

Our Ref: 4712,GI

Persimmon Homes  
Orion Court  
Great Blakenham  
Ipswich  
Suffolk  
IP6 0LW

Date: 16 March 2020

**For the attention of Mr James Vine**

By Email:

- [james.vine@persimmonhomes.com](mailto:james.vine@persimmonhomes.com)

Dear James

**BOYTON PLACE, HAVERHILL ROAD, HAVERHILL, SUFFOLK**

**1. Introduction**

Geosphere Environmental Ltd was commissioned by Persimmon Homes Ltd, the Client, to investigate the suitability of the existing shallow soils at Boyton Place, Haverhill Road, Haverhill, Suffolk for re-use as Topsoil.

**2. Site Works**

Site works were undertaken on 25 February 2020 and comprised the collection of 22 no. soil samples, taken at an approximate depth of 0.1m bgl. These samples were subsequently dispatched to a UKAS accredited laboratory (Derwentside Environmental Testing Ltd) and subjected to testing in accordance with BS:3882:2015 '*Specification for topsoil*'.

The locations of the sampling were chosen to give a general spread across the area of the investigation and agreed with the Client prior to undertaking the investigation. For details of sample locations please refer to the Exploratory Hole Location Plan, included within Appendix 2.

**3. Testing Results**

The soil encountered during sampling was generally consistent with a brown clay noted in all locations. Variable quantities of gravel and roots were also present.

The results of laboratory testing were generally negative, with 21 of the 22 samples testing failing to comply with one or more suitability criteria. The results for TS13 indicate suitability for re-use as 'low fertility' topsoil.

Other observations of note within the testing were that nine of the samples (TS1, TS2, TS3, TS4, TS6, TS8, TS11, TS14 and TS21) only failed the classification of 'low fertility topsoil' on the basis

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that the carbon-nitrogen ration was exceeding 20:1, some by a fine margin, and <2mm visible contaminants when air dried (TS8 was borderline on clay content as well). There may be scope to turn this into a 'low fertility' classification topsoil but a specialist would have to be consulted to determine the financial or practical feasibility of this.

Five samples exhibited too much clay, sometimes in addition to the issues noted above and the remaining samples failed to classify as any form of topsoil on multiple different parameters.

Results from laboratory testing are detailed in full within lab report number 20-02527, included within Appendix 3.

Yours sincerely



**Peter Coyne**  
**Technical Assistant**  
**Geosphere Environmental Ltd**  
peter@geosphere-environmental.co.uk

**Enclosures:**

- Appendix 1 – Report Limitations and Conditions
- Appendix 2 – Drawings
- Appendix 3 – Laboratory Testing Results



# APPENDICES

## **Appendix 1 – Report Limitations and Conditions**

This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site.

This report has been prepared for the sole use of the Client for the purposes described and no extended duty of care to any third party is implied or offered. Third parties using any information contained within this report do so at their own risk.

This report is prepared and written for the use stated herein; it should not be used for any other purposes without reference to Geosphere Environmental Limited. The report has been prepared in relation to the proposed end-use should another end-use be intended a further re-assessment may be required. It is likely that over time practises will improve and the relevant guidance and legislation be amended or superseded, which may necessitate a re-assessment of the site.

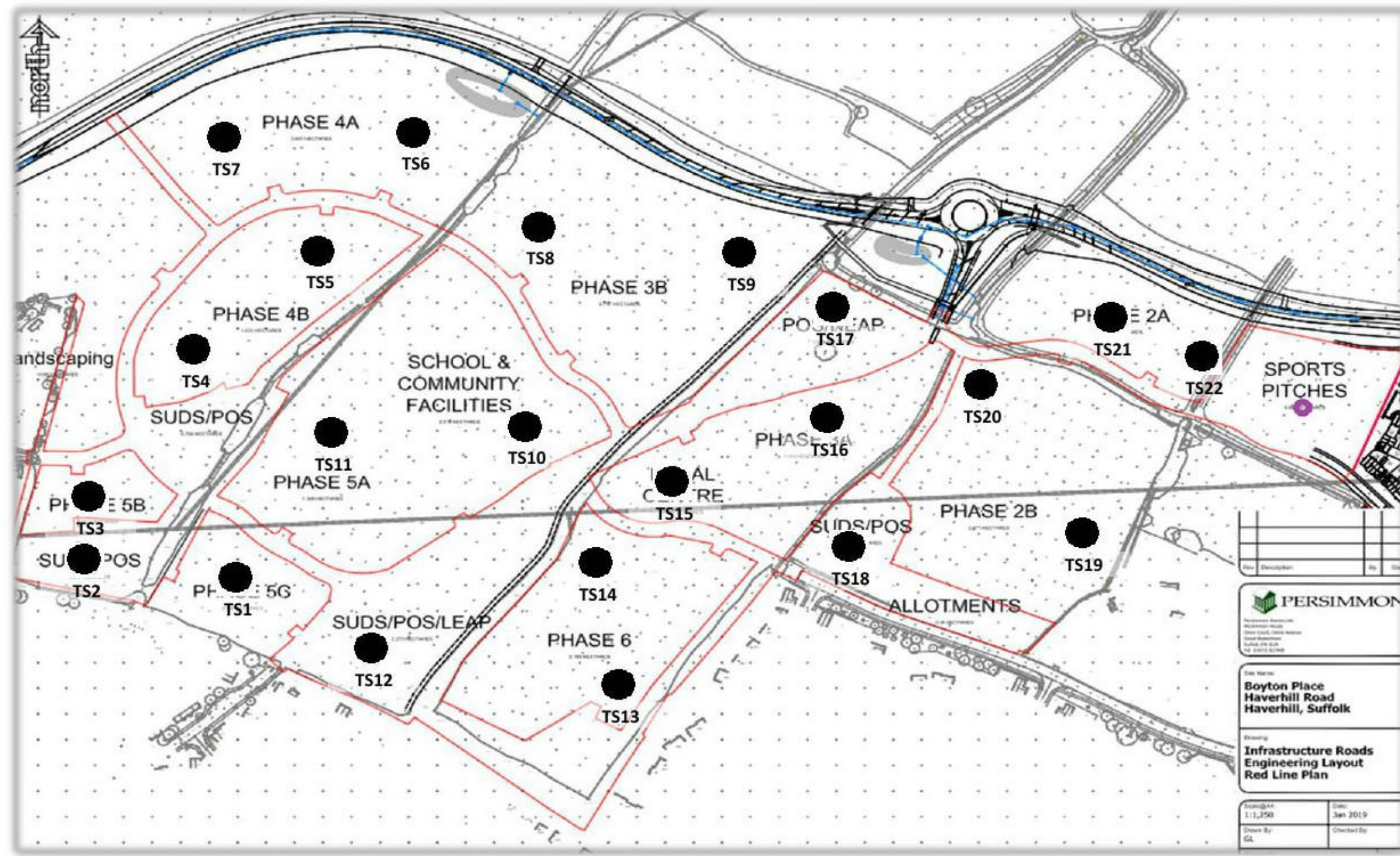
The accuracy of any map extracts cannot be guaranteed. It is possible that different conditions existed onsite, between and subsequent to the various map surveys appended.

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



## Appendix 2 – Drawings

Exploratory Hole Location Plan – Drawing ref. 4712,GI/001/Rev0



**LEGEND**

● Sampling location

**SOURCE**

Client provided

**PROJECT**

Boyton Place, Haverhill Road, Haverhill, Suffolk

**TITLE**

Exploratory Hole Location Plan

**DRAWING NUMBER**

4712,GI/001/Rev0

**SCALE**

As marked

**DATE**

12/03/2020

**DRAWN BY**

PC

**CHECKED BY**

TP





## **Appendix 3 – Laboratory Testing Results**

DETS report number. 20-02527.1



Peter Coyne  
Geosphere Environmental Ltd  
Brightwell Barns  
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Brightwell  
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IP10 0BJ

**DETS Ltd**  
Unit 1  
Rose Lane Industrial Estate  
Rose Lane  
Lenham Heath  
Kent  
ME17 2JN  
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## **DETS Report No: 20-02527**

**Site Reference:** Boyton Place, Haverhill

**Project / Job Ref:** 4712,GI

**Order No:** None Supplied

**Sample Receipt Date:** 26/02/2020

**Sample Scheduled Date:** 26/02/2020

**Report Issue Number:** 1

**Reporting Date:** 10/03/2020

**Authorised by:**

Ela Mysiara  
Quality Manager

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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.



BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS1				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465191				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	16.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	18.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	66.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Sandy Loam	-			
Loss on Ignition	%	< 0.01	4.90	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>Clay Content 20 - 35%</b>			
5 - 20	5 - 30	2 - 20	5 - 20				
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	5.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.5	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	3.4				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.05	<b>≥ 0.15</b>	<b>≥ 0.15</b>		<b>≥ 0.15</b>
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	6	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	140	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	170	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	42.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	56	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	16	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	20	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	3.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	39				
Available Calcium <sup>(S)</sup>	mg/l	< 1	3900				
Electrical Conductivity	uS/cm	< 5	1478	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS2				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465192				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	7.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	11.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	82.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Loamy Sand	-			
Loss on Ignition	%	< 0.01	4.00	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>Clay Content 20 - 35%</b>			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	6.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.0	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	<b>7.5 - 9.0</b>
Carbonate	%	< 0.1	1.1				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.07	<b>≥ 0.15</b>	<b>≥ 0.15</b>		<b>≥ 0.15</b>
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	6	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	150	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	180	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	32.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	47	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	16	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	43				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4000				
Electrical Conductivity	uS/cm	< 5	1426	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS3				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465193				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	24.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	32.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	44.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	3.90	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
				<b>Clay Content 20 - 35%</b>			
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	0.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.1	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	<b>7.5 - 9.0</b>
Carbonate	%	< 0.1	1.0				<b>&gt; 1</b>
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.03	<b>≥ 0.15</b>	<b>≥ 0.15</b>		<b>≥ 0.15</b>
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	6	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	130	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	170	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	63.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	54	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	17	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	5.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	61				
Available Calcium <sup>(S)</sup>	mg/l	< 1	3900				
Electrical Conductivity	uS/cm	< 5	1475	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS4				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465194				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	23.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	41.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	36.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	4.10	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
				<b>Clay Content 20 - 35%</b>			
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	1.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.2	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	<b>7.5 - 9.0</b>
Carbonate	%	< 0.1	1.2				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.03	<b>≥ 0.15</b>	<b>≥ 0.15</b>		<b>≥ 0.15</b>
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	6	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	150	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	170	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	69.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	54	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	18	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	3.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	45				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4500				
Electrical Conductivity	uS/cm	< 5	1384	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS5				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465195				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	40.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	39.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	21.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	6.00	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	1.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.3	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	0.9				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.03	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	4	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	140	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	160	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	81.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	63	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	36				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4000				
Electrical Conductivity	uS/cm	< 5	1394	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS6				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465196				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	19.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	25.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	56.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Sandy Clay Loam	-			
Loss on Ignition	%	< 0.01	3.90	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>Clay Content 20 - 35%</b>			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	5.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.9	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	5.4				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.03	<b>≥ 0.15</b>	<b>≥ 0.15</b>		<b>≥ 0.15</b>
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	6	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	120	<b>121 - 1500</b>	<b>121 - 1500</b>		<b>121 - 1500</b>
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	130	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	74.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	51	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	5.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	30				
Available Calcium <sup>(S)</sup>	mg/l	< 1	3600				
Electrical Conductivity	uS/cm	< 5	1389	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS7				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465197				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	29.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	40.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	31.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	3.80	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
				<b>Clay Content 20 - 35%</b>			
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	1.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.9	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	2.8				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.14	<b>≥ 0.15</b>	<b>≥ 0.15</b>		<b>≥ 0.15</b>
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	26	16 - 140	16 - 140	<b>≤ 15</b>	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	250	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	97	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	23.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	51	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	21	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	26				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4800				
Electrical Conductivity	uS/cm	< 5	1391	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS8				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465198				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	36.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	34.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	30.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	4.50	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	5.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.9	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	2.6				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.15	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	27	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	280	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	110	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	58	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	24	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	61				
Available Calcium <sup>(S)</sup>	mg/l	< 1	5300				
Electrical Conductivity	uS/cm	< 5	1412	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							



BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS9				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465199				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	28.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	25.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	47.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	4.30	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
<b>Clay Content 20 - 35%</b>							
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	10.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	8.0	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.2				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.15	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	25	16 - 140	16 - 140	<b>≤ 15</b>	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	290	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	110	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	48	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	24	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	2.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	45				
Available Calcium <sup>(S)</sup>	mg/l	< 1	5500				
Electrical Conductivity	uS/cm	< 5	1430	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							



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BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS10				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465200				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	23.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	19.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	58.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Sandy Clay Loam	-			
Loss on Ignition	%	< 0.01	4.30	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	8.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.4				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.15	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	18	16 - 140	16 - 140	<b>≤ 15</b>	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	280	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	110	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	56	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	18	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	28	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	3.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	45				
Available Calcium <sup>(S)</sup>	mg/l	< 1	5000				
Electrical Conductivity	uS/cm	< 5	1156	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS11				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465201				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	31.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	30.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	39.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	4.20	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
				<b>Clay Content 20 - 35%</b>			
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	12.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.7	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.2				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.16	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	15	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	210	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	82	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	23.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	53	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	16	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	2.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	36				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4200				
Electrical Conductivity	uS/cm	< 5	1468	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS12				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465202				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	28.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	28.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	44.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	4.40	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
<b>Clay Content 20 - 35%</b>							
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	24.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	14.0	<b>0 - 10</b>	<b>0 - 10</b>	<b>0 - 10</b>	<b>0 - 10</b>
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	8.0	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.2				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.17	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	13	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	210	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	83	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	20.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	52	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	16	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	5.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	31				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4400				
Electrical Conductivity	uS/cm	< 5	1432	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS13				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465203				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	19.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	24.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	57.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Sandy Clay Loam	-			
Loss on Ignition	%	< 0.01	4.60	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>Clay Content 20 - 35%</b>			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	7.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.6				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.19	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	11	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	200	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	83	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	18.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	50	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	16	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	19	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	31				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4300				
Electrical Conductivity	uS/cm	< 5	1464	3300			
<b>OVERALL COMPLIANCY</b>				N	N	Y	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS14				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465204				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	22.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	23.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	55.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Sandy Clay Loam	-			
Loss on Ignition	%	< 0.01	4.70	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	10.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.6				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.17	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	5	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	83	<b>121 - 1500</b>	<b>121 - 1500</b>		<b>121 - 1500</b>
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	30	<b>51 - 600</b>	<b>51 - 600</b>		<b>51 - 600</b>
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	48	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	22	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	5.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	9				
Available Calcium <sup>(S)</sup>	mg/l	< 1	1600				
Electrical Conductivity	uS/cm	< 5	1516	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS15				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465205				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	37.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	36.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	27.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	3.50	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	12.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.9	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.4				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.18	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	21	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	220	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	82	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	20.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	53	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	17	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	2.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	38				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4300				
Electrical Conductivity	uS/cm	< 5	1470	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite				Compliance with Range			
DETS Report No: 20-02527		Date Sampled	25/02/2020				
Geosphere Environmental Ltd		Time Sampled	None Supplied				
Site Reference: Boyton Place, Haverhill		TP / BH No	TS16				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465206				
Determinand	Reporting Unit	RL		Multipurpose	Acidic	Low Fertility	Calcareous
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	26.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	25.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	49.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	3.40	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
<b>Clay Content 20 - 35%</b>							
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	10.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.9	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	4.2				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.16	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	17	16 - 140	16 - 140	<b>≤ 15</b>	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	240	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	100	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>	<b>&lt; 20 : 1</b>
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	47	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	3.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	52				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4900				
Electrical Conductivity	uS/cm	< 5	1501	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							





**DETS Ltd**  
 Lane Industrial Estate  
 Rose Lane  
 Enham Heath  
 Maidstone  
 Kent ME17 2JN  
 : 01622 850410



BS3882 Topsoil Suite				Compliance with Range			
DETS Report No: 20-02527		Date Sampled	25/02/2020				
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS17				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465207				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	42.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	31.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	27.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	4.10	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	0.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	3.9				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.17	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	17	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	150	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	61	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	51	< 200	< 200	< 300	< 300
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	< 200
Nickel <sup>MU</sup>	mg/kg	< 3	24	< 60	< 75	< 110	< 110
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	41				
Available Calcium <sup>(S)</sup>	mg/l	< 1	3400				
Electrical Conductivity	uS/cm	< 5	1448	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							



**DETS Ltd**  
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BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS18				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465208				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	41.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	34.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	25.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	6.20	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	4.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.6	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	1.8				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.16	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	19	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	240	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	100	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	23.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	62	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	21	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	37				
Available Calcium <sup>(S)</sup>	mg/l	< 1	5500				
Electrical Conductivity	uS/cm	< 5	1452	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS19				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465209				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	41.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	34.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	25.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	4.70	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	1.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	1.2				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.18	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	19	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	260	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	110	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	20.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	58	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	15	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	23	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	42				
Available Calcium <sup>(S)</sup>	mg/l	< 1	5800				
Electrical Conductivity	uS/cm	< 5	1466	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS20				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465210				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	36.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	41.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	23.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	6.10	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	2.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.7	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	3.7				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.16	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	11	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	140	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	44	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	22.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	59	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	21	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	0.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	44				
Available Calcium <sup>(S)</sup>	mg/l	< 1	3100				
Electrical Conductivity	uS/cm	< 5	1478	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS21				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465211				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	29.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	32.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	39.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay Loam	-			
Loss on Ignition	%	< 0.01	3.60	<b>Clay Content 5 - 20%</b>			
				3 - 20	3 - 30	2 - 20	3 - 20
				<b>5 - 20</b>	<b>5 - 30</b>	2 - 20	<b>5 - 20</b>
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	8.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	<b>3.5 - 5.5</b>	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	11.8				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.19	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	13	<b>16 - 140</b>	<b>16 - 140</b>	≤ 15	<b>16 - 140</b>
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	200	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	87	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	17.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	43	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	18	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	2.0	<b>&lt; 0.5</b>			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	40				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4000				
Electrical Conductivity	uS/cm	< 5	1406	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

BS3882 Topsoil Suite							
DETS Report No: 20-02527		Date Sampled	25/02/2020	Compliance with Range			
Geosphere Environmental Ltd		Time Sampled	None Supplied	Multipurpose	Acidic	Low Fertility	Calcareous
Site Reference: Boyton Place, Haverhill		TP / BH No	TS22				
Project / Job Ref: 4712,GI		Additional Refs	None Supplied				
Order No: None Supplied		Depth (m)	0.10				
Reporting Date: 10/03/2020		DETS Sample No	465212				
Determinand	Reporting Unit	RL					
<b>Soil Texture</b>							
Clay Content <sup>(S)</sup>	%	N/a	43.0	5 - 35			
Silt Content <sup>(S)</sup>	%	N/a	36.0	0 - 65			
Sand Content <sup>(S)</sup>	%	N/a	21.0	30 - 85			
Textural Class <sup>(S)</sup>	N/a	N/a	Clay	-			
Loss on Ignition	%	< 0.01	4.00	Clay Content 5 - 20%			
				3 - 20	3 - 30	2 - 20	3 - 20
				Clay Content 20 - 35%			
				5 - 20	5 - 30	2 - 20	5 - 20
<b>Coarse Fragment Content</b>							
>2mm <sup>(S)</sup>	%	N/a	10.0	0 - 30	0 - 30	0 - 30	0 - 30
>20mm <sup>(S)</sup>	%	N/a	0.0	0 - 10	0 - 10	0 - 10	0 - 10
>50mm <sup>(S)</sup>	%	N/a	0.0	0	0	0	0
pH <sup>MU</sup>	pH Units	N/a	7.8	5.5 - 8.5	3.5 - 5.5	3.5 - 9.0	7.5 - 9.0
Carbonate	%	< 0.1	9.5				> 1
<b>Available Plant Nutrients</b>							
Total Nitrogen <sup>(S)</sup>	%	< 0.01	0.16	≥ 0.15	≥ 0.15		≥ 0.15
Phosphorus (Extractable) <sup>(S)</sup>	mg/l	< 3	18	16 - 140	16 - 140	≤ 15	16 - 140
Potassium (Extractable) <sup>(S)</sup>	mg/l	< 20	250	121 - 1500	121 - 1500		121 - 1500
Magnesium (Extractable) <sup>(S)</sup>	mg/l	< 1	100	51 - 600	51 - 600		51 - 600
Carbon / Nitrogen Ratio <sup>(S)</sup>	:1	< 0.1	21.0	< 20 : 1	< 20 : 1	< 20 : 1	< 20 : 1
Exchangeable Sodium <sup>(S)</sup>	%	< 0.1	< 0.1				
<b>Phytotoxic Elements (by soil pH)</b>				<b>Multipurpose &amp; Specific Purpose Topsoils at pH range</b>			
				< 6.0	6.0 - 7.0	> 7.0	
Zinc <sup>MU</sup>	mg/kg	< 3	49	< 200	< 200	< 300	
Copper <sup>MU</sup>	mg/kg	< 4	14	< 100	< 135	< 200	
Nickel <sup>MU</sup>	mg/kg	< 3	18	< 60	< 75	< 110	
<b>Visible Contaminants (Air Dried Soil)</b>							
>2mm	%	N/a	1.0	< 0.5			
Plastics	%	N/a	0.00	< 0.25			
Sharps	%	N/a	0.0	0			
<b>Additional Analytes</b>							
Available Sodium <sup>(S)</sup>	mg/l	< 1	44				
Available Calcium <sup>(S)</sup>	mg/l	< 1	4800				
Electrical Conductivity	uS/cm	< 5	1428	3300			
<b>OVERALL COMPLIANCY</b>				N	N	N	N
Results are expressed on a dry weight basis, after correction for moisture content where applicable							
Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation							
M Denotes MCERTS accredited test							
U Denotes ISO17025 accredited test							
Subcontracted analysis <sup>(S)</sup>							

**Soil Analysis Certificate - Sample Descriptions**

<b>DETS Report No: 20-02527</b>	
<b>Geosphere Environmental Ltd</b>	
<b>Site Reference: Boyton Place, Haverhill</b>	
<b>Project / Job Ref: 4712,GI</b>	
<b>Order No: None Supplied</b>	
<b>Reporting Date: 10/03/2020</b>	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
465191	TS1	None Supplied	0.10	14.3	Brown loamy clay with vegetation
465192	TS2	None Supplied	0.10	14	Brown loamy clay
465193	TS3	None Supplied	0.10	13.4	Brown loamy clay with stones and vegetation
465194	TS4	None Supplied	0.10	14.6	Brown loamy clay
465195	TS5	None Supplied	0.10	16.5	Brown loamy clay with vegetation
465196	TS6	None Supplied	0.10	16.5	Brown loamy clay with vegetation
465197	TS7	None Supplied	0.10	14.9	Brown loamy clay with stones and vegetation
465198	TS8	None Supplied	0.10	17.9	Brown loamy clay with vegetation
465199	TS9	None Supplied	0.10	18.8	Brown loamy clay
465200	TS10	None Supplied	0.10	17	Brown loamy clay with stones
465201	TS11	None Supplied	0.10	14.9	Brown loamy clay with stones and vegetation
465202	TS12	None Supplied	0.10	18.2	Brown loamy clay with stones and vegetation
465203	TS13	None Supplied	0.10	17.4	Brown loamy clay with stones and vegetation
465204	TS14	None Supplied	0.10	19.6	Brown loamy clay with vegetation
465205	TS15	None Supplied	0.10	17.7	Brown loamy clay with vegetation
465206	TS16	None Supplied	0.10	17.7	Brown loamy clay with vegetation
465207	TS17	None Supplied	0.10	19.3	Brown loamy clay
465208	TS18	None Supplied	0.10	21.4	Brown loamy clay with vegetation
465209	TS19	None Supplied	0.10	19.1	Brown loamy clay with vegetation
465210	TS20	None Supplied	0.10	22.5	Brown loamy clay with vegetation
465211	TS21	None Supplied	0.10	18.7	Brown loamy clay with stones
465212	TS22	None Supplied	0.10	17.5	Brown loamy clay with stones and vegetation

*Moisture content is part of procedure E003 & is not an accredited test*

Insufficient Sample <sup>U/S</sup>

Unsuitable Sample <sup>U/S</sup>

<b>Soil Analysis Certificate - Methodology &amp; Miscellaneous Information</b>
<b>DETS Report No: 20-02527</b>
<b>Geosphere Environmental Ltd</b>
<b>Site Reference: Boyton Place, Haverhill</b>
<b>Project / Job Ref: 4712,GI</b>
<b>Order No: None Supplied</b>
<b>Reporting Date: 10/03/2020</b>

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 diphenylcarbazide 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 (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	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 @ 450oC	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 SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - 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 (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

**D Dried**  
**AR As Received**



Parameter	Matrix Type	Suite Reference	Uncertainty Measurement	Unit
TOC	Soil	BS EN 12457	7	%
Loss on Ignition	Soil	BS EN 12457	17	%
BTEX	Soil	BS EN 12457	14	%
Sum of PCBs	Soil	BS EN 12457	23	%
Mineral Oil	Soil	BS EN 12457	9	%
Total PAH	Soil	BS EN 12457	20	%
pH	Soil	BS EN 12457	0.23	Units
Acid Neutralisation Capacity	Soil	BS EN 12457	18	%
Arsenic	Leachate	BS EN 12457	10	%
Barium	Leachate	BS EN 12457	10	%
Cadmium	Leachate	BS EN 12457	7	%
Chromium	Leachate	BS EN 12457	7	%
Copper	Leachate	BS EN 12457	12	%
Mercury	Leachate	BS EN 12457	12	%
Molybdenum	Leachate	BS EN 12457	9	%
Nickel	Leachate	BS EN 12457	10	%
Lead	Leachate	BS EN 12457	5	%
Antimony	Leachate	BS EN 12457	9	%
Selenium	Leachate	BS EN 12457	10	%
Zinc	Leachate	BS EN 12457	7	%
Chloride	Leachate	BS EN 12457	8	%
Fluoride	Leachate	BS EN 12457	9	%
Sulphate	Leachate	BS EN 12457	9	%
TDS	Leachate	BS EN 12457	12	%
Phenol Index	Leachate	BS EN 12457	14	%
DOC	Leachate	BS EN 12457	10	%
Clay Content	Soil	BS 3882: 2015	15	%
Silt Content	Soil	BS 3882: 2015	14	%
Sand Content	Soil	BS 3882: 2015	13	%
Loss on Ignition	Soil	BS 3882: 2015	17	%
pH	Soil	BS 3882: 2015	0.23	Units
Carbonate	Soil	BS 3882: 2015	16	%
Total Nitrogen	Soil	BS 3882: 2015	12	%
Phosphorus (Extractable)	Soil	BS 3882: 2015	24	%
Potassium (Extractable)	Soil	BS 3882: 2015	20	%
Magnesium (Extractable)	Soil	BS 3882: 2015	26	%
Zinc	Soil	BS 3882: 2015	7	%
Copper	Soil	BS 3882: 2015	12	%
Nickel	Soil	BS 3882: 2015	10	%
Available Sodium	Soil	BS 3882: 2015	23	%
Available Calcium	Soil	BS 3882: 2015	23	%
Electrical Conductivity	Soil	BS 3882: 2015	10	%



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**Ge**

**Geotechnical.**

**En**

**Environmental.**

**Kw**

**Knotweed.**

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