

Sent by email to: steve.collis@persimmonhomes.com

Steve Collis
Persimmon Homes South Coast
Park View House
100 Wickham Road
Fareham
PO16 7HT

Our ref: BRD231128-OR5VerA.docx

27th February 2014

Dear Steve

**CONTAMINATION SAMPLING AND REMEDIAL MEASURES
BURDELL ROAD, YAPTON**

Background

Further to our previous correspondence with Ian Mcfaul, who had been liaising with Arun District Council (see attached correspondence), I am writing with regards to some additional sampling undertaken at the site in the location of WS13, where elevated concentrations of PAHs have been recorded in the Made Ground during the previous site investigation.

The area in question comprises a proposed area of Public Open Space (POS) which will be fenced off due to the presence of a nearby badger sett. The purpose of the additional testing was to provide further comfort to the regulators to establish whether or not the elevated concentrations are consistent across the area or whether the result was more anomalous and relating to a fragment of ash or clinker within the soil.

This letter should be read in conjunction with the previous reports completed for the site referenced as follows:

- Site Investigation - Land North of Burndell Road, Yapton', BRD Report ref. 231128/OR1 Version B, dated April 2010.
- Groundwater Monitoring Report - Land North of Burndell Road, Yapton', BRD Report ref. 231128/OR2 Version A, dated February 2012.
- Ground Gas Assessment - Land North of Burndell Road, Yapton', BRD Report ref. 231128/OR3 Version A, dated February 2012.

This letter aims to address conditions 16 and 17 of the planning permission ref. Y/48/13 granted by Arun District Council.

Site works

The site works were completed on 31st January 2014 and comprised the excavation of 6No. shallow hand dug pits (ref. SS1 to SS6) located around WS13. The nature of the pit was to minimise any potential disturbance to the nearby badger sett. The sampling targeted the near surface soils as these will be the soils which future site users would have the potential to be exposed to.

The hand dug pits were positioned in the vicinity of WS13 generally within a 5m radius, as shown on the attached plan.

Laboratory analysis

The samples from the exploratory holes were forwarded to the laboratory of QTS Environmental (QTSE) for analysis. The individual UKAS or MCERTS accreditation of the test methods is shown on the reported results. Samples were dispatched to the laboratory by overnight courier.

Soil samples for contamination testing were placed in dedicated laboratory supplied plastic tubs. The soil testing suite is detailed within the table below and this comprises of a general contamination suite suitable for assessing the soils for a range of potential toxic contaminants.

Soil Tests	Number of samples tested
Organic Matter	2
Speciated Polycyclic Aromatic Hydrocarbons (PAH)	8

The results of the contamination testing attached.

Ground Conditions

The ground conditions encountered in the exploratory holes are as detailed in the table below:

Hand dug pit	Depth (m)	Description	Samples
SS1	0.00-0.15	MADE GROUND: Moss over dark brown slightly gravelly sandy clay with occasional roots and rootlets. Gravel of fine to coarse angular to subrounded flint and rare brick and clinker.	J1@0.10m
	0.15-0.30	MADE GROUND: Orange brown gravelly sandy clay with occasional roots and rootlets. Gravel of fine to coarse angular to subrounded flint, clinker and rare brick.	J2@0.25m
SS2	0.00-0.15	MADE GROUND: Moss over grey brown and dark brown at surface, slightly gravelly, sandy clay. Gravel of fine to coarse angular to subrounded flint, rare clinker and brick with many rootlets.	J1@0.10m
	0.15-0.25	MADE GROUND: Orange brown gravelly sandy clay. Gravel of fine to coarse angular to subrounded chalk, flint, clinker and brick with occasional rootlets.	J2@0.20m

SS3	0.00-0.10	MADE GROUND: Moss over dark brown slightly gravelly sandy clay with occasional roots and rootlets. Gravel of fine to coarse angular to subrounded flint and rare brick and clinker.	J1@0.05m
	0.10-0.30	MADE GROUND: Brown ashy very gravelly sand with occasional cobbles. Gravel of fine to coarse angular to subrounded clinker, brick and occasional flint.	J2@0.20m
SS4	0.00-0.15	MADE GROUND: Moss over grey brown and dark brown at surface, slightly gravelly, sandy clay. Gravel of fine to coarse angular to subrounded flint, occasional chalk and rare clinker and brick with many rootlets.	J1@0.10m
SS5	0.00-0.10	MADE GROUND: Moss over dark brown slightly gravelly sandy clay with occasional roots and rootlets. Gravel of fine to coarse angular to subrounded flint and occasional brick and clinker.	J1@0.05m
	0.10-0.25	MADE GROUND: Orange brown gravelly sandy clay. Gravel of fine to coarse angular to subrounded chalk, flint, clinker and brick with occasional rootlets.	J2@0.25m
SS6	0.00-0.15	MADE GROUND: Moss over grey brown and dark brown at surface, slightly gravelly, sandy clay. Gravel of fine to coarse angular to subrounded flint rare clinker and brick with many rootlets.	J1@0.10m

Therefore, it is apparent that across the area there is a cover of slightly gravelly clay containing occasional clinker, overlying a more gravelly clay at depths ranging from 0.10m to 0.15m bgl.

Contamination Assessment

Generic Soil Assessment Criteria

The chemical test results have been compared to the generic assessment criteria as outlined in the site investigation report. These relate to the 'residential with plant uptake land use whereas, in reality, the exposure will be far less in a public open space land use.

Analysis	Assessment Criteria	Source
Naphthalene	1.5 mg/kg	LQM CIEH GAC
Acenaphthylene	170 mg/kg	
Acenaphthene	210 mg/kg	
Fluorene	160 mg/kg	
Phenanthrene	92 mg/kg	
Anthracene	2,300 mg/kg	
Fluoranthene	260 mg/kg	
Pyrene	560 mg/kg	
Benzo(a)anthracene	3.1 mg/kg	

Analysis	Assessment Criteria	Source
Chrysene	6.0 mg/kg	
Benzo(b)fluoranthene	5.6 mg/kg	
Benzo(k)fluoranthene	8.5 mg/kg	
Benzo(a)pyrene	0.83 mg/kg	
Indeno(1,2,3-cd)pyrene	3.2 mg/kg	
Dibenz(a,h)anthracene	0.76 mg/kg	
Benzo(ghi)perylene	44 mg/kg	

Results

The results of the contamination testing are enclosed with this letter and a summary is presented in the table below:

Contaminant	Units	Number of tests	Minimum Concentration	Maximum Concentration	Number of results exceeding respective assessment criteria
Naphthalene	mg/kg	6	<0.1	<0.1	0
Acenaphthylene	mg/kg	6	<0.1	<0.1	0
Acenaphthene	mg/kg	6	<0.1	0.41	0
Fluorene	mg/kg	6	<0.1	0.35	0
Phenanthrene	mg/kg	6	0.48	5.28	0
Anthracene	mg/kg	6	<0.1	1.29	0
Fluoranthene	mg/kg	6	1.53	9.86	0
Pyrene	mg/kg	6	1.32	8.40	0
Benzo(a)anthracene	mg/kg	6	0.59	3.62	1
Chrysene	mg/kg	6	0.63	3.12	0
Benzo(b)fluoranthene	mg/kg	6	0.79	3.70	0
Benzo(k)fluoranthene	mg/kg	6	0.34	1.44	0
Benzo(a)pyrene	mg/kg	6	0.62	3.04	4
Ideno(1,2,3-cd)pyrene	mg/kg	6	0.36	1.74	0
Di-benzo(a,h)anthracene	mg/kg	6	<0.1	0.18	0
Benzo (ghi) perylene	mg/kg	6	0.29	1.37	0

It can be seen that low level PAHs are present throughout the surface soils in the area of WS13 with benzo(a)pyrene (BaP) recorded up to 3.04mg/kg. However, the concentrations recorded in these surface soils are not at the level observed in WS13 with BaP recorded at 19mg/kg in the slightly deeper soils at 0.4m bgl. The concentrations are more consistent with what was observed elsewhere across the infilled canal where BaP was recorded up to 1.66mg/kg.

Marginally elevated concentrations of BaP are commonly encountered within surface soils across the UK from the deposition of atmospheric pollution, inadvertent addition of ash or clinker from activities such as bonfires or the deliberate incorporation such as the historic practice of adding ash as a soil improver.

Exposure to BaP is associated with an increased cancer risk, but there are substantial uncertainties as to the level of exposure from soils that is associated with an unacceptable risk to health. Due to these difficulties the subject of a suitable BaP assessment criterion is an industry wide debate that has currently spanned several years and appears to be no closer to a compromise. As a consequence the assessment of BaP is, to an extent, subjective and based on site specific conditions combined with a reasoned professional judgement.

The UK approach to unacceptable risk has typically been to consider that a risk greater than one excess death in 100,000 to be unacceptable, but there is international evidence to support that a threshold of one in 10,000 is the limit of unacceptable risk. Indeed back in 2006, DEFRA's document 'Assessing Risks From Land Contamination - a Proportionate Approach Soil Guideline Values: the Way Forward' showed that changing the proposed benchmark for unacceptable intake could generate a generic assessment criteria value of 11 mg/kg for residential with gardens land use.

Based on the one in 10,000 risk threshold, BRD are also aware of a previous study undertaken by the Institute of Occupational Medicine for a local authority, where a screening value of 3.6mg/kg for residential housing with gardens was proposed as being unlikely to pose a Significant Possibility Of Significant Harm (SPOSH) to human health. This is within one standard deviation of the average BaP content of urban soils sampled by the EA in a study published in 2007. The recently published BGS Technical Guidance Sheet on normal levels of contaminants in English soils reported an urban background BaP soil concentration of 3.6 mg/kg and this would also fit with BRDs extensive experience of testing urban garden soils. In view of the above, BRD's judgement is to employ a BaP screening value of 3.6mg/kg as a marker compound for PAHs below which it is considered that the contamination risk presented is negligible.

The maximum recorded value from the surface soils is below this figure and therefore, it is not considered that there is any significant risk to future residents from these surface soils.

Summary

In summary, the surface soils across the area of POS have been demonstrated to be free from any significant contamination. Minimal disturbance of these soils would be anticipated and it is also proposed that the area will be secured by a hedgerow and fence due to the nearby badger sett. A thorny shrub will also be planted across the area (these measured are outlined on the attached plan provided by yourselves).

Therefore, the previously identified elevated PAHs in the deeper Made Ground are not considered to cause any impact on the proposed development.

Gas Protection Measures

Long term gas monitoring has been undertaken at the site and this has demonstrated that the only plots requiring any form of gas protection measures would be those straddling the backfilled areas of infilled canal. The development layout (attached) clearly confirms that none of the plots straddle the infilled canal and therefore it is not considered that any gas protection measures are required at the site.

Conclusion

It is therefore concluded that based on the additional sampling, and coupled with the proposed remedial measures to secure and prevent access to the area of the previously identified contamination, there is no ongoing risk to future residents from the identified contamination at WS13.

In line with the previous recommendations, gas protection measures will not be required at the site as none of the proposed plots straddle the infilled canal.

Confirmation of the finished fence and hedgerow should be forwarded to the council in order to confirm that the finished area of POS has been completed in accordance with the plans provided.

I trust this report meets with your requirements, however, should you have any further queries, then please do not hesitate to contact me.

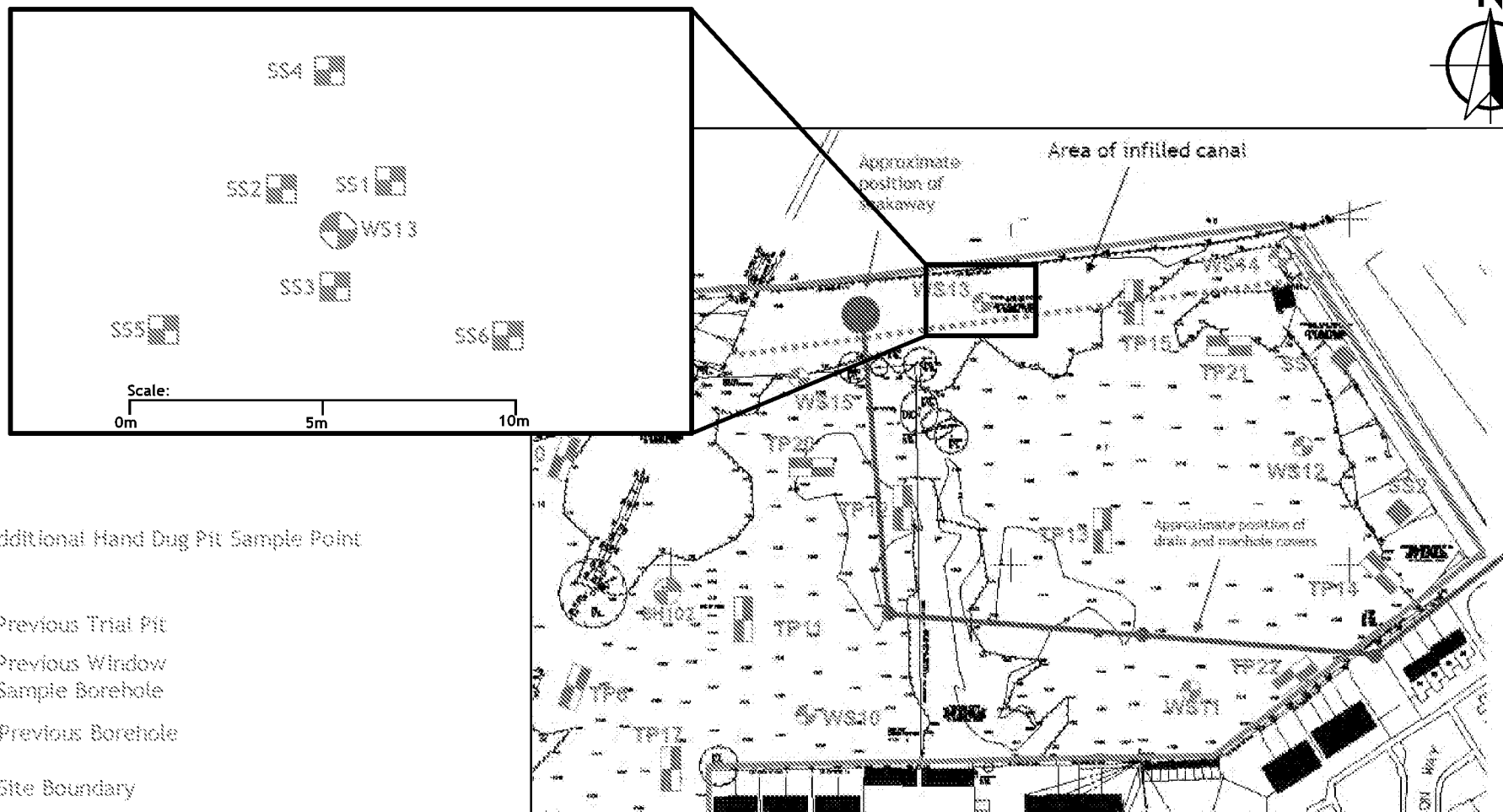
Yours sincerely



Matt Morgan
Senior Geo-Environmental Consultant
BRD Environmental Ltd
mattm@brduk.com

Enc. Exploratory point plan (ref. BRD231128-OP5-A)
Test results (QTS Report 14-19136)
Fence and Hedgerow plan supplied by Persimmon Homes
Development layout (AAP Architecture 'Planning Layout Drawing' ref. P1004/01)
Arun District Council email dated 24/1/2014

Exploratory Point Plan



Key:

SS  Additional Hand Dug Pit Sample Point

TP  Previous Trial Pit

WS  Previous Window Sample Borehole

BH  Previous Borehole

 Site Boundary

Not to scale.

All positions illustrative only.

Project Title: Land North of Burndell Road, Yapton

Client: Persimmon Homes South Coast

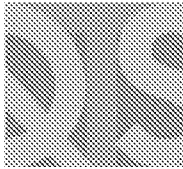
BRD Reference: BRD231128-OP5-A

Date Issued: February 2014



01295 272244

info@brduk.com



Matthew Morgan
BRD Environmental Ltd
Hawthorne Villa
1 Old Parr Road
Banbury
Oxfordshire
OX16 5HT



QTS Environmental Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN



QTS Environmental Report No: 14-19136

Site Reference: Yapton

Project / Job Ref: 231128

Order No: None Supplied

Sample Receipt Date: 04/02/2014

Sample Scheduled Date: 04/02/2014

Report Issue Number: 1

Reporting Date: 10/02/2014

Authorised by:

Russell Jarvis
Director

On behalf of QTS Environmental Ltd



Authorised by:

Kevin Old
Director

On behalf of QTS Environmental Ltd



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone



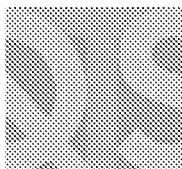
Soil Analysis Certificate						
QTS Environmental Report No: 14-19136	Date Sampled	31/01/14	31/01/14			
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Yapton	TP / BH No	SS1	SS4			
Project / Job Ref: 231128	Additional Refs	J1	J1			
Order No: None Supplied	Depth (m)	0.10	0.10			
Reporting Date: 10/02/2014	QTSE Sample No	92529	92532			

Determinand	Unit	RL	Accreditation				
Organic Matter	%	< 0.1	NONE	8.8	5.7		

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

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

Subcontracted analysis ⁽⁵⁾



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone

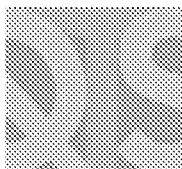


Soil Analysis Certificate - Speciated PAHs

QTS Environmental Report No: 14-19136	Date Sampled	31/01/14	31/01/14	31/01/14	31/01/14	31/01/14
BRD Environmental Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Yapton	TP / BH No	SS1	SS2	SS3	SS4	SS5
Project / Job Ref: 231128	Additional Refs	J1	J1	J1	J1	J1
Order No: None Supplied	Depth (m)	0.10	0.10	0.05	0.10	0.05
Reporting Date: 10/02/2014	QTSE Sample No	92529	92530	92531	92532	92533

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.25	< 0.1	0.41
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.18	< 0.1	0.35
Phenanthrene	mg/kg	< 0.1	MCERTS	1.21	0.48	2.96	0.55	5.28
Anthracene	mg/kg	< 0.1	MCERTS	0.26	< 0.1	0.75	< 0.1	1.29
Fluoranthene	mg/kg	< 0.1	MCERTS	3.56	1.68	8.62	1.53	9.86
Pyrene	mg/kg	< 0.1	MCERTS	3.09	1.46	7.67	1.32	8.40
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	1.28	0.67	3.54	0.59	3.62
Chrysene	mg/kg	< 0.1	MCERTS	1.38	0.74	3.12	0.63	2.94
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	1.54	0.89	3.70	0.79	3.15
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.57	0.38	1.44	0.34	1.25
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	1.07	0.73	3.04	0.62	2.52
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.72	0.41	1.74	0.36	1.47
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.18	< 0.1	0.14
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.60	0.32	1.37	0.29	1.12
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	15.3	7.8	38.6	7	41.8

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



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone



Soil Analysis Certificate - Speciated PAHs

QTS Environmental Report No: 14-19136	Date Sampled	31/01/14				
BRD Environmental Ltd	Time Sampled	None Supplied				
Site Reference: Yapton	TP / BH No	SS6				
Project / Job Ref: 231128	Additional Refs	J1				
Order No: None Supplied	Depth (m)	0.10				
Reporting Date: 10/02/2014	QTSE Sample No	92534				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	0.17			
Fluorene	mg/kg	< 0.1	MCERTS	0.16			
Phenanthrene	mg/kg	< 0.1	MCERTS	2.63			
Anthracene	mg/kg	< 0.1	MCERTS	0.67			
Fluoranthene	mg/kg	< 0.1	MCERTS	7.21			
Pyrene	mg/kg	< 0.1	MCERTS	6.62			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	3.03			
Chrysene	mg/kg	< 0.1	MCERTS	2.73			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	3.49			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	1.12			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	2.73			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	1.64			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.14			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	1.27			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	33.6			

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

QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone



Soil Analysis Certificate - Sample Descriptions

QTS Environmental Report No: 14-19136

BRD Environmental Ltd

Site Reference: Yapton

Project / Job Ref: 231128

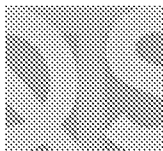
Order No: None Supplied

Reporting Date: 10/02/2014

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
92529	SS1	J1	0.10	30.4	Brown loam with vegetation
92530	SS2	J1	0.10	24.1	Brown loam with stones and vegetation
92531	SS3	J1	0.05	32.1	Brown loam with vegetation
92532	SS4	J1	0.10	25.6	Brown clayey loam with vegetation
92533	SS5	J1	0.05	20.5	Brown loam with vegetation
92534	SS6	J1	0.10	19.4	Brown loam with vegetation

Insufficient sample ^{1/5}

Unsuitable Sample ^{1/5}



QTS Environmental Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone



Soil Analysis Certificate - Methodology & Miscellaneous Information

QTS Environmental Report No: 14-19136

BRD Environmental Ltd

Site Reference: Yapton

Project / Job Ref: 231128

Order No: None Supplied

Reporting Date: 10/02/2014

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

D Dried

AR As Received

Xapton
Charles Church

----- 0.9m wide hedge row to be planted

- - - - - 1.2m high Post + 2 rail fence to be
erected to protect bridge seats and to
prevent contact with contamination

//

Location of bridge
seats



Matt Morgan

From: Mcfaul, Ian [REDACTED]
Sent: 30 January 2014 12:31
To: Matt Morgan
Cc: Lindsay, Joe; Freeman, Mike
Subject: RE: Planning Consultation on Y/104/13/DOC
Attachments: Badger and Contamination screening - 30.01.14.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Afternoon Matt,

Following your conclusions on the soil testing at Yapton it would be worth providing the council a similar letter as last time for phase to explaining how we are discharging the conditions but also picking up the points raised below along with the attached drawing.

Mike/ Joe – if the council approve this, there needs to be an allowance within the tender.

All future correspondence will need to go to Joe Lindsay.

Regards

Ian Mcfaul
Technical Co-ordinator
Technical Department

Persimmon Homes South Coast
Park View House
100 Wickham Road
Fareham
PO16 7HT

www.persimmonhomes.com

From: Peter Cleveland [REDACTED]
Sent: 29 January 2014 09:57
To: Mcfaul, Ian
Subject: FW: Planning Consultation on Y/104/13/DOC

From: Matthew Kennett
Sent: 24 January 2014 14:07
To: Planning.Responses; Peter Cleveland
Subject: RE: Planning Consultation on Y/104/13/DOC

Environmental Health Advises;

I agree with the recommendation in the BRD Environmental letter report dated 27th February 2012 from Amber 1 (NHBC table) gas protection measures should be installed in homes built over areas of infill. I accept that securing the area around the badger set with the exposed benzo-A-pyrene will keep people away whilst the fence lasts, however in the longer term it may be prudent to plant a thorny type bush like sea buckthorne (*Hippophae rhamnoides*).

Therefore condition 18 can be passed however, condition 19 can only be passed once a verification report has been received detailing the gas protection measures and fencing.

thanks

Matthew Kennett
Pollution Officer
Environmental Health
Arun District Council

01903 737696 (direct line)

Civic Centre, Maltravers Road, Littlehampton BN17 5LF

For further information on Environmental Health's services visit our website: www.arun.gov.uk/eh



From: Sam Humphries
Sent: 14 January 2014 10:14
To: Graham Evans
Subject: FW: Planning Consultation on Y/104/13/DOC

C/N: 202118

From: planning.responses@arun.gov.uk [<mailto:planning.responses@arun.gov.uk>]
Sent: 13 January 2014 16:36
To: EH Planning Consultations
Subject: Planning Consultation on Y/104/13/DOC

To: Environmental Health - Graham Evans/Sarah Meeten

NOTIFICATION FROM ARUN DISTRICT COUNCIL

TOWN AND COUNTRY PLANNING ACT 1990

APPLICATION NO: Y/104/13/DOC

Registered: 13-JAN-14

Site Address: Land North of Burndell Road Yapton BN18 0HR

Description of Works:

Application for the approval of details reserved by conditions 13 (wheel cleaning), 18 (remediation strategy) and 19 (verification report) following a grant of planning permission Y/81/10/.

The Council have received the above application to discharge conditions. I shall be pleased to receive any observations you may wish to make in respect of those conditions relating to your field of expertise.

[Click here to view the Discharge of Condition application](#)

[Click here to view conditions on original application - click on decision tab](#)

Should you have any comments to make, these should be sent [by replying to this email](#) by 27th January 2014.

www.arun.gov.uk/planning

Please be aware that any comments you may make will be available on our website so please do not insert personal details or signatures on your reply.

In the absence of a reply within the period stated, I shall assume that you have no observations to make.

The officer dealing with this application is Mr P Cleveland who can be contacted on telephone number 01903 737631.

Thanking you in anticipation

Planning Case Officer
Arun District Council