P3159.1.0

Site at Battisford Hall, Church Road, Battisford, Stowmarket, IP14 2HG

Combined Phase 1 and Phase 2 Geo-environmental Report

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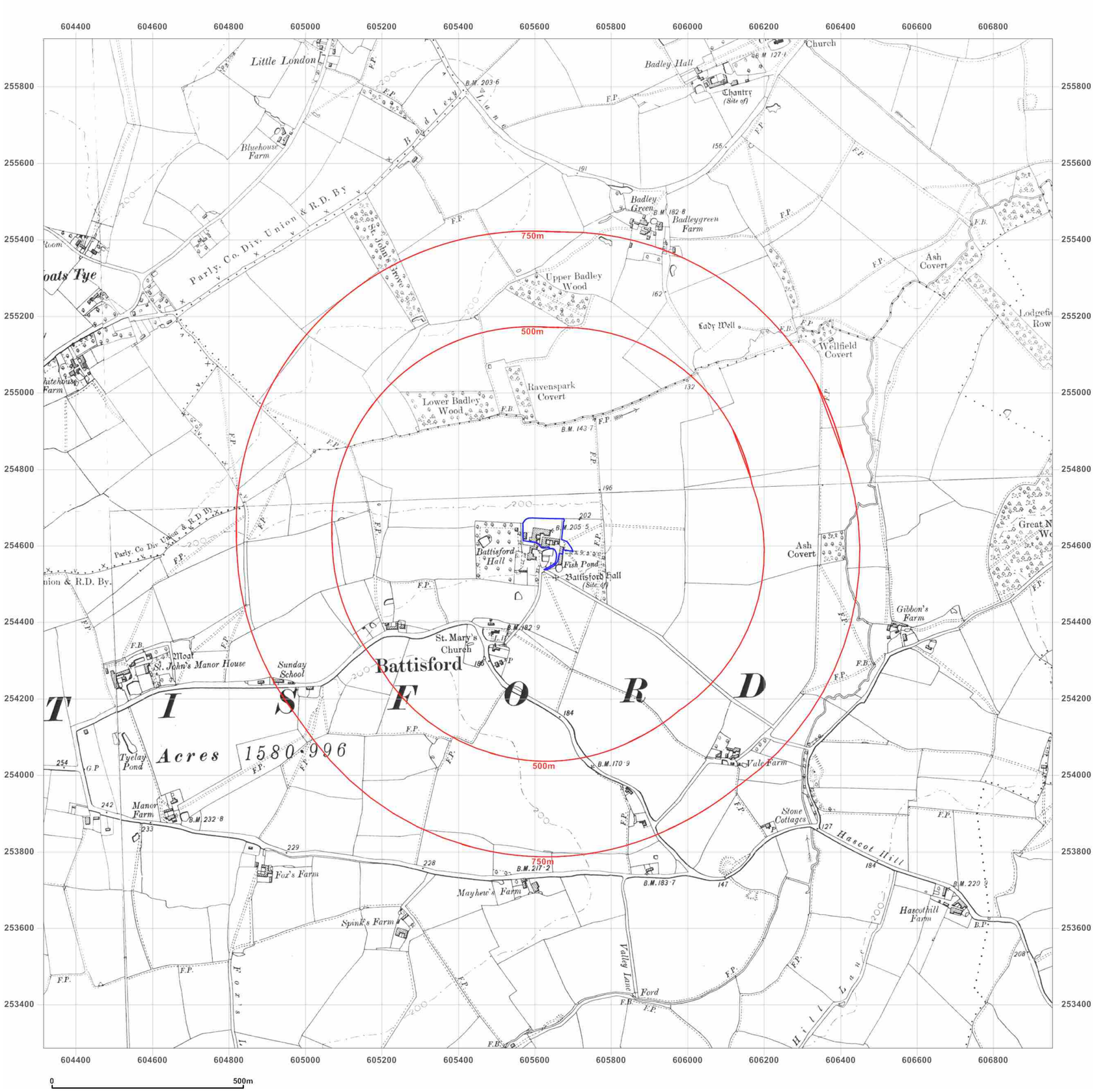
Part 4 of 4



Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: County Series

Map date: **1903-1905**

Scale: 1:10,560

Printed at: 1:10,560

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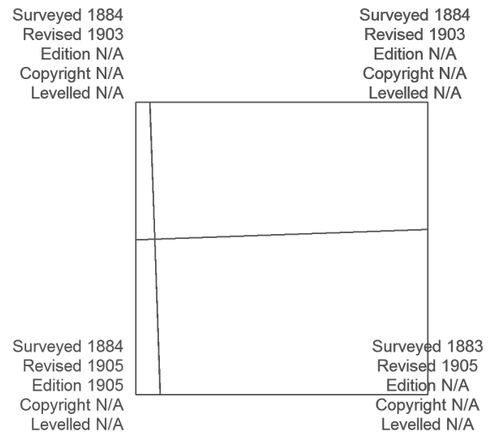

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Production date: 08 June 2018

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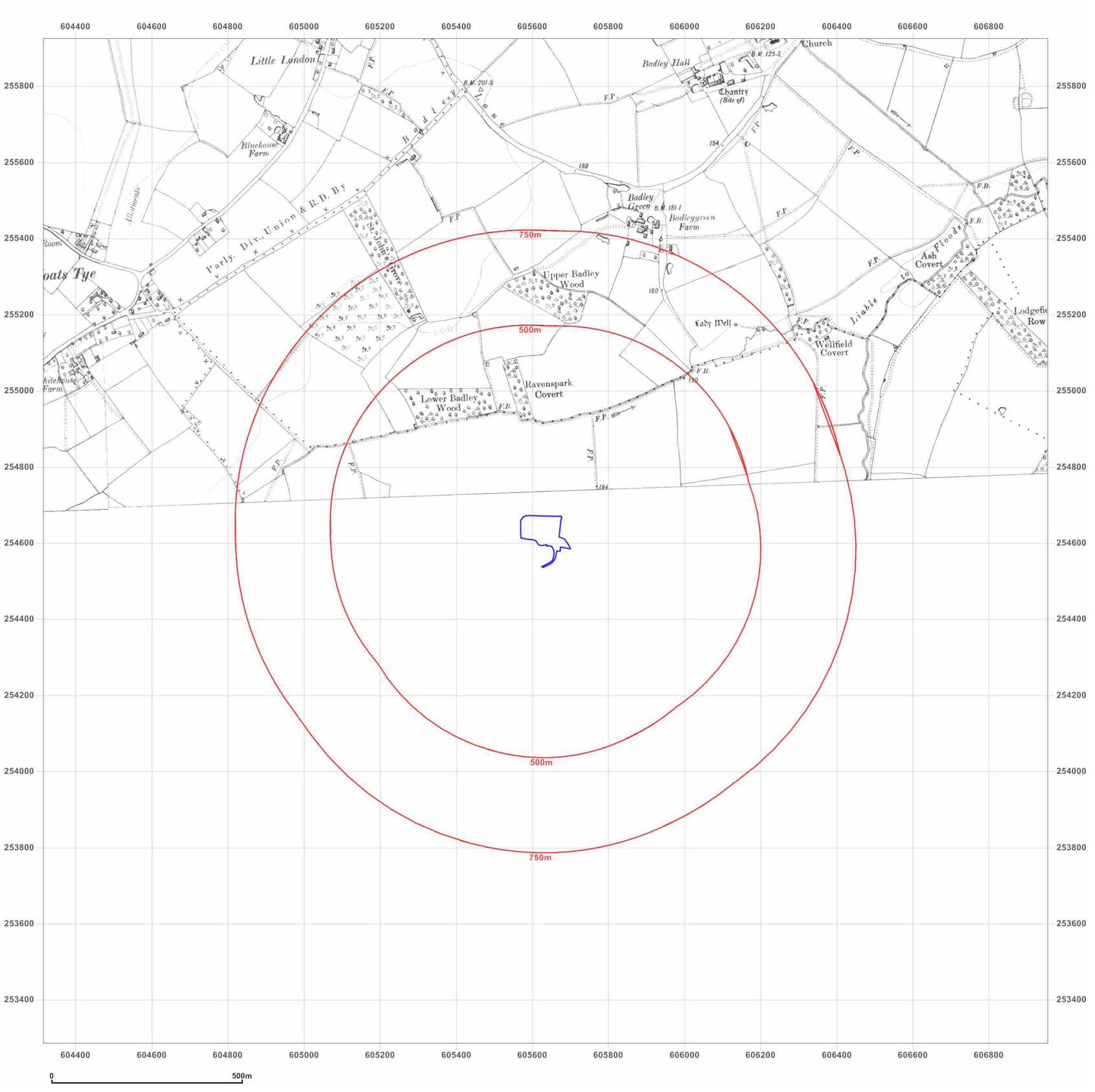

Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: County Series

Map date: **1928**

Scale: 1:10,560

Printed at: 1:10,560

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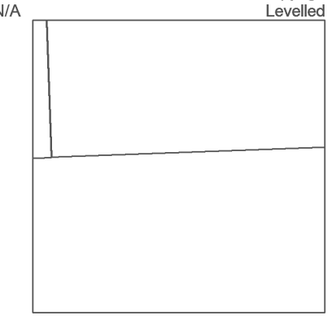
Surveyed 1884
Revised 1928
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1884
Revised 1928
Edition 1928
Copyright N/A
Levelled N/A



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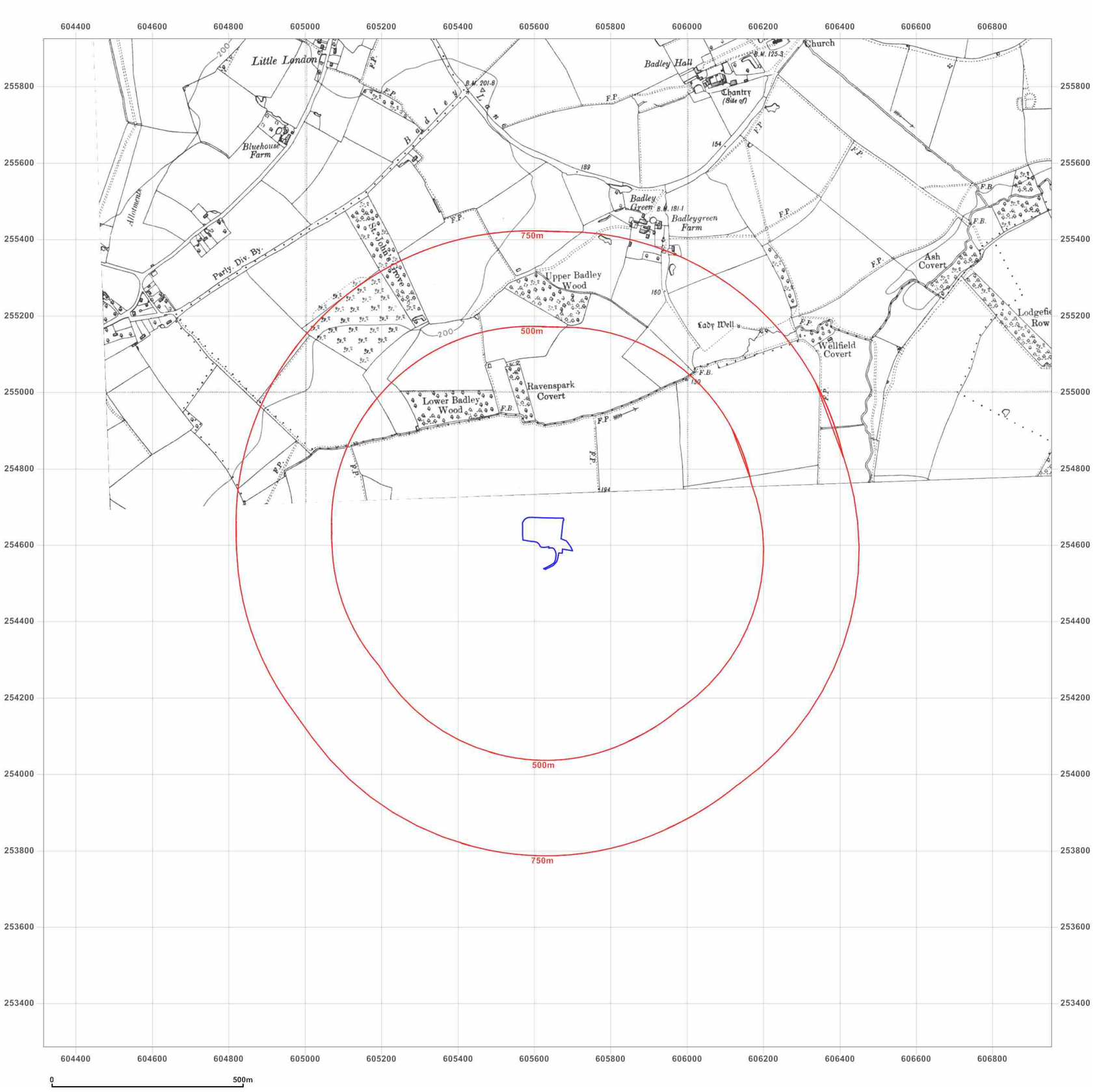

Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: County Series

Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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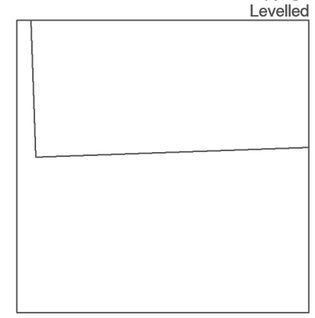
Surveyed 1884
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A



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Production date: 08 June 2018

Map legend available at:
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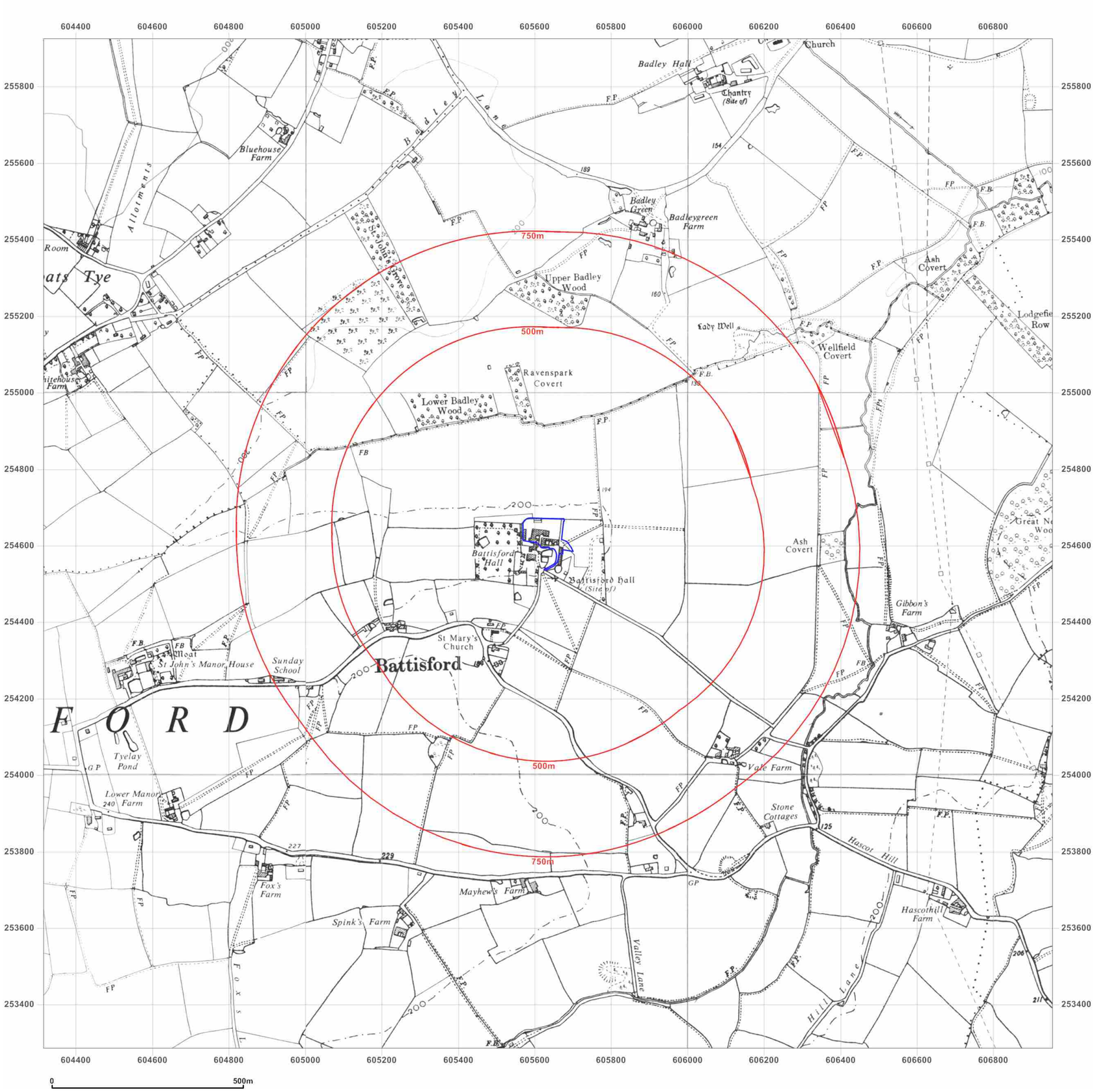

Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: Provisional
Map date: **1953-1958**
Scale: 1:10,560
Printed at: 1:10,560

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Surveyed N/A
Revised 1957
Edition 1958
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1957
Edition 1958
Copyright N/A
Levelled N/A

Surveyed 1953
Revised 1953
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1953
Revised 1953
Edition N/A
Copyright N/A
Levelled N/A

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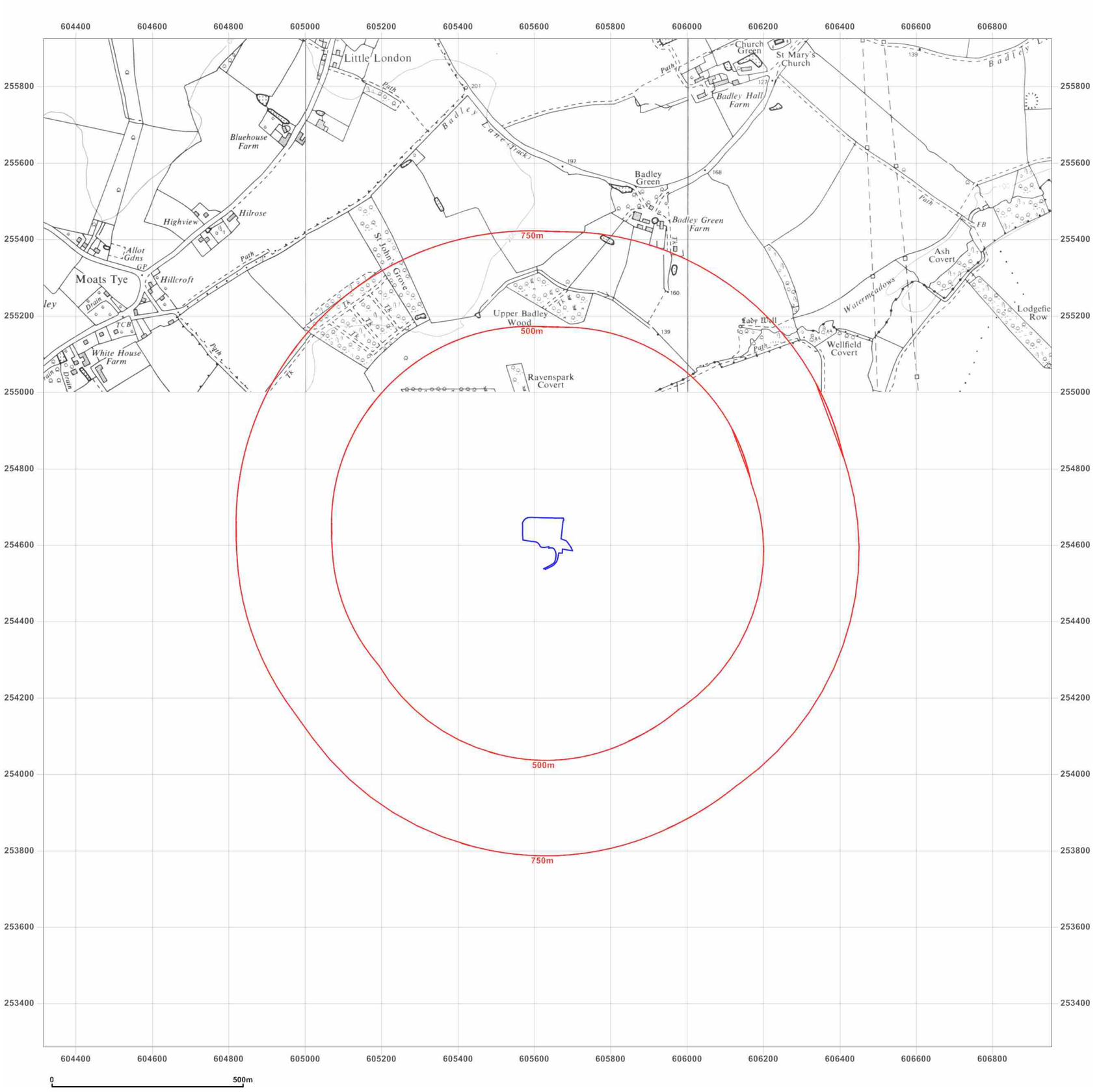
Production date: 08 June 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: Provisional

Map date: **1969**

Scale: 1:10,560

Printed at: 1:10,560

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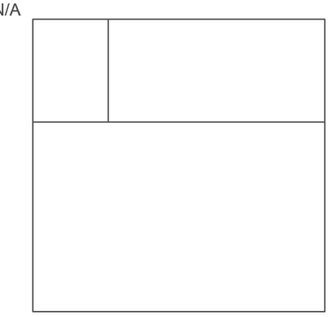
Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

Powered by OS

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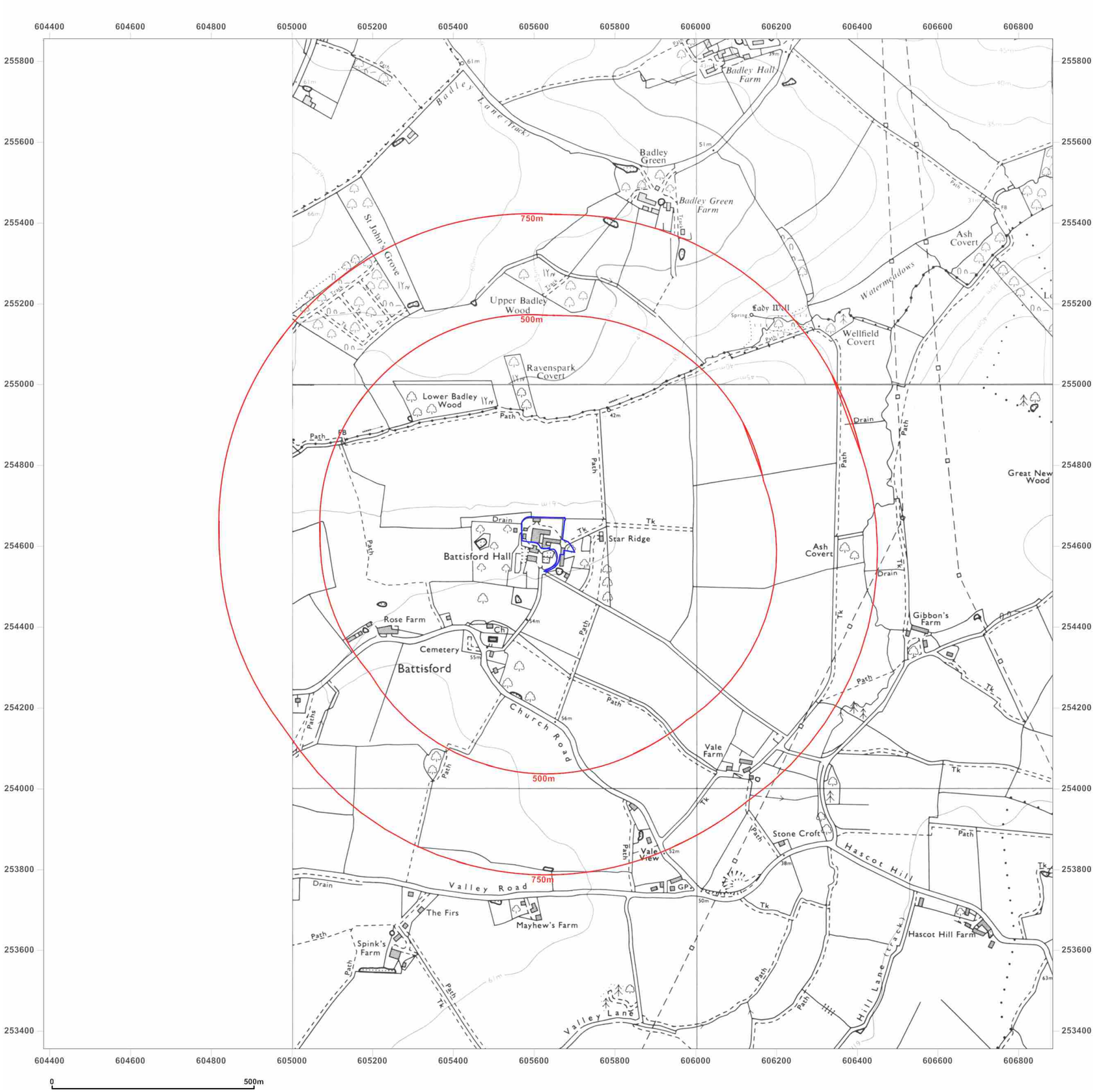
Production date: 08 June 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: National Grid

Map date: **1971-1976**

Scale: 1:10,000

Printed at: 1:10,000

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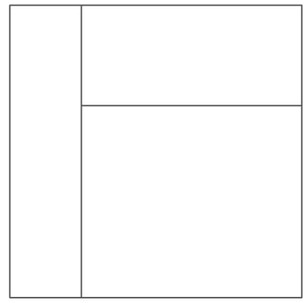

Surveyed 1974
Revised 1976
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1971
Revised 1971
Edition N/A
Copyright N/A
Levelled N/A

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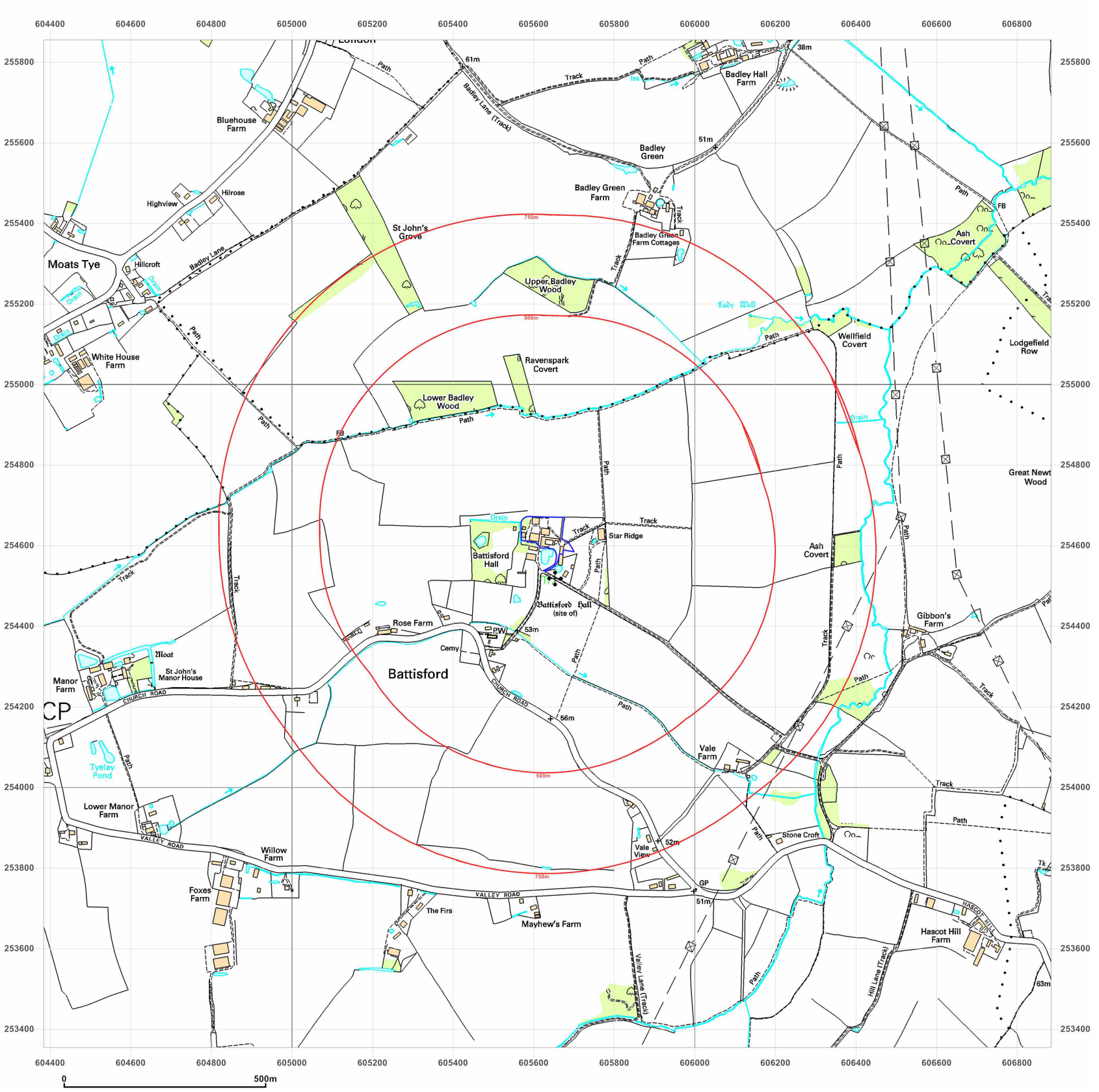
Production date: 08 June 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: 1:10,000 Raster
Map date: **2002**
Scale: 1:10,000
Printed at: 1:10,000

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2002

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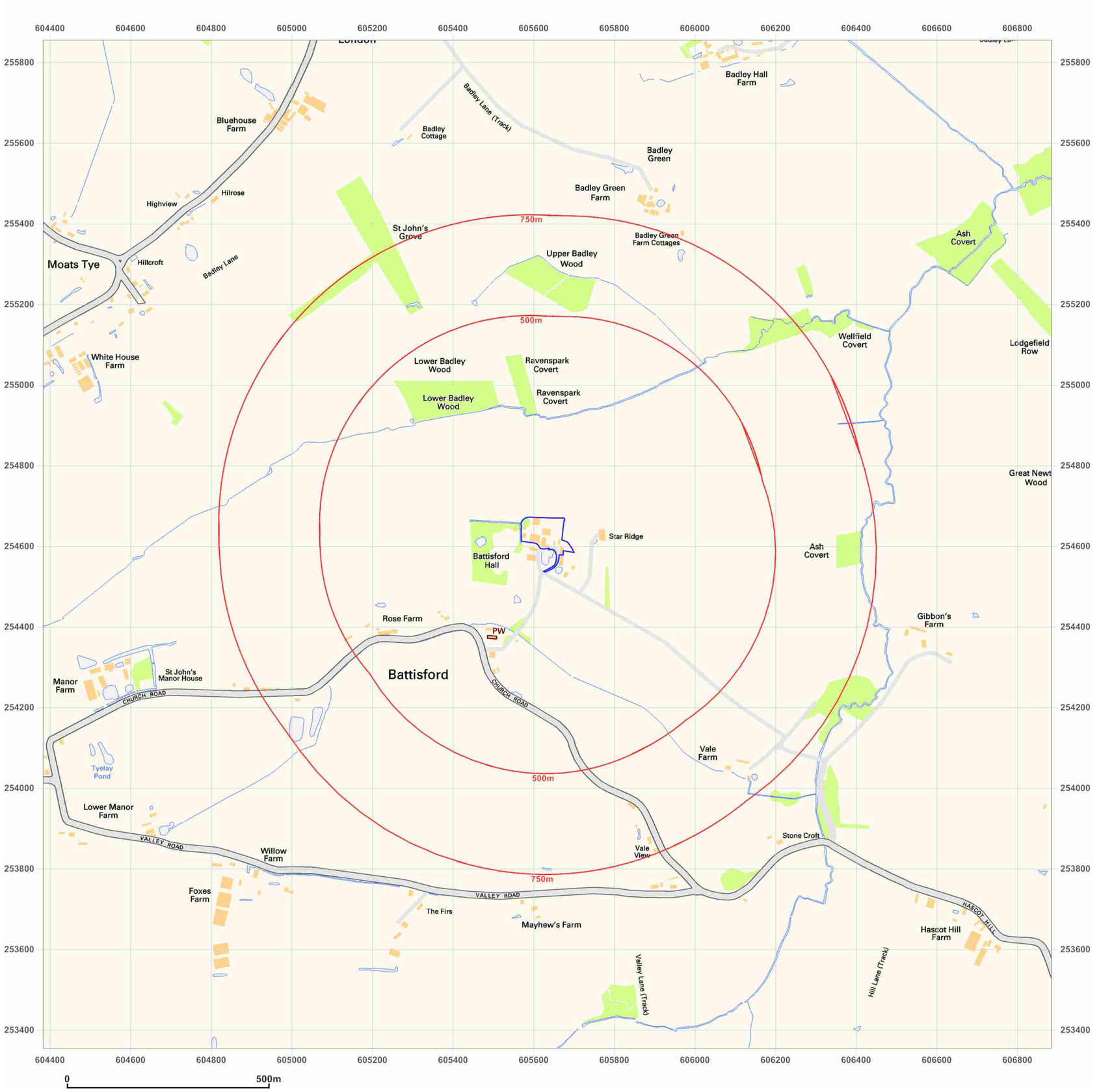
Production date: 08 June 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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2010

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Groundsure Insights
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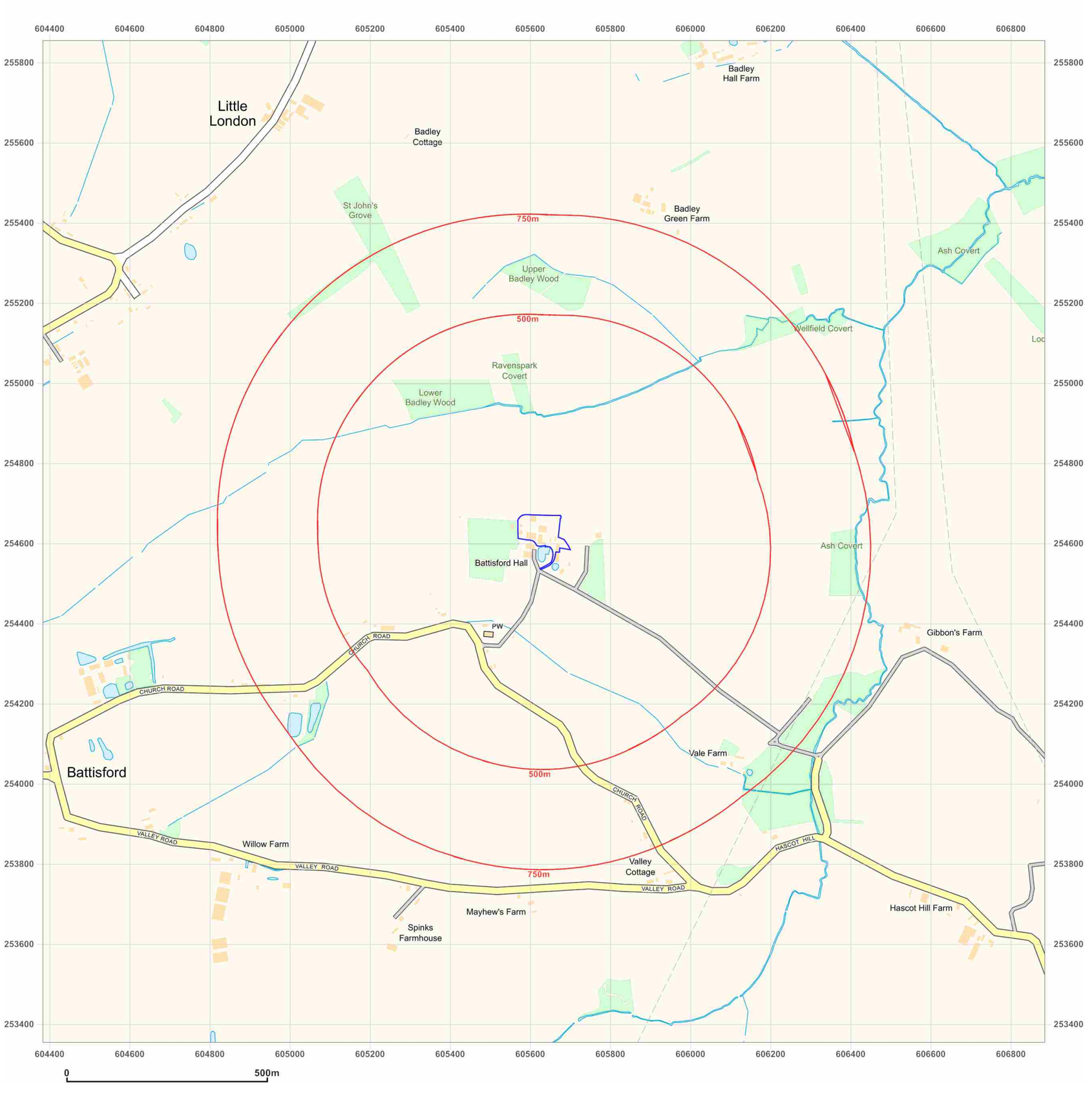
E: info@groundsure.com
W: www.groundsure.com

Production date: 08 June 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Groundsure INSIGHTS

Site Details:

BATTISFORD HALL, CHURCH ROAD, BATTISFORD, IP14 2HG

Client Ref: Q5486
Report Ref: GS-5117459
Grid Ref: 605634, 254605

Map Name: National Grid

Map date: **2014**

Scale: 1:10,000

Printed at: 1:10,000

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2014

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Production date: 08 June 2018

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf

Appendix 4 Preliminary Qualitative Risk Assessment

Preliminary Qualitative Risk Assessment

Plausible Contaminant Linkages Assuming Current Conditions							
No.	**Source**	**Pathway**	**Receptor**	**Consequence**	**Probability**	**Risk**	**Justification**
Hazards to Human Health							
1	Non-volatile contamination in soils	Direct contact / ingestion	Site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
2	Volatile contamination in soils	Inhalation	Site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
3	Contamination in soils	Direct contact / ingestion/ Inhalation	Site workers	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
4	Ground gas	Inhalation / asphyxiation	Site users	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
5	Ground Gas	Explosion	Site users	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
6	Ground gas	Inhalation / asphyxiation / explosion	Site workers	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
Hazards to the Water Environment							
7	Contamination in soils	Leachable contamination	Unproductive Strata	Minor	Not Possible	**Negligible**	No plausible contaminant linkage
8	Contamination in soils	Leachable contamination	Secondary Aquifer	Mild	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
9	Contamination in soils	Leachable contamination	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
10	Groundwater contamination	Aquifer	Secondary Aquifer	Mild	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
11	Groundwater contamination	Aquifer	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
12	Groundwater contamination	Aquifer	Surface water	Severe	Unlikely	**Moderate/Low Risk**	No plausible contaminant linkage
13	Groundwater contamination	Aquifer	Water supply well(s)	Severe	Not Possible	**Negligible**	No plausible contaminant linkage
Hazards to Flora and Fauna							
14	Contamination in Soils	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
15	Ground gas / low oxygen	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
Hazards to Building Structure and Services							
16	Contamination in soils	Direct contact with subsurface	Buried concrete	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
17	Contamination in soils	Direct contact with subsurface	Plastic water supply pipes	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
18	Ground gas	Explosion	Building structure	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site

Plausible Contaminant Linkages Assuming Future Development							
No.	**Source**	**Pathway**	**Receptor**	**Consequence**	**Probability**	**Risk**	**Justification**
Hazards to Human Health							
1	Non-volatile contamination in soils	Direct contact / ingestion	Future site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
2	Volatile contamination in soils	Inhalation	Future site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
3	Contamination in soils	Direct contact / ingestion/ Inhalation	Site workers	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
4	Ground gas	Inhalation / asphyxiation	Future site users	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
5	Ground Gas	Explosion	Future site users	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
6	Ground gas	Inhalation / asphyxiation / explosion	Site workers	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
Hazards to the Water Environment							
7	Contamination in soils	Leachable contamination	Unproductive Strata	Minor	Not Possible	**Negligible**	No plausible contaminant linkage
8	Contamination in soils	Leachable contamination	Secondary Aquifer	Mild	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
9	Contamination in soils	Leachable contamination	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
10	Groundwater contamination	Aquifer	Secondary Aquifer	Mild	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
11	Groundwater contamination	Aquifer	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
12	Groundwater contamination	Aquifer	Surface water	Severe	Unlikely	**Moderate/Low Risk**	No plausible contaminant linkage
13	Groundwater contamination	Aquifer	Water supply well(s)	Severe	Not Possible	**Negligible**	No plausible contaminant linkage
Hazards to Flora and Fauna							
14	Contamination in Soils	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
15	Ground gas / low oxygen	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
Hazards to Building Structure and Services							
16	Contamination in soils	Direct contact with subsurface	Buried concrete	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
17	Contamination in soils	Direct contact with subsurface	Plastic water supply pipes	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
18	Ground gas	Explosion	Building structure	Severe	Unlikely	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site

Classification of Consequence

Severe Short-term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990 Part IIA. Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem.
Medium Chronic damage to human health ('significant harm'). Pollution of sensitive water resources. A significant change in a particular ecosystem.
Mild Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.
Minor Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means of personal protective clothing). Easily repairable effects of damage to buildings, structures and services.

Classification of Probability
High Likelihood There is a contaminant linkage and an event, which would either appear, very likely in the short term and almost inevitable over the long term, or, there is evidence at the receptor of harm or pollution.
Likely There is a contaminant linkage and all the elements are present and in the right place, which means that, it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood. There is a contaminant linkage and circumstances are possible under which and event could occur.However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely There is a contaminant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

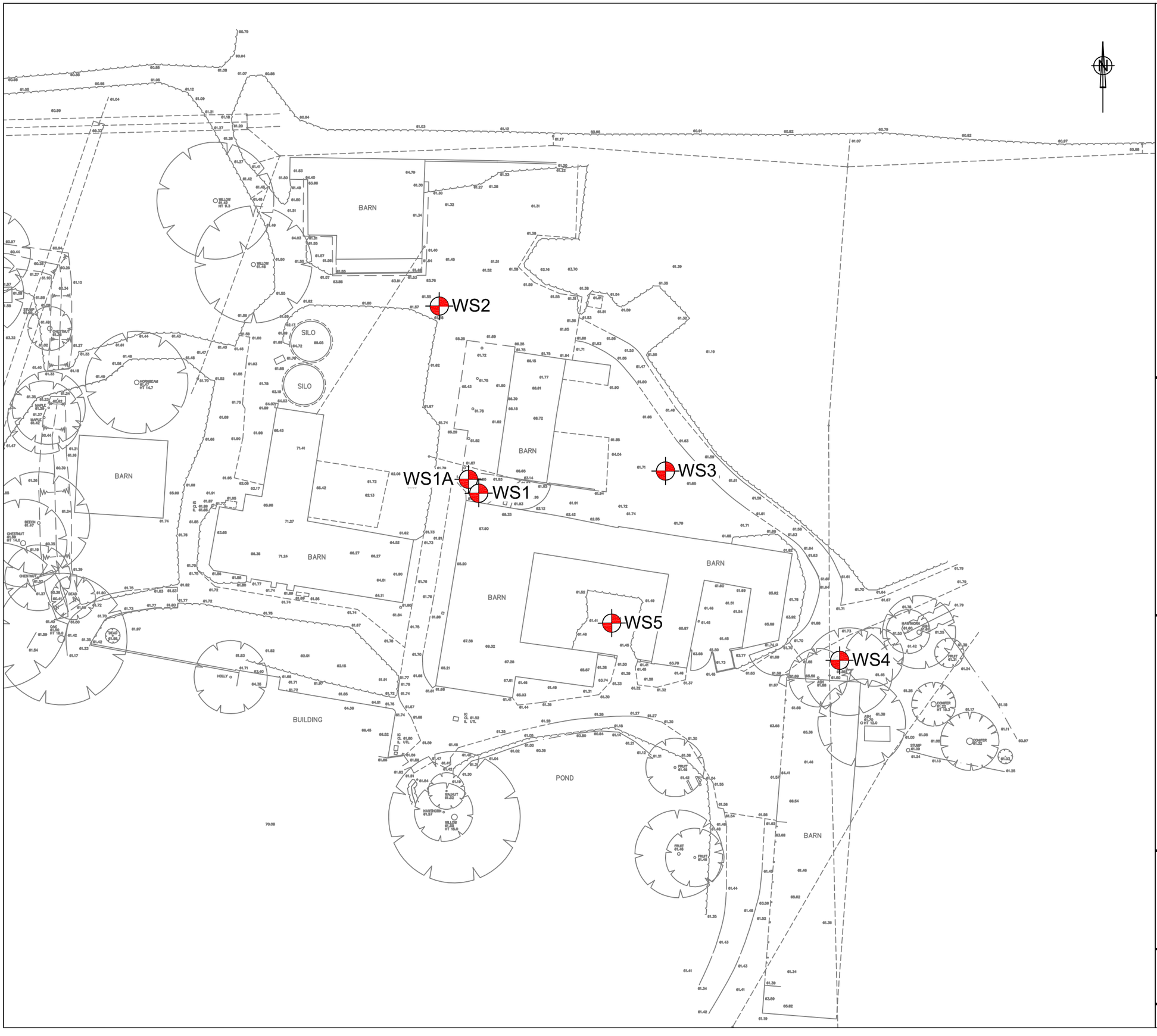
Comparison of Consequence against Probability

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Description of the Classified Risks and Likely Action Required

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

Appendix 5 Fieldwork Records



REV	DATE	DESCRIPTION

LEGEND

DYNAMIC SAMPLING BOREHOLE

LOCATIONS ARE APPROXIMATE.

PROJECT

BATTISFORD HALL, BATTISFORD,
STOWMARKET, SUFFOLK, IP14 2HG

TITLE

EXPLORATORY HOLE LOCATIONS

CLIENT

THE TRUSTEES OF T.A HARWOOD

agb ENVIRONMENTAL

agb Environmental Ltd

Newmarket Business Centre, 341 Exning Road,
Newmarket, CB8 0AT
Tel: 01638 663 226
Email: info@agbenvironmental.co.uk
Web: www.agbenvironmental.co.uk

DATE 26/06/18
SCALE 1:500

PROJECT NUMBER . DRAWING NUMBER

P3159.1 . 001

agb Environmental

BOREHOLE LOG

Project				BOREHOLE No
Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG				**WS1**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
P3159	21-06-18	63.50	E 605,624.0 N 254,625.0	
Contractor				Sheet
RP Drilling				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				63.35		0.15	MADE GROUND: reinforced concrete slab.		
				63.20		0.30	MADE GROUND: yellowy grey and grey GRAVEL of sub-angular concrete and limestone.		
				63.00		0.50	Firm, orangey brown and brown, slightly sandy, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded flint. (LOWESTOFT FORMATION)		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
21-06-18	00.00	0.50			0.45						Abandoned at 0.50mbgl due to perched water ingress.

All dimensions in metres Scale 1:37.5	Client The Trustees of T.A Harwood	Method/ Plant Used Dynamic sampling rig	Logged By AS

AGS3 UK BH P3159.1.0 BATTISFORD HALL BARNS SI LOGS.GPJ AGB1.GDT 16/7/18

agb Environmental

BOREHOLE LOG

Project				BOREHOLE No
Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG				**WS1a**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
P3159	21-06-18	63.50	E 605,622.0 N 254,626.0	
Contractor				Sheet
RP Drilling				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				63.30		0.20	MADE GROUND: reinforced concrete slab.		
0.30	ES1					(0.70)	MADE GROUND: soft or firm, multicoloured of yellowy brown, greyish brown and orange, slightly sandy, gravelly CLAY. Gravel is angular to sub-rounded of brick, flint and charcoal.		
0.60	ES2								
0.80	D1			62.60		0.90			
0.90	ES3						Stiff very high strength, yellowy grey and grey mottled, slightly gravelly CLAY. Gravel is angular to sub-angular flint and chalk. (LOWESTOFT FORMATION)		
1.20	SPT1	N16				(0.80)			
1.40	HV1	203							
1.50	ES4			61.80		1.70			
1.80	D2						Stiff locally firm very high strength, grey, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded chalk and flint. (LOWESTOFT FORMATION)		
1.80	HV2	220							
2.00	ES5								
2.00	SPT2	N23							
2.40	HV3	203							
2.80	D3								
2.80	HV4	237							
3.00	SPT3	N20				(3.30)			
3.80	D4								
4.00	SPT4	N27							
4.80	D5			58.50		5.00			
5.00	SPT5	N33							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
21-06-18	00.00	5.00			DRY						
28-06-18	00.00	5.00			3.16						

All dimensions in metres Scale 1:37.5	Client The Trustees of T.A Harwood	Method/ Plant Used Dynamic sampling rig	Logged By AS

agb Environmental

BOREHOLE LOG

Project				BOREHOLE No
Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG				**WS2**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
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Contractor				Sheet
RP Drilling				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				61.80		0.20	MADE GROUND: reinforced concrete slab.		
0.30	ES1			61.50		(0.30) 0.50	MADE GROUND: soft or firm, multicoloured of yellowy brown, greyish brown and orange, slightly sandy, gravelly CLAY. Gravel is angular to sub-rounded of brick, flint and charcoal.		
0.50	D1						Stiff very high strength, yellowy grey and grey mottled, slightly gravelly CLAY. Gravel is angular to sub-angular flint and chalk. (LOWESTOFT FORMATION)		
0.50	ES2								
0.70	ES3								
1.00	D2					(1.20)			
1.40	HV1	173							
1.50	D3								
1.50	ES4			60.30		1.70			
1.80	HV2	224					Stiff locally firm very high strength, grey, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded chalk and flint. (LOWESTOFT FORMATION)		
2.00	D4								
2.00	ES5								
2.50	D5								
2.50	HV3	217							
2.90	HV4	227							
3.00	D6					(3.30)			
3.50	HV5	237							
4.00	D7								
4.20	HV6	237							
4.80	HV7	237		57.00		5.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
21-06-18	00.00	5.00			DRY						

All dimensions in metres Scale 1:37.5	Client The Trustees of T.A Harwood	Method/ Plant Used Dynamic sampling rig	Logged By AS

AGS3 UK BH P3159.1.0 BATTISFORD HALL BARNS SI LOGS.GPJ AGB1.GDT 16/7/18

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BOREHOLE LOG

Project				BOREHOLE No
Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG				**WS3**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
P3159	21-06-18	62.00	E 605,651.0 N 254,630.0	
Contractor				Sheet
RP Drilling				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				61.80		0.20	MADE GROUND: brown and grey, slightly sandy GRAVEL of sub-angular to sub-rounded flint.		
0.30	ES1						Firm, greyish brown and orangey brown mottled, slightly gravelly CLAY. Gravel is angular to sub-angular flint and chalk. (LOWESTOFT FORMATION)		
0.50	D1								
0.60	ES2					(1.10)			
0.90	ES3								
1.00	D2								
				60.70		1.30			
1.50	D3						Stiff locally very stiff high strength, grey, slightly gravelly CLAY with local sand pockets. Gravel is sub-angular to sub-rounded chalk and flint. (LOWESTOFT FORMATION)		
1.50	ES4								
1.50	HV1	170							
2.00	D4								
2.00	HV2	170							
2.50	HV3	170							
3.00	D5								
3.00	HV4	170				(3.70)			
3.50	HV5	170							
4.00	HV6	102							
4.50	HV7	119							
				57.00		5.00			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
21-06-18	00.00	5.00			DRY						Live roots present to 0.30mbgl.

All dimensions in metres Scale 1:37.5	Client The Trustees of T.A Harwood	Method/ Plant Used Dynamic sampling rig	Logged By AS

AGS3 UK BH P3159.1.0 BATTISFORD HALL BARNS SI LOGS.GPJ AGB1.GDT 16/7/18

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BOREHOLE LOG

Project				BOREHOLE No
Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG				**WS4**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
P3159	21-06-18	63.00	E 605,671.0 N 254,601.0	
Contractor				Sheet
RP Drilling				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				62.80		0.20	MADE GROUND: brown and grey, slightly sandy GRAVEL of sub-angular to sub-rounded flint.		
0.30	ES1						Firm, greyish brown and orangey brown mottled, slightly gravelly CLAY. Gravel is angular to sub-angular flint and chalk. (LOWESTOFT FORMATION)		
0.50	D1								
0.60	ES2					(1.10)			
0.90	ES3								
1.20	SPT1	N24		61.70		1.30			
1.50	D2						Stiff locally very stiff very high strength, grey, slightly gravelly CLAY with local sand pockets. Gravel is sub-angular to sub-rounded chalk and flint. (LOWESTOFT FORMATION)		
1.50	ES4								
1.50	HV1	186							
2.00	SPT2	N22							
2.40	HV2	220							
2.50	D3								
3.00	SPT3	N23				(3.70)			
3.40	HV3	224							
3.50	D4								
4.00	SPT4	N26							
4.40	HV4	237							
				58.00		5.00			
5.00	SPT5	N33							

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
21-06-18	00.00	5.00			DRY						Live roots present to 0.60mbgl
28-06-18	00.00	5.00			3.20						

All dimensions in metres Scale 1:37.5	Client The Trustees of T.A Harwood	Method/ Plant Used Dynamic sampling rig	Logged By AS

AGS3 UK BH P3159.1.0 BATTISFORD HALL BARNS SI LOGS.GPJ AGB1.GDT 16/7/18

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BOREHOLE LOG

Project				BOREHOLE No
Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG				**WS5**
Job No	Date	Ground Level (m)	Co-Ordinates ()	
P3159	21-06-18	63.00	E 605,644.0 N 254,610.0	
Contractor				Sheet
RP Drilling				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				62.90		0.10	MADE GROUND: reinforced concrete slab.		
						(0.30)	MADE GROUND: orangey brown and greyish brown mottled, slightly clayey, sandy GRAVEL of sub-angular to sub-rounded flint and concrete.		
0.30	ES1			62.60		0.40			
0.60	ES2						Firm or stiff very high strength, yellowy brown and grey mottled, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded flint and chalk. (LOWESTOFT FORMATION)		
0.90	ES3								
1.00	D1								
1.40	HV1	183							
1.50	ES4					(2.60)			
2.00	D2								
2.40	HV2	214							
2.50	ES5								
2.70	HV3	220							
				60.00		3.00			
3.00	D3								

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
21-06-18	00.00	3.00			DRY						

All dimensions in metres Scale 1:37.5	Client The Trustees of T.A Harwood	Method/ Plant Used Dynamic sampling rig	Logged By AS

AGS3 UK BH P3159.1.0 BATTISFORD HALL BARNS SI LOGS.GPJ AGB1.GDT 16/7/18

Monitoring Record

Site name / location:	Battisford Hall
Installation ref.:	WS1A
Date:	28/06/2018
Engineer:	AS
Weather / temp:	16C cloudy

PID Monitoring

	Reading		Reading
	ppm		ppm
Ambient	0.0	**+3m**	-
+10s	0.7	**+4m**	-
+30s	1.0	**+5m**	-
+1m	0.8	**+6m**	-
+1m 30s	0.5	**+7m**	-
+2m	0.4	**+8m**	-
		Max	*1.0*

Flow Rate

	Reading
	l/hr
+10s	0.0
+30s	0.0
+1m	0.0
+1m 30s	0.0
+2m	0.0
Max	0.0

Gas Monitoring

	CO2	CH4	O2	CO	H2S	Pressure	Comments
	%	%	%	ppm	ppm	mb	
+10s	0.2	0.0	20.7	0.0	0.0	1022	
+30s	0.6	0.0	19.4	0.0	0.0	1022	
+1m	0.7	0.0	18.8	0.0	0.0	1022	
+1m 30s	0.7	0.0	18.6	0.0	0.0	1022	
+2m	0.7	0.0	18.6	0.0	0.0	1022	
+2m 30s	0.7	0.0	18.6	0.0	0.0	1022	
+3m	0.7	0.0	18.6	0.0	0.0	1022	
+3m 30s	0.7	0.0	18.6	0.0	0.0	1022	
+4m	0.7	0.0	18.6	0.0	0.0	1022	
+4m 30s	0.7	0.0	18.6	0.0	0.0	1022	
+5m	0.7	0.0	18.6	0.0	0.0	1022	
Min	*0.2*	*0.0*	*18.6*	*0.0*	*0.0*	-	
Max	*0.7*	*0.0*	*20.7*	*0.0*	*0.0*	-	

Groundwater

Water Depth (m)	3.16
Well Depth (m)	5.00
Sample:	3.50
Comment:	-

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Monitoring Record

Site name / location:	Battisford Hall
Installation ref.:	WS4
Date:	28/06/2018
Engineer:	AS
Weather / temp:	18C cloudy

PID Monitoring

	Reading		Reading
	ppm		ppm
Ambient	0.0	**+3m**	-
+10s	0.5	**+4m**	-
+30s	0.3	**+5m**	-
+1m	0.2	**+6m**	-
+1m 30s	0.2	**+7m**	-
+2m	0.2	**+8m**	-
		Max	*0.5*

Flow Rate

	Reading
	l/hr
+10s	0.0
+30s	0.0
+1m	0.0
+1m 30s	0.0
+2m	0.0
Max	0.0

Gas Monitoring

	CO2	CH4	O2	CO	H2S	Pressure	Comments
	%	%	%	ppm	ppm	mb	
+10s	0.6	0.1	20.5	0.0	0.0	1022	
+30s	1.2	0.1	19.8	0.0	0.0	1022	
+1m	1.3	0.1	19.5	0.0	0.0	1022	
+1m 30s	1.4	0.1	19.4	0.0	0.0	1022	
+2m	1.5	0.1	19.3	0.0	0.0	1022	
+2m 30s	1.5	0.1	19.3	0.0	0.0	1022	
+3m	1.5	0.1	19.3	0.0	0.0	1022	
+3m 30s	1.5	0.1	19.3	0.0	0.0	1022	
+4m	1.5	0.1	19.3	0.0	0.0	1022	
+4m 30s	1.5	0.1	19.3	0.0	0.0	1022	
+5m	1.5	0.1	19.3	0.0	0.0	1022	
Min	*0.6*	*0.1*	*19.3*	*0.0*	*0.0*	-	
Max	*1.5*	*0.1*	*20.5*	*0.0*	*0.0*	-	

Groundwater

Water Depth (m)	3.20
Well Depth (m)	5.00
Sample:	4.00
Comment:	-

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Appendix 6 Laboratory Results

Adam Steele
AGB Environmental Ltd
341 Exning Road
Newmarket
CB8 0AT

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410
russell.jarvis@qtsenvironmental.com

DETS Report No: 18-77375

Site Reference:	Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG
Project / Job Ref:	P3159.1
Order No:	None Supplied
Sample Receipt Date:	25/06/2018
Sample Scheduled Date:	25/06/2018
Report Issue Number:	1
Reporting Date:	04/07/2018

Authorised by:

Russell Jarvis
Associate Director of Client Services

Authorised by:

Dave Ashworth
Deputy Quality Manager

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate						
DETS Report No: 18-77375	**Date Sampled**	21/06/18	21/06/18	21/06/18	21/06/18	21/06/18
AGB Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a	WS2	WS3	WS4	WS5
Project / Job Ref: P3159.1	**Additional Refs**	ES1	ES1	ES1	ES1	ES1
Order No: None Supplied	**Depth (m)**	0.30	0.30	0.30	0.30	0.30
Reporting Date: 04/07/2018	**QTSE Sample No**	342772	342773	342774	342775	342776

Determinand	Unit	RL	Accreditation					
Asbestos Screen (S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	10.8	11.3	8.3	8.0	11.3
Total Cyanide	mg/kg	< 2	NONE	< 2				
Total Sulphate as SO_4	mg/kg	< 200	NONE	2430	2235	< 200	607	4246
Total Sulphate as SO_4	%	< 0.02	NONE	0.24	0.22	< 0.02	0.06	0.42
W/S Sulphate as SO_4 (2:1)	mg/l	< 10	MCERTS	20	29	26	41	19
W/S Sulphate as SO_4 (2:1)	g/l	< 0.01	MCERTS	0.02	0.03	0.03	0.04	0.02
Organic Matter	%	< 0.1	MCERTS	0.9	2.5	0.6	2.9	0.7
Arsenic (As)	mg/kg	< 2	MCERTS	13	8	2	9	11
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	17	16	6	209	21
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	13	7	< 4	13	10
Lead (Pb)	mg/kg	< 3	MCERTS	12	15	4	26	8
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	19	9	4	12	13
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Zinc (Zn)	mg/kg	< 3	MCERTS	48	26	12	91	44
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2				
EPH (C10 - C40)	mg/kg	< 6	MCERTS			15	129	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
Subcontracted analysis (S)

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate - Speciated PAHs							
DETS Report No: 18-77375	**Date Sampled**	21/06/18	21/06/18	21/06/18	21/06/18	21/06/18
AGB Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a	WS2	WS3	WS4	WS5
Project / Job Ref: P3159.1	**Additional Refs**	ES1	ES1	ES1	ES1	ES1
Order No: None Supplied	**Depth (m)**	0.30	0.30	0.30	0.30	0.30
Reporting Date: 04/07/2018	**QTSE Sample No**	342772	342773	342774	342775	342776

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.26	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	0.19	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	0.21	< 0.1	< 0.1	0.11	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	0.43	< 0.1	< 0.1	0.31	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	5.52	0.20	< 0.1	2.28	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	1.59	< 0.1	< 0.1	0.26	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	16.30	0.39	0.18	2.85	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	13.20	0.35	0.15	2.31	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	4.87	0.19	< 0.1	1.14	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	4.50	0.23	0.12	1.29	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	4.84	0.33	0.16	1.50	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	1.47	0.12	< 0.1	0.53	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	3.54	0.20	0.10	1.03	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	1.89	0.13	< 0.1	0.66	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.33	< 0.1	< 0.1	0.12	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	1.46	< 0.1	< 0.1	0.53	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	60.2	2.1	< 1.6	15.4	< 1.6

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 18-77375	**Date Sampled**	21/06/18	21/06/18	21/06/18		
AGB Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a	WS2	WS5		
Project / Job Ref: P3159.1	**Additional Refs**	ES1	ES1	ES1		
Order No: None Supplied	**Depth (m)**	0.30	0.30	0.30		
Reporting Date: 04/07/2018	**QTSE Sample No**	342772	342773	342776		

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3		
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3		
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10		
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21		
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	2	< 2	< 2		
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	46	< 3	< 3		
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	107	< 10	< 10		
Aromatic (C5 - C35)	mg/kg	< 21	NONE	155	< 21	< 21		
Total >C5 - C35	mg/kg	< 42	NONE	155	< 42	< 42		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{O}C

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 18-77375	**Date Sampled**	21/06/18	21/06/18	21/06/18		
AGB Environmental Ltd	**Time Sampled**	None Supplied	None Supplied	None Supplied		
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a	WS2	WS5		
Project / Job Ref: P3159.1	**Additional Refs**	ES1	ES1	ES1		
Order No: None Supplied	**Depth (m)**	0.30	0.30	0.30		
Reporting Date: 04/07/2018	**QTSE Sample No**	342772	342773	342776		

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

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

4480

Soil Analysis Certificate - Volatile Organic Compounds (VOC)						
DETS Report No: 18-77375	**Date Sampled**	21/06/18				
AGB Environmental Ltd	**Time Sampled**	None Supplied				
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a				
Project / Job Ref: P3159.1	**Additional Refs**	ES1				
Order No: None Supplied	**Depth (m)**	0.30				
Reporting Date: 04/07/2018	**QTSE Sample No**	342772				

Determinand	Unit	RL	Accreditation					
Dichlorodifluoromethane	ug/kg	< 5	MCERTS	< 5				
Vinyl Chloride	ug/kg	< 5	MCERTS	< 5				
Chloromethane	ug/kg	< 10	MCERTS	< 10				
Chloroethane	ug/kg	< 5	MCERTS	< 5				
Bromomethane	ug/kg	< 10	MCERTS	< 10				
Trichlorofluoromethane	ug/kg	< 5	MCERTS	< 5				
1,1-Dichloroethene	ug/kg	< 5	MCERTS	< 5				
MTBE	ug/kg	< 5	MCERTS	< 5				
trans-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5				
1,1-Dichloroethane	ug/kg	< 5	MCERTS	< 5				
cis-1,2-Dichloroethene	ug/kg	< 5	MCERTS	< 5				
2,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5				
Chloroform	ug/kg	< 5	MCERTS	< 5				
Bromochloromethane	ug/kg	< 5	MCERTS	< 5				
1,1,1-Trichloroethane	ug/kg	< 5	MCERTS	< 5				
1,1-Dichloropropene	ug/kg	< 10	MCERTS	< 10				
Carbon Tetrachloride	ug/kg	< 5	MCERTS	< 5				
1,2-Dichloroethane	ug/kg	< 5	MCERTS	< 5				
Benzene	ug/kg	< 2	MCERTS	< 2				
1,2-Dichloropropane	ug/kg	< 5	MCERTS	< 5				
Trichloroethene	ug/kg	< 5	MCERTS	< 5				
Bromodichloromethane	ug/kg	< 5	MCERTS	< 5				
Dibromomethane	ug/kg	< 5	MCERTS	< 5				
TAME	ug/kg	< 5	MCERTS	< 5				
cis-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5				
Toluene	ug/kg	< 5	MCERTS	< 5				
trans-1,3-Dichloropropene	ug/kg	< 5	MCERTS	< 5				
1,1,2-Trichloroethane	ug/kg	< 10	MCERTS	< 10				
1,3-Dichloropropane	ug/kg	< 5	MCERTS	< 5				
Tetrachloroethene	ug/kg	< 5	MCERTS	< 5				
Dibromochloromethane	ug/kg	< 5	MCERTS	< 5				
1,2-Dibromoethane	ug/kg	< 5	MCERTS	< 5				
Chlorobenzene	ug/kg	< 5	MCERTS	< 5				
1,1,1,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5				
Ethyl Benzene	ug/kg	< 2	MCERTS	< 2				
m,p-Xylene	ug/kg	< 2	MCERTS	< 2				
o-Xylene	ug/kg	< 2	MCERTS	< 2				
Styrene	ug/kg	< 5	MCERTS	< 5				
Bromoform	ug/kg	< 10	MCERTS	< 10				
Isopropylbenzene	ug/kg	< 5	MCERTS	< 5				
1,1,2,2-Tetrachloroethane	ug/kg	< 5	MCERTS	< 5				
1,2,3-Trichloropropane	ug/kg	< 5	MCERTS	< 5				
n-Propylbenzene	ug/kg	< 5	MCERTS	< 5				
Bromobenzene	ug/kg	< 5	MCERTS	< 5				
2-Chlorotoluene	ug/kg	< 5	MCERTS	< 5				
1,3,5-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5				
4-Chlorotoluene	ug/kg	< 5	MCERTS	< 5				
tert-Butylbenzene	ug/kg	< 5	MCERTS	< 5				
1,2,4-Trimethylbenzene	ug/kg	< 5	MCERTS	< 5				
sec-Butylbenzene	ug/kg	< 5	MCERTS	< 5				
p-Isopropyltoluene	ug/kg	< 5	MCERTS	< 5				
1,3-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5				
1,4-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5				
n-Butylbenzene	ug/kg	< 5	MCERTS	< 5				
1,2-Dichlorobenzene	ug/kg	< 5	MCERTS	< 5				
,2-Dibromo-3-chloropropane	ug/kg	< 10	MCERTS	< 10				
Hexachlorobutadiene	ug/kg	< 5	MCERTS	< 5				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30^{o}C

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate - Semi Volatile Organic Compounds (SVOC)						
DETS Report No: 18-77375	**Date Sampled**	21/06/18				
AGB Environmental Ltd	**Time Sampled**	None Supplied				
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a				
Project / Job Ref: P3159.1	**Additional Refs**	ES1				
Order No: None Supplied	**Depth (m)**	0.30				
Reporting Date: 04/07/2018	**QTSE Sample No**	342772				

Determinand	Unit	RL	Accreditation					
Phenol	mg/kg	< 0.1	NONE	< 0.1				
1,2,4-Trichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1				
2-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1				
Nitrobenzene	mg/kg	< 0.1	MCERTS	< 0.1				
0-Cresol	mg/kg	< 0.1	NONE	< 0.1				
bis(2-chloroethoxy)methane	mg/kg	< 0.1	MCERTS	< 0.1				
bis(2-chloroethyl)ether	mg/kg	< 0.1	MCERTS	< 0.1				
2,4-Dichlorophenol	mg/kg	< 0.1	MCERTS	< 0.1				
2-Chlorophenol	mg/kg	< 0.1	ISO17025	< 0.1				
1,3-Dichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1				
1,4-Dichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1				
1,2-Dichlorobenzene	mg/kg	< 0.1	ISO17025	< 0.1				
2,4-Dimethylphenol	mg/kg	< 0.15	ISO17025	< 0.15				
Isophorone	mg/kg	< 0.1	NONE	< 0.1				
Hexachloroethane	mg/kg	< 0.1	MCERTS	< 0.1				
p-Cresol	mg/kg	< 0.15	MCERTS	< 0.15				
2,4,6-Trichlorophenol	mg/kg	< 0.1	MCERTS	< 0.1				
2,4,5-Trichlorophenol	mg/kg	< 0.15	MCERTS	< 0.15				
2-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1				
4-Chloro-3-methylphenol	mg/kg	< 0.1	NONE	< 0.1				
2-Methylnaphthalene	mg/kg	< 0.1	MCERTS	< 0.1				
Hexachlorocyclopentadiene	mg/kg	< 0.1	NONE	< 0.1				
Hexachlorobutadiene	mg/kg	< 0.1	ISO17025	< 0.1				
2,6-Dinitrotoluene	mg/kg	< 0.1	MCERTS	< 0.1				
Dimethyl phthalate	mg/kg	< 0.1	NONE	< 0.1				
2-Chloronaphthalene	mg/kg	< 0.1	MCERTS	< 0.1				
4-Chloroanaline	mg/kg	< 0.15	NONE	< 0.15				
4-Nitrophenol	mg/kg	< 0.1	NONE	< 0.1				
4-Chlorophenyl phenyl ether	mg/kg	< 0.1	MCERTS	< 0.1				
3-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1				
4-Nitroaniline	mg/kg	< 0.1	NONE	< 0.1				
4-Bromophenyl phenyl ether	mg/kg	< 0.1	MCERTS	< 0.1				
Hexachlorobenzene	mg/kg	< 0.1	MCERTS	< 0.1				
2,4-Dinitrotoluene	mg/kg	< 0.1	MCERTS	< 0.1				
Diethyl phthalate	mg/kg	< 0.1	MCERTS	< 0.1				
Dibenzofuran	mg/kg	< 0.1	MCERTS	< 0.1				
Azobenzene	mg/kg	< 0.1	NONE	< 0.1				
Dibutyl phthalate	mg/kg	< 0.1	ISO17025	< 0.1				
Carbazole	mg/kg	< 0.1	ISO17025	< 0.1				
bis(2-ethylhexyl)phthalate	mg/kg	< 0.15	MCERTS	< 0.15				
Benzyl butyl phthalate	mg/kg	< 0.1	MCERTS	< 0.1				
Di-n-octyl phthalate	mg/kg	< 0.1	MCERTS	< 0.1				

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

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Semi Volatile Organic Compounds TIC (SVOC)		
DETS Report No: 18-77375	**Date Sampled**	21/06/18
AGB Environmental Ltd	**Time Sampled**	None Supplied
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1a
Project / Job Ref: P3159.1	**Additional Refs**	ES1
Order No: None Supplied	**Depth (m)**	0.30
Reporting Date: 04/07/2018	**QTSE Sample No**	342772

Compound No	Compound Name	% Match	Units	RL	Estimated Concentration
1	N/a	N/a	mg/kg	< 0.1	< 0.1
2	N/a	N/a	mg/kg	< 0.1	< 0.1
3	N/a	N/a	mg/kg	< 0.1	< 0.1
4	N/a	N/a	mg/kg	< 0.1	< 0.1
5	N/a	N/a	mg/kg	< 0.1	< 0.1

There were no / other compounds identified with a match of >90%

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Kent ME17 2JN
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Soil Analysis Certificate - Sample Descriptions
DETS Report No: 18-77375
AGB Environmental Ltd
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG
Project / Job Ref: P3159.1
Order No: None Supplied
Reporting Date: 04/07/2018

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
342772	WS1a	ES1	0.30	8.9	Brown sandy clay with stones and concrete
342773	WS2	ES1	0.30	5.7	Light grey sandy clay with stones and concrete
342774	WS3	ES1	0.30	2.9	Brown sandy clay with stones and concrete
342775	WS4	ES1	0.30	3.9	Brown sandy clay with stones and chalk
342776	WS5	ES1	0.30	6.4	Light grey sandy clay with stones and concrete

Moisture content is part of procedure E003 & is not an accredited test
Insufficient Sample I/S
Unsuitable Sample U/S

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-77375
AGB Environmental Ltd
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG
Project / Job Ref: P3159.1
Order No: None Supplied
Reporting Date: 04/07/2018

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

4480

Adam Steele
AGB Environmental Ltd
341 Exning Road
Newmarket
CB8 0AT

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410
russell.jarvis@qtsenvironmental.com

DETS Report No: 18-77764

Site Reference:	Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG
Project / Job Ref:	P3159.1
Order No:	PO5550
Sample Receipt Date:	29/06/2018
Sample Scheduled Date:	02/07/2018
Report Issue Number:	1
Reporting Date:	06/07/2018

Authorised by:

Russell Jarvis
Associate Director of Client Services

Authorised by:

Dave Ashworth
Deputy Quality Manager

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

UKAS TESTING
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Water Analysis Certificate								
DETS Report No: 18-77764	**Date Sampled**	28/06/18	28/06/18					
AGB Environmental Ltd	**Time Sampled**	None Supplied	None Supplied					
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1	WS4					
Project / Job Ref: P3159.1	**Additional Refs**	None Supplied	None Supplied					
Order No: PO5550	**Depth (m)**	3.50	4.00					
Reporting Date: 06/07/2018	**QTSE Sample No**	344586	344587					

Determinand	Unit	RL	Accreditation					
pH	pH Units	N/a	ISO17025	7.0	7.4			
Total Organic Carbon (TOC)	mg/l	< 0.1	NONE	10.3	5.9			
Arsenic (dissolved)	ug/l	< 5	ISO17025	< 5	< 5			
Cadmium (dissolved)	ug/l	< 0.4	ISO17025	< 0.4	< 0.4			
Chromium (dissolved)	ug/l	< 5	ISO17025	< 5	< 5			
Chromium (hexavalent)	ug/l	< 20	NONE	< 20	< 20			
Copper (dissolved)	ug/l	< 5	ISO17025	< 5	< 5			
Lead (dissolved)	ug/l	< 5	ISO17025	72	< 5			
Mercury (dissolved)	ug/l	< 0.05	ISO17025	< 0.05	< 0.05			
Nickel (dissolved)	ug/l	< 5	ISO17025	7	< 5			
Selenium (dissolved)	ug/l	< 5	ISO17025	6	19			
Zinc (dissolved)	ug/l	< 2	ISO17025	16	7			
EPH (C10 - C40)	ug/l	< 10	NONE	< 10	< 10			

Subcontracted analysis (S)
Insufficient sample I/S
Unsuitable Sample U/S

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Water Analysis Certificate - Speciated PAH							
DETS Report No: 18-77764	**Date Sampled**	28/06/18	28/06/18			
AGB Environmental Ltd	**Time Sampled**	None Supplied	None Supplied			
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG	**TP / BH No**	WS1	WS4			
Project / Job Ref: P3159.1	**Additional Refs**	None Supplied	None Supplied			
Order No: PO5550	**Depth (m)**	3.50	4.00			
Reporting Date: 06/07/2018	**QTSE Sample No**	344586	344587			

Determinand	**Unit**	**RL**	**Accreditation**					
Naphthalene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Fluorene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008			
Total EPA-16 PAHs	ug/l	< 0.01	NONE	< 0.01	< 0.01			

DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

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Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 18-77764
AGB Environmental Ltd
Site Reference: Battisford Hall, Battisford, Stowmarket, Suffolk, IP14 2HG
Project / Job Ref: P3159.1
Order No: PO5550
Reporting Date: 06/07/2018

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by co	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detect	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	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 liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	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 liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

Appendix 7 Updated Qualitative Risk Assessment

Qualitative Risk Assessment

Plausible Contaminant Linkages Assuming Current Conditions							
No.	**Source**	**Pathway**	**Receptor**	**Consequence**	**Probability**	**Risk**	**Justification**
Hazards to Human Health							
1	Non-volatile contamination in soils	Direct contact / ingestion	Site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination on site
2	Volatile contamination in soils	Inhalation	Site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
3	Contamination in soils	Direct contact / ingestion/ Inhalation	Site workers	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
4	Ground gas	Inhalation / asphyxiation	Site users	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified
5	Ground Gas	Explosion	Site users	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified
6	Ground gas	Inhalation / asphyxiation / explosion	Site workers	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified
Hazards to the Water Environment							
7	Contamination in soils	Leachable contamination	Unproductive Strata	Minor	Not Possible	**Negligible**	No plausible contaminant linkage
8	Contamination in soils	Leachable contamination	Secondary Aquifer	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
9	Contamination in soils	Leachable contamination	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
10	Groundwater contamination	Aquifer	Secondary Aquifer	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
11	Groundwater contamination	Aquifer	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
12	Groundwater contamination	Aquifer	Surface water	Severe	Unlikely	**Moderate/Low Risk**	No plausible contaminant linkage
13	Groundwater contamination	Aquifer	Water supply well(s)	Severe	Not Possible	**Negligible**	No plausible contaminant linkage
Hazards to Flora and Fauna							
14	Contamination in Soils	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
15	Ground gas / low oxygen	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
Hazards to Building Structure and Services							
16	Contamination in soils	Direct contact with subsurface	Buried concrete	Mild	Unlikely	**Very Low Risk**	No significant sources of contamination identified
17	Contamination in soils	Direct contact with subsurface	Plastic water supply pipes	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
18	Ground gas	Explosion	Building structure	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified

Plausible Contaminant Linkages Assuming Future Development							
No.	**Source**	**Pathway**	**Receptor**	**Consequence**	**Probability**	**Risk**	**Justification**
Hazards to Human Health							
1	Non-volatile contamination in soils	Direct contact / ingestion	Future site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination on site
2	Volatile contamination in soils	Inhalation	Future site users	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
3	Contamination in soils	Direct contact / ingestion/ Inhalation	Site workers	Medium	Low Likelihood	**Moderate/Low Risk**	Historical / existing potential sources of contamination off site
4	Ground gas	Inhalation / asphyxiation	Future site users	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified
5	Ground Gas	Explosion	Future site users	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified
6	Ground gas	Inhalation / asphyxiation / explosion	Site workers	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified
Hazards to the Water Environment							
7	Contamination in soils	Leachable contamination	Unproductive Strata	Minor	Not Possible	**Negligible**	No plausible contaminant linkage
8	Contamination in soils	Leachable contamination	Secondary Aquifer	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
9	Contamination in soils	Leachable contamination	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
10	Groundwater contamination	Aquifer	Secondary Aquifer	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
11	Groundwater contamination	Aquifer	Principal Aquifer	Medium	Unlikely	**Low Risk**	Historical / existing potential sources of contamination off site
12	Groundwater contamination	Aquifer	Surface water	Severe	Unlikely	**Moderate/Low Risk**	No plausible contaminant linkage
13	Groundwater contamination	Aquifer	Water supply well(s)	Severe	Not Possible	**Negligible**	No plausible contaminant linkage
Hazards to Flora and Fauna							
14	Contamination in Soils	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
15	Ground gas / low oxygen	Plant uptake	Plants and soft landscaping	Minor	Unlikely	**Very Low Risk**	Historical / existing potential sources of contamination off site
Hazards to Building Structure and Services							
16	Contamination in soils	Direct contact with subsurface	Buried concrete	Mild	Unlikely	**Very Low Risk**	No significant sources of contamination identified
17	Contamination in soils	Direct contact with subsurface	Plastic water supply pipes	Mild	Low Likelihood	**Low Risk**	Historical / existing potential sources of contamination off site
18	Ground gas	Explosion	Building structure	Severe	Unlikely	**Moderate/Low Risk**	No significant sources of contamination identified

Classification of Consequence

Severe Short-term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990 Part IIA. Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem.
Medium Chronic damage to human health ('significant harm'). Pollution of sensitive water resources. A significant change in a particular ecosystem.
Mild Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.
Minor Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means of personal protective clothing). Easily repairable effects of damage to buildings, structures and services.

Classification of Probability
High Likelihood There is a contaminant linkage and an event, which would either appear, very likely in the short term and almost inevitable over the long term, or, there is evidence at the receptor of harm or pollution.
Likely There is a contaminant linkage and all the elements are present and in the right place, which means that, it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood. There is a contaminant linkage and circumstances are possible under which and event could occur.However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely There is a contaminant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Comparison of Consequence against Probability

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate / Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

Description of the Classified Risks and Likely Action Required

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