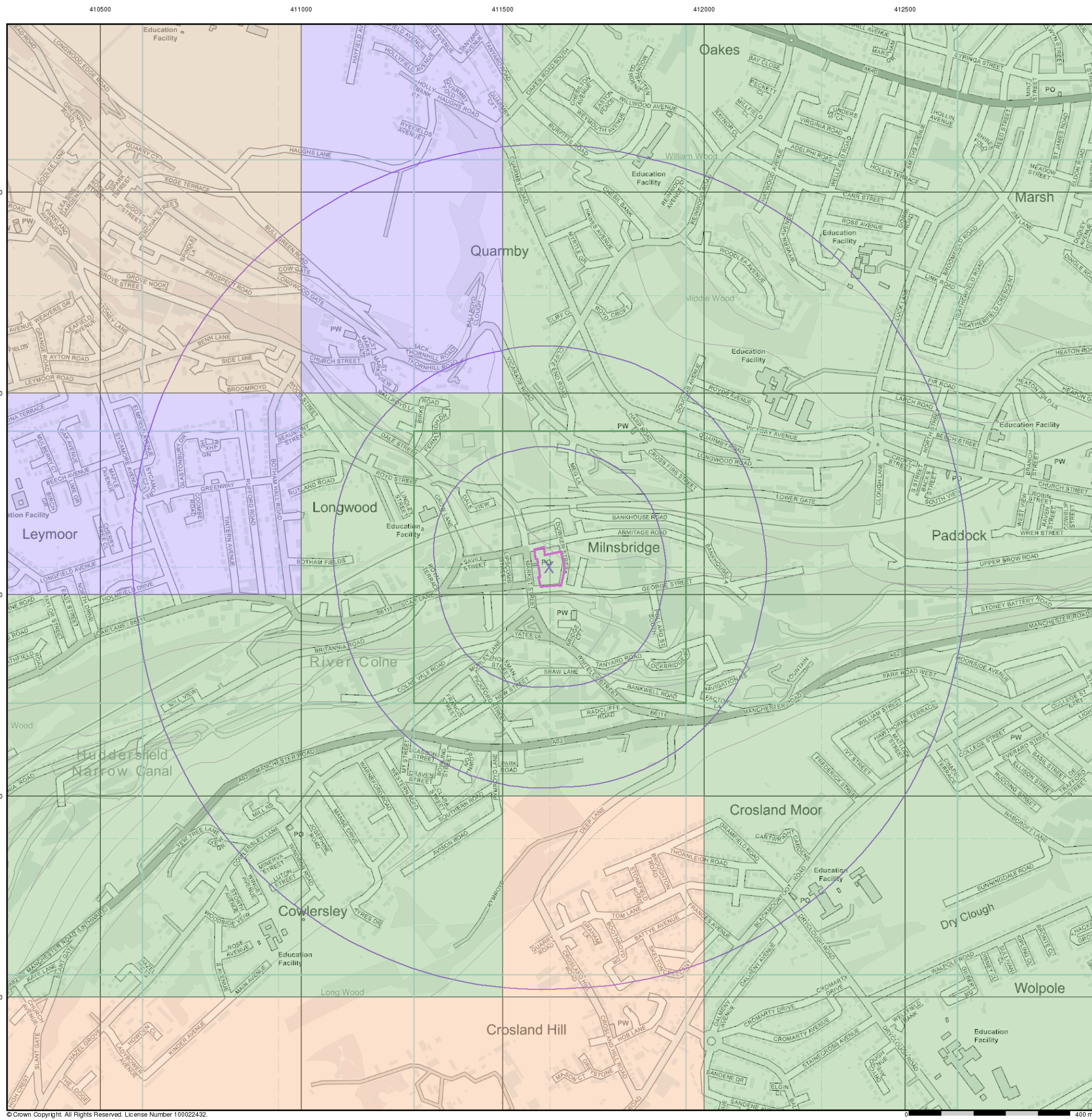




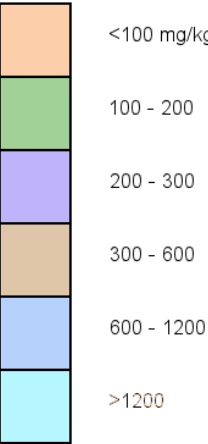
ARP GEOTECHNICAL LTD

General

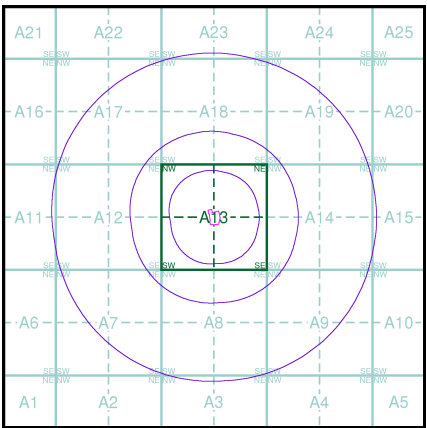
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice A



Order Details

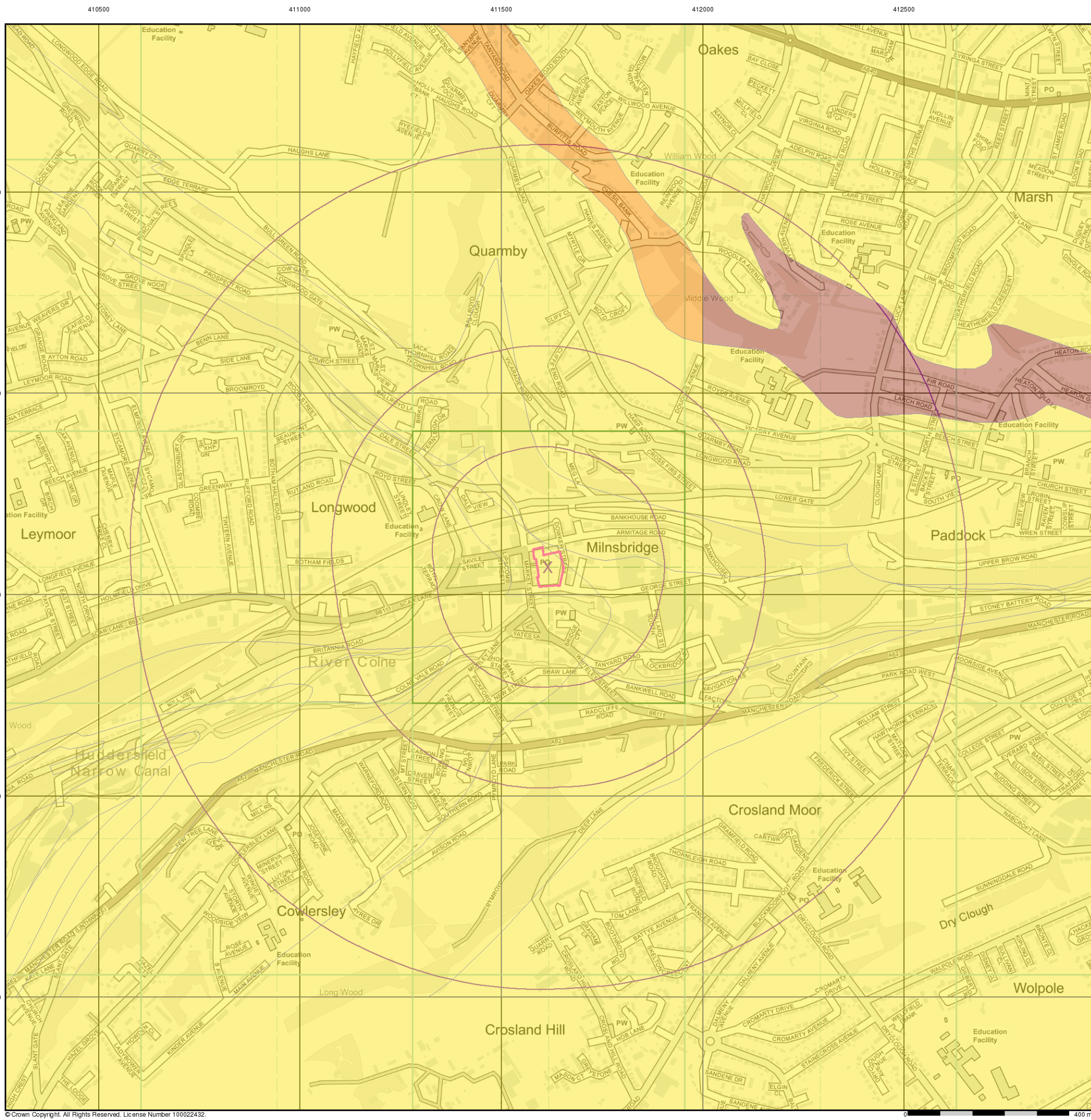
Order Details: 310976690_1_1
Customer Ref: WSD/01
National Grid Reference: 411620, 416070
Slice: A
Site Area (Ha): 0.54
Search Buffer (m): 1000

Site Details

Apartment 1, Armitage House, 2, Dowker Street,
HUDDERSFIELD, HD3 4JB



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



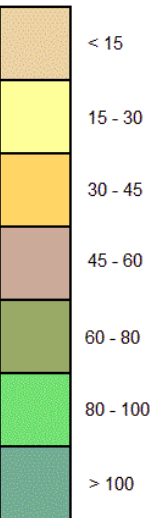
ARP GEOTECHNICAL LTD

General

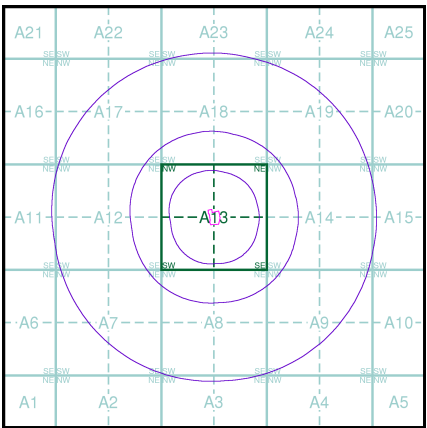
Specified Site Specified Buffer(s) Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details: 310976690_1_1
Customer Ref: WSD/01
National Grid Reference: 411620, 416070
Slice: A
Site Area (Ha): 0.54
Search Buffer (m): 1000

Site Details

Apartment 1, Armitage House, 2, Dowker Street,
HUDDERSFIELD, HD3 4JB



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

APPENDIX D

RISK CATEGORISATION TABLES

Severity of Consequence

Severe	Short term (acute) risks to human health, likely to result in significant harm. Major pollution of (watercourses or groundwater)
Medium	Long-term (Chronic) damage (significant harm) to human health. Pollution of sensitive water resources.
Mild	Pollution of non-sensitive water resources.
Minor	Non-permanent health effects easily prevented by use of personal protective equipment during site works.

Probability of Risk Event Occurring

High Likelihood	There is a pollutant linkage and an event that either appears very likely in the short term, almost inevitable in the long term, or there is evidence of harm or pollution at the receptor.
Likely	There is a pollution linkage and all the elements are present and in the right place, so that a risk event is possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which a risk event could occur. However, it is not certain that such an event would take place even over a longer period, and even less likely in the short term.
unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

Comparison of Probability Against Severity of Consequence

		Severity of 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

Risk Categories - Definitions

Very High Risk	High probability that severe harm could arise to a receptor, or there is evidence that severe harm is already occurring. Urgent investigation is required and urgent remediation is likely to be required.
High Risk	Harm is likely to arise to a receptor. Urgent investigation is required and remediation may be necessary in the short term and likely over the longer term.
Moderate Risk	Possible that harm could arise to a receptor, but low likelihood that such harm would be severe. Harm is likely to be mild. Investigation normally required to clarify risk. Some remedial works may be required in the long-term.
Moderate/ Low Risk	Possible that harm could arise to a receptor, but where a combination of likelihood and consequence results in a risk that is above low, but is not of sufficient concern to be classified as mild. Limited further investigation may be required to clarify the risk. If necessary, remediation works are likely to be limited in extent.
Low Risk	Possible that harm could arise to a receptor. Such harm, at worst, would normally be mild.
Very Low Risk	Low possibility that harm could arise to a receptor. Such harm is unlikely to be any worse than mild.

APPENDIX E

BOREHOLE AND TRIAL PIT LOCATION PLAN AND LOGS



Key-

- TP Trial Pit - 2015 Investigation
- WS Windowless Sample Borehole - 2023 Investigation



ARP

ARP GEOTECHNICAL LTD
CHARTERED CONSULTING ENGINEERS
Northwest House: 5-6 Northwest Business Park, Servia Hill, Leeds LS6 2QH
Telephone: 0113 245 9496 Fax: 0113 244 3864 E-Mail: leeds@arpassociates.co.uk

Project
DOWKER STREET, MILNSBRIDGE

Client
WESTSHIELD LTD

Title
COMBINED INVESTIGATION
PLAN

Date
JUNE 2023

Drawn
OG

Scale
AS SHOWN

Job No.
WSD/1



Former Taylor Valve Works, Dowker Street, Milnsbridge

**Trial Pit
Number**
TP01

JCB 3CX equipped with
0.60m wide toothed bucket
and breaker

Location

Dates	11/06/2015
--------------	------------

Invicta Developments Ltd

ARP

Job Number
INV/01

Sheet
1/1

Depth
(m)

Sample / Tests

Water
Depth
(m)

Field Records

Level
(mOD)

**Depth
(m)
(Thickness)**

Description

Legend

Water

0.50-1.00

JV1

$$F \quad (0.40)$$

0.40

MADE GROUND: Concrete (reinforced).

MADE GROUND: Dark grey sandy gravelly angular COBBLES of brick and sandstone. Gravel is angular, of ash, clinker, brick and sandstone.

Below 1.20m: Medium angular boulder (<400mm)
content of sandstone.

At 1.50m: Masonry wall in east face of pit.

(2.95)

3.35

At 3.30m: Concrete floor.

Complete at 3.35m

Plan

Remarks

Trial pit sides unstable.
No groundwater encountered.
Trial pit backfilled with arisings on completion.

Scale (approx)

1:25

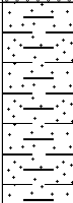
Logged By

JBW

Figure No.

INV/01.TP01

 ARP GEOTECHNICAL LIMITED CHARTERED CONSULTING ENGINEERS						Site Former Taylor Valve Works, Dowker Street, Milnsbridge		Trial Pit Number TP04	
Excavation Method JCB 3CX equipped with 0.60m wide toothed bucket and breaker		Dimensions		Ground Level (mOD)		Client Invicta Developments Ltd		Job Number INV/01	
		Location		Dates 11/06/2015		Engineer A R P		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50-1.00	JV1				0.15	MADE GROUND: Red brown and light grey angular COBBLES of brick and concrete.			
					0.30	MADE GROUND: Concrete (reinforced). At 0.50m: Metal pipework (50mm and 75mm dia.) below slab.			
1.80-2.00	B2				0.45	MADE GROUND: Dark grey fine to coarse SAND and angular fine to coarse GRAVEL of ash, clinker, brick, tile and sandstone. Medium angular cobble content of sandstone.			
					(1.35)				
					1.80	Red brown clayey fine to coarse SAND and angular and subangular fine to coarse GRAVEL of sandstone. [Alluvium]			
					(0.60)	Below 2.00m: Slow excavation.			
					2.40	At 2.40m: Hard strata (possible sandstone bedrock).			
						Complete at 2.40m			
Plan 						Remarks Trial pit sides unstable. No groundwater encountered. Trial pit backfilled with arisings on completion.			
						Scale (approx) 1:25		Logged By JBW	
								Figure No. INV/01.TP04	

 ARP GEOTECHNICAL LIMITED CHARTERED CONSULTING ENGINEERS						Site Former Taylor Valve Works, Dowker Street, Milnsbridge		Trial Pit Number TP05	
Excavation Method JCB 3CX equipped with 0.60m wide toothed bucket and breaker		Dimensions		Ground Level (mOD)		Client Invicta Developments Ltd		Job Number INV/01	
		Location		Dates 11/06/2015		Engineer A R P		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
0.60 0.60	HSV 64.33kPa B1		62,66,65/Av. 64.33		(0.30) 0.30 (0.70) 1.00	MADE GROUND: Concrete. Firm (medium strength) orange brown mottled grey slightly sandy CLAY. [Alluvium]	 		
1.50	B2				(1.80) 2.80	Red brown fine to coarse SAND and angular and subangular fine to coarse GRAVEL of sandstone. Medium subangular and angular cobble content of sandstone. [Alluvium] At 2.80m: Hard strata (possible sandstone bedrock).			
						Complete at 2.80m			
Plan						Remarks			
. .						Trial pit sides stable. No groundwater encountered. Trial pit backfilled with arisings on completion.			
						Scale (approx)	Logged By	Figure No.	
						1:25	JBW	INV/01.TP05	



Former Taylor Valve Works, Dowker Street, Milnsbridge

**Trial Pit
Number
TP06**

JCB 3CX equipped with
0.60m wide toothed bucket
and breaker

Location

Dates

11/06/2015

Invicta Developments Ltd

ARP

Job Number
INV/01

Sheet
1/1

Depth
(m)

Sample / Tests

Water
Depth
(m)

Field Records

Level
(mOD

Depth
(m)
(Thickness)

Description

Legend

Water

0.30-0.50

JV1

62,66,65/Av. 64.33

0.60

HSV 64.33kPa

0.90

B2

(0.50)

0.50

(0.50)

1.00

(1.80)

2.80

MADE GROUND: Dark grey gravelly fine to coarse SAND of ash. Gravel is angular, of clinker.

Firm red brown sandy CLAY. [Alluvium]

Red brown fine to coarse SAND and angular and subangular fine to coarse GRAVEL of sandstone. Medium subangular and angular cobble content of sandstone.
[Alluvium]

At 2.80m: Hard strata (possible sandstone bedrock).

Complete at 2.80m

Plan

Remarks

Trial pit sides stable.
No groundwater encountered.
Trial pit backfilled with arisings on completion.

Scale (approx)

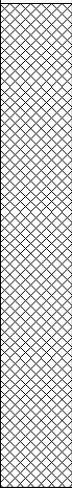
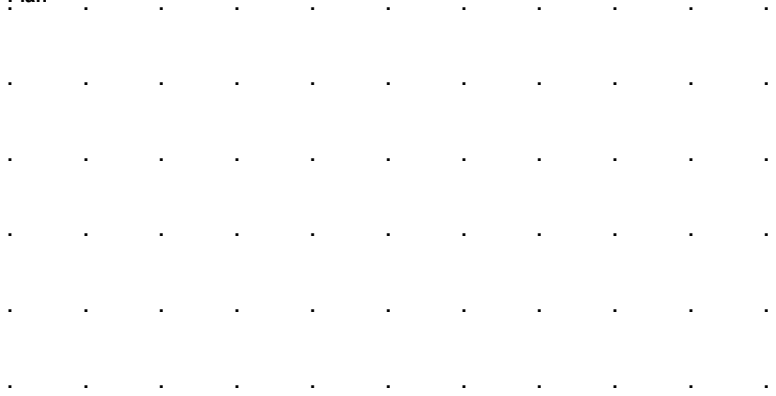
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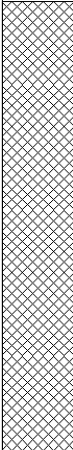
Logged By

JBW

Figure No.

INV/01.TP06

 ARP GEOTECHNICAL LIMITED CHARTERED CONSULTING ENGINEERS						Site Former Taylor Valve Works, Dowker Street, Milnsbridge		Trial Pit Number TP08	
Excavation Method JCB 3CX equipped with 0.60m wide toothed bucket and breaker		Dimensions		Ground Level (mOD)		Client Invicta Developments Ltd		Job Number INV/01	
		Location		Dates 11/06/2015		Engineer A R P		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50-1.00	JV1				 (1.60)	MADE GROUND: Red brown and light grey sandy, ashy, angular COBBLES of brick and concrete.			
					1.60	At 1.60m: Concrete slab. Complete at 1.60m			
Plan 						Remarks Trial pit sides unstable. No groundwater encountered. Trial pit backfilled with arisings on completion.			
						Scale (approx) 1:25		Logged By JBW	Figure No. INV/01.TP08

 ARP GEOTECHNICAL LIMITED CHARTERED CONSULTING ENGINEERS						Site Former Taylor Valve Works, Dowker Street, Milnsbridge		Trial Pit Number TP09	
Excavation Method JCB 3CX equipped with 0.60m wide toothed bucket and breaker		Dimensions		Ground Level (mOD)		Client Invicta Developments Ltd		Job Number INV/01	
		Location		Dates 12/06/2015		Engineer A R P		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.30-0.60	JV1				(1.50)	MADE GROUND: Brown grey clayey sandy angular and subangular fine to coarse GRAVEL of ash, clinker, brick, tile, sandstone, brick. Medium angular cobble content of sandstone.			
2.00	B2				1.50 (0.30)	MADE GROUND: Stiff red brown slightly sandy CLAY. Occasional angular gravel of coal and sandstone.			
					1.80 (0.90)	Soft red brown sandy CLAY. [Alluvium] Large subangular boulder in north.			
3.00	B3				2.70 (1.00)	Grey sandy clayey subrounded and subangular fine to coarse GRAVEL of sandstone. High subangular and angular cobble content of sandstone. [Alluvium]			
					3.70 (0.10) 3.80	At 3.40m: Subangular sandstone boulder. Very weak orange brown fine to coarse grained SANDSTONE. Limited recovery. Complete at 3.80m			
Plan 						Remarks Trial pit sides unstable in made ground. No groundwater encountered. Trial pit backfilled with arisings on completion.			
						Scale (approx) 1:25		Logged By JBW	
								Figure No. INV/01.TP09	



Former Taylor Valve Works, Dowker Street, Milnsbridge

**Trial Pit
Number
TP12**

JCB 3CX equipped with
0.60m wide toothed backhoe
bucket and breaker

Location

Dates

S
12/06/2015

Invicta Developments Ltd

ARP

Job Number
INV/01

Sheet
1/1

Sample / Tests

Field Records

Depth
(m)
(Thickness)

Description

Legend :

Water

0.60-1.00

JV1

F (0.30)

MADE GROUND: Grey and red brown sandy angular
COBBLES of brick, masonry and concrete.

0.30
(0.20)

MADE GROUND: Concrete slab.

0.50

MADE GROUND: Dark grey sandy/ashy gravelly angular COBBLES and BOULDERS (<500mm) of brick, sandstone and concrete.

(1.30)

1.80

Orange brown very clayey fine to coarse SAND and subrounded and subangular fine to coarse GRAVEL of sandstone. Medium to high subrounded and subangular cobble and boulder (<500mm) content of sandstone. [Alluvium]

(1.00)

2.80

Very weak red brown fine to coarse grained SANDSTONE.

3.00

Complete at 3.00m

Water strike(1) at 3.00m.

Plan

Remarks

Trial pit sides unstable.
Groundwater seepage at 3.00m.
Trial pit backfilled with arisings on completion.

Scale (approx)

1:25

Logged By

JBW

Figure No.

INV/01.TP12

ARP ARP Geotechnical Limited					Windowless Sample Log				Borehole No. WS1 (HP) Sheet 1 of 1	
Project Name: Dowker Street, Milnsbridge					Project No. WSD/01		Co-ords: 411635.81 - 416089.12		Date 15/03/2023	
Location: Dowker Street, Milnsbridge							Level:		Scale 1:25	
Client: Westshield Ltd							Rig Crew: Hand Tools		Logged: OG	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.20 - 0.25	ES		0.25			MADE GROUND: Brown gravelly sand. Gravel includes brick, concrete and sandstone.		
								End of Borehole at 0.250m		
Groundwater: No groundwater ingress observed. Backfill: Backfilled with arisings upon completion. Remarks:										
RrWS_v1.054										

 ARP Geotechnical Limited				Windowless Sample Log				Borehole No. WS2 Sheet 1 of 1							
Project Name: Dowker Street, Milnsbridge				Project No. WSD/01		Co-ords: 411605.71 - 416067.64		Date 15/03/2023							
Location: Dowker Street, Milnsbridge						Level:		Scale 1:25							
Client: Westshield Ltd						Rig Crew: RP Drilling		Logged: OG							
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description							
		Depth (m)	Type	Results											
		0.20 - 0.30	ES		0.17			Reinforced CONCRETE							
					0.20					MADE GROUND: Brown sandy gravel and cobbles including sandstone.					
					0.45					Possible MADE GROUND: Greyish brown clayey fine sand.					
					0.75					Greyish brown and brown slightly gravelly sandy CLAY with occasional cobbles. Gravel is sub angular to sub rounded of mixed lithologies. Cobbles are angular of sandstone.					
					1.00					Soft brown slightly sandy silty CLAY.					
		1.00	SPT	N=5 (3,2/1,1,1,2)	1.00			No recovery. Cone SPT test. Low strength/loose soil.		1					
					1.25			Soft brown slightly gravelly slightly sandy CLAY with occasional cobbles. Gravel is sub angular to sub rounded of mixed lithologies. Cobbles are sub angular of sandstone.							
					1.60						Brown gravelly fine to coarse SAND. Gravel is sub angular to sub rounded of mixed lithologies.				
					2.00			SPT			N=11 (2,3/3,2,2,4)	2.00		No recovery. Cone SPT test. Medium Strength/medium dense soils.	2
												2.50		Firm CLAY and cobbles of sandstone (minimal recovery).	
		3.00	SPT	50 (25 for 50mm/50 for 5mm)	2.70			Limited recover between 2.5m and 2.7m depth.		3					
					3.00			Orangish brown, brown and dark brown clayey sandy sub angular to angular GRAVEL of sandstone. (Residual soils derived from the insitu weathering of bedrock).							
					3.06			No recovery. Cone SPT test.							
							End of Borehole at 3.055m								
Groundwater: No groundwater ingress observed. Backfill: Backfilled with arisings upon completion. Remarks:															

 ARP Geotechnical Limited				Windowless Sample Log				Borehole No. WS3 Sheet 1 of 1	
Project Name: Dowker Street, Milnsbridge				Project No. WSD/01		Co-ords: 411631.41 - 416075.13		Date 15/03/2023	
Location: Dowker Street, Milnsbridge						Level:		Scale 1:25	
Client: Westshield Ltd						Rig Crew: RP Drilling		Logged: OG	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50 - 0.60	ES		0.15			Reinforced CONCRETE	1 2 3 4 5
					0.35			MADE GROUND: Brown sandy gravel of angular sandstone.	
					0.45			MADE GROUND: Brown clayey gravel and cobbles of sandstone.	
								MADE GROUND: Brown, grey and dark brown sandy clay and cobbles of sandstone with rare ash.	
		1.00	SPT	N=20 (3,2/6,7,4,3)	0.80			MADE GROUND: Brown sandy clayey gravel of sandstone.	
					1.00			Stiff, high strength, brown slightly gravelly sandy CLAY. Gravel is sub angular to sub rounded fine to medium of mixed lithologies including sandstone.	
					1.40			Clayey fine to medium SAND. (Residual soils derived from the insitu weathering of bedrock.	
					2.00			No recovery. Cone SPT test.	
		2.21			End of Borehole at 2.205m				
		Groundwater: No groundwater ingress observed. Backfill: Backfilled with arisings upon completion Remarks:							



ARP Geotechnical Limited

Windowless Sample Log

Borehole No.

WS4

Sheet 1 of 1

Project Name:

Dowker Street, Milnsbridge

Project No.

WSD/01

Co-ords:

411617.86 - 416030.16

Date

15/03/2023

Location:

Dowker Street, Milnsbridge

Level:

Scale

1:25

Client:

Westshield Ltd

Rig Crew:

RP Drilling

Logged:

OG

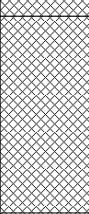
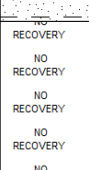
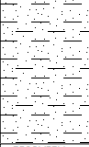
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50 - 0.70	ES		0.30			Reinforced CONCRETE.	1
					0.35			MADE GROUND: Brown sandy gravel.	
					0.50			MADE GROUND: Greyish brown clayey sandy gravel with occasional cobbles. Gravel includes brick and sandstone. Cobbles are angular of brick.	
					0.70			MADE GROUND: Black ashy gravelly sandy with occasional cobbles of brick.	
					0.80			Brown cobbles of sandstone.	
		1.00	SPT	N=15 (3,3/5,3,3,4)	0.90		RECOVERY	MADE GROUND: Greyish brown clayey gravelly sand with occasional cobbles. Gravel includes sandstone and brick. Cobbles include brick.	
						NO RECOVERY	No recovery. Cone SPT test. Medium strength/ medium dense soil.		
						NO RECOVERY			
						NO RECOVERY			
						NO			
		2.00	SPT	N=17 (2,2/2,5,5,5)	1.40			MADE GROUND: Grey, brown and yellowish brown sandy gravel and occasional clay. Gravel includes sandstone and bricks. With occasional angular cobbles of brick.	
					2.00		RECOVERY	No recovery. Cone SPT test. Medium strength/ medium dense soil.	
						NO RECOVERY			
						NO RECOVERY			
						NO			
3.00	SPT	50 (25 for 75mm/50 for 70mm)	2.40			Soft brown slightly gravelly sandy CLAY.			
			2.60			Firm brown sandy gravelly CLAY with many cobble of sandstone. Gravel is sub angular to sub rounded fine to medium of sandstone.			
			3.00		RECOVERY	No recovery. Cone SPT.			
			3.10			End of Borehole at 3.100m			

Groundwater: No groundwater ingress observed.

Backfill: Backfilled with arisings upon completion.

Remarks:

RrWS_v1.054

 ARP Geotechnical Limited				Windowless Sample Log				Borehole No. WS5 Sheet 1 of 1		
Project Name: Dowker Street, Milnsbridge				Project No. WSD/01		Co-ords: 411627.05 - 416043.27		Date 15/03/2023		
Location: Dowker Street, Milnsbridge						Level:		Scale 1:25		
Client: Westshield Ltd						Rig Crew: RP Drilling		Logged: OG		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.50 - 0.60	ES		0.27			Reinforced CONCRETE		
					0.35					MADE GROUND: Brown sandy gravel of sandstone.
										MADE GROUND: Black, grey and brown clayey gravelly sand with occasional cobbles. Occasionally ashy. Gravel includes sandstone, brick and concrete. Cobbles are angular of brick.
		1.00	SPT	N=37 (15,10/17,10,5,5)	1.00		MADE GROUND: Brown and grey ashy gravelly sand . Gravel includes sandstone, brick and occasional clinker.	1		
					1.30		High strength / dense soil at 1m depth.			
					1.60		Possible MADE GROUND: Brown and grey slightly gravelly slightly sandy clay. Gravel includes sandstone and coal.			
		2.00	SPT	N=4 (1,1/1,1,1,1)	2.00		Firm brown and grey slightly gravelly sandy CLAY. Gravel is sub angular to sub rounded fine to medium of mixed lithologies including sandstone. With occasional angular cobbles of sandstone.	2		
			2.50		No recovery. Cone SPT test. Low strength/Loose soil.	3				
3.00	SPT	50 (4,4/50 for 145mm)	3.00		Soft orangish brown slightly gravelly sandy CLAY. Gravel is sub angular to sub rounded fine to medium of mixed lithologies including sandstone. With occasional sub angular cobbles of sandstone.	3				
			3.30		No recovery. Cone SPT test.	4				
							End of Borehole at 3.295m	5		

Groundwater: No groundwater ingress observed.

Backfill: Backfilled with arisings upon completion.

Remarks:

RrWS_v1.054

A P P E N D I X F

LABORATORY TEST CERTIFICATES AND SCREENING VALUES



ARP GEOTECHNICAL LIMITED
SOIL CONTAMINANT SCREENING VALUES
RESIDENTIAL WITH HOME-GROWN PRODUCE

Determinand	S4UL (mg/kg)			C4SL (mg/kg)		
Arsenic	37			37		
Cadmium	11			22		
Chromium (trivalent)	910					
Chromium (hexavalent)	6			21		
Copper	2400					
Lead				200		
Inorganic Mercury	40					
Nickel	180					
Selenium	250					
Zinc	3700					
Acidity (pH)	*Should be Greater Than 5			*Should be Greater Than 5		
	1% SOM	2.5% SOM	6% SOM	1% SOM	2.5% SOM	6% SOM
Naphthalene	2.3	5.6	13			
Acenaphthylene	170	420	920			
Acenaphthene	210	510	1,100			
Fluorene	170	400	860			
Phenanthrene	95	220	440			
Anthracene	2,400	5,400	11,000			
Fluoranthene	280	560	890			
Pyrene	620	1,200	2,000			
Benzo(a)anthracene	7.2	11	13			
Chrysene	15	22	27			
Benzo(b)fluoranthene	2.6	3.3	3.7			
Benzo(k)fluoranthene	77	93	100			
Benzo(a)pyrene	2.2	2.7	3			5
Indeno(1,2,3-cd)pyrene	27	36	41			
Dibenzo(a,h)anthracene	0.24	0.28	0.30			
Benzo(g,h,i)perylene	320	340	350			
Phenols	120	200	380			
Total TPH	*Above 500, speciate and compare with values below:					
C5 to C6 Aliphatic	42	78	160			
C6 to C8 Aliphatic	100	230	530			
C8 to C10 Aliphatic	27	65	150			
C10 to C12 Aliphatic	130	330	760			
C12 to C16 Aliphatic	1100	2,400	4,300			
C16 to C35 Aliphatic	65,000	92,000	110,000			
C35 TO C44 Aliphatic	65,000	92,000	110,000			
C5 to C7 Aromatic (Benzene)	70	140	300			
C7 to C8 Aromatic (Toluene)	130	290	660			
C8 to C10 Aromatic	34	83	190			
C10 to C12 Aromatic	74	180	380			
C12 to C16 Aromatic	140	330	660			
C16 to C21 Aromatic	260	540	930			
C21 TO C35 Aromatic	1100	1,500	1,700			
C35 TO C44 Aromatic	1100	1,500	1,700			
Asbestos	*Should be None Detected			*Should be None Detected		

* In House Value/Approach S4UL = Suitable 4 Use Level, CIEH/LQM 2014 C4SL = Cat 4 Screening Level, DEFRA, 2014

Blank cell indicates no published value or in-house value. Some values presented are above saturation limits.

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Certificate of Analysis

Certificate Number 15-37966-1

09-Jul-15

Client ARP Geotechnical
5/6 Northwest Business Park
Servia Hill
Leeds
LS6 2QH

Our Reference 15-37966-1

Client Reference INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Description 17 Soil samples, 6 Leachate samples.

Date Received 17-Jun-15

Date Started 17-Jun-15

Date Completed 09-Jul-15

Test Procedures Identified by prefix DETSn (details on request).

Notes **This report supersedes 15-37966. Extra testing**

Opinions and interpretations are outside the scope of UKAS 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. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in black ink, appearing to read 'Rob Brown'.

Rob Brown
Business Manager



Summary of Chemical Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	827147	827148	827149	827150	827151	827152
Sample ID	TP1	TP2	TP3	TP4	TP6	TP7
Depth	0.50-1.00	0.50	0.60-1.00	0.50-1.00	0.30-0.50	0.30-0.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	11	12	91	21	13	15
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	1.6	1.3	0.7	0.5	1.6
Chromium III	DETSC 2301*	0.15	mg/kg	18	18	33	20	17	20
Hexavalent Chromium	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	350	36	160	110	190	410
Lead	DETSC 2301#	0.3	mg/kg	130	72	90	320	140	230
Mercury	DETSC 2325#	0.05	mg/kg	0.13	0.19	0.12	0.30	0.09	0.17
Nickel	DETSC 2301#	1	mg/kg	18	24	47	18	22	15
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.1
Zinc	DETSC 2301#	1	mg/kg	330	130	57	200	220	340
Inorganics									
pH	DETSC 2008#			8.8	9.5	8.7	8.8	9.9	8.1
Organic matter	DETSC 2002#	0.1	%	4.4	3.1	13	3.4	5.8	3.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	2100	1200	670	420	2400	2100
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.55	0.26	0.20	0.16	0.69	0.49
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg				< 0.01	< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg				< 0.01	< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg				< 0.01	< 0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg				< 1.5	< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg				< 1.2	< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg				< 1.5	2.8	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg				< 3.4	46	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg				< 10	49	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg				< 0.01	< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg				< 0.01	< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg				< 0.01	0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg				< 0.9	< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg				< 0.5	< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg				8.3	12	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg				3.0	37	
Aromatic C5-C35	DETSC 3072*	10	mg/kg				11	49	
TPH Ali/Aro	DETSC 3072*	10	mg/kg				11	98	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	300	500	< 10	710	880	78
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	0.3	< 0.1	< 0.1	13	1.4	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.1	< 0.1	< 0.1	0.3	1.2	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	0.5	0.1	< 0.1	6.9	0.4	0.2
Fluorene	DETSC 3301	0.1	mg/kg	0.4	< 0.1	< 0.1	5.3	0.4	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	2.0	0.7	0.2	40	1.9	0.7
Anthracene	DETSC 3301	0.1	mg/kg	0.5	0.2	< 0.1	8.3	0.4	0.1

Summary of Chemical Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	827147	827148	827149	827150	827151	827152
Sample ID	TP1	TP2	TP3	TP4	TP6	TP7
Depth	0.50-1.00	0.50	0.60-1.00	0.50-1.00	0.30-0.50	0.30-0.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Fluoranthene	DETSC 3301	0.1	mg/kg	3.9	1.5	0.4	39	1.9	1.3
Pyrene	DETSC 3301	0.1	mg/kg	3.7	1.1	0.4	35	1.4	1.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	2.4	1.1	< 0.1	17	0.6	1.0
Chrysene	DETSC 3301	0.1	mg/kg	2.1	0.5	< 0.1	19	0.7	0.7
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	1.5	0.5	< 0.1	12	1.9	0.5
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	1.0	0.5	< 0.1	7.3	0.5	0.5
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	1.9	0.6	< 0.1	15	0.3	0.4
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.9	< 0.1	< 0.1	8.4	0.5	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.2	< 0.1	< 0.1	1.6	0.8	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	1.0	< 0.1	< 0.1	7.8	0.6	< 0.1
PAH	DETSC 3301	1.6	mg/kg	22	6.8	< 1.6	240	15	6.4
PCBs									
PCB 77	DETSC 3401*	0.01	mg/kg						
PCB 81	DETSC 3401*	0.01	mg/kg						
PCB 105	DETSC 3401*	0.01	mg/kg						
PCB 114	DETSC 3401*	0.01	mg/kg						
PCB 118	DETSC 3401*	0.01	mg/kg						
PCB 123	DETSC 3401*	0.01	mg/kg						
PCB 126	DETSC 3401*	0.01	mg/kg						
PCB 156	DETSC 3401*	0.01	mg/kg						
PCB 157	DETSC 3401*	0.01	mg/kg						
PCB 167	DETSC 3401*	0.01	mg/kg						
PCB 169	DETSC 3401*	0.01	mg/kg						
PCB 189	DETSC 3401*	0.01	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	0.7	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	827153	827154	827155	827156	827157	827158
Sample ID	TP8	TP9	TP10	TP11	TP12	TP2
Depth	0.50-1.00	0.30-0.60	0.30-0.50	1.20	0.60-1.00	3.00
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	13	12	5.4	7.8	88	
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	0.8	0.6	0.8	2.4	
Chromium III	DETSC 2301*	0.15	mg/kg	21	22	13	20	58	
Hexavalent Chromium	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	370	74	74	47	8200	
Lead	DETSC 2301#	0.3	mg/kg	180	110	100	180	990	
Mercury	DETSC 2325#	0.05	mg/kg	0.05	0.11	< 0.05	0.19	1.8	
Nickel	DETSC 2301#	1	mg/kg	17	18	27	23	57	
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Zinc	DETSC 2301#	1	mg/kg	480	110	180	280	1400	
Inorganics									
pH	DETSC 2008#			9.6	8.1	10.9	7.9	8.4	7.6
Organic matter	DETSC 2002#	0.1	%	3.2	9.4	0.7	1.1	18	
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	1700	350	690	320	2000	450
Total Sulphate as SO4	DETSC 2321#	0.01	%	0.46	0.08	0.34	0.08	0.99	
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01		0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg			< 1.5		< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg			2.5		< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg			32		3.8	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg			71		66	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg			100		70	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01		< 0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg			< 0.9		3.5	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg			< 0.5		21	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg			14		110	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg			18		170	
Aromatic C5-C35	DETSC 3072*	10	mg/kg			32		300	
TPH Ali/Aro	DETSC 3072*	10	mg/kg			140		370	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	290	230	1000	33	820	
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	0.2	< 0.1	0.4	< 0.1	6.2	
Acenaphthylene	DETSC 3301	0.1	mg/kg	1.2	0.1	< 0.1	< 0.1	0.2	
Acenaphthene	DETSC 3301	0.1	mg/kg	1.4	0.3	< 0.1	< 0.1	7.5	
Fluorene	DETSC 3301	0.1	mg/kg	1.1	0.3	< 0.1	< 0.1	5.3	
Phenanthrene	DETSC 3301	0.1	mg/kg	1.0	2.0	< 0.1	< 0.1	42	
Anthracene	DETSC 3301	0.1	mg/kg	0.3	0.7	< 0.1	< 0.1	9.7	

Summary of Chemical Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	827153	827154	827155	827156	827157	827158
Sample ID	TP8	TP9	TP10	TP11	TP12	TP2
Depth	0.50-1.00	0.30-0.60	0.30-0.50	1.20	0.60-1.00	3.00
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Fluoranthene	DETSC 3301	0.1	mg/kg	1.1	4.1	< 0.1	0.8	40	
Pyrene	DETSC 3301	0.1	mg/kg	0.9	3.9	< 0.1	1.1	35	
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.5	2.4	< 0.1	0.6	17	
Chrysene	DETSC 3301	0.1	mg/kg	0.3	2.0	< 0.1	0.4	18	
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	1.8	< 0.1	0.5	12	
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	1.2	< 0.1	0.4	7.1	
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	2.3	< 0.1	0.6	15	
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	1.3	< 0.1	< 0.1	8.3	
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1	1.4	
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	1.5	< 0.1	< 0.1	7.8	
PAH	DETSC 3301	1.6	mg/kg	8.0	24	< 1.6	4.5	230	
PCBs									
PCB 77	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 81	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 105	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 114	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 118	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 123	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 126	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 156	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 157	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 167	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 169	DETSC 3401*	0.01	mg/kg			< 0.01			
PCB 189	DETSC 3401*	0.01	mg/kg			< 0.01			
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	0.8	

Summary of Chemical Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	827159	827160	827161	827162	827163
Sample ID	TP3	TP4	TP5	TP7	TP10
Depth	3.20-3.30	1.80-2.00	1.50	2.00	3.00-3.20
Other ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg					
Cadmium	DETSC 2301#	0.1	mg/kg					
Chromium III	DETSC 2301*	0.15	mg/kg					
Hexavalent Chromium	DETSC 2204*	1	mg/kg					
Copper	DETSC 2301#	0.2	mg/kg					
Lead	DETSC 2301#	0.3	mg/kg					
Mercury	DETSC 2325#	0.05	mg/kg					
Nickel	DETSC 2301#	1	mg/kg					
Selenium	DETSC 2301#	0.5	mg/kg					
Zinc	DETSC 2301#	1	mg/kg					
Inorganics								
pH	DETSC 2008#			7.9	7.8	5.6	7.6	7.4
Organic matter	DETSC 2002#	0.1	%					
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	250	190	52	1100	84
Total Sulphate as SO4	DETSC 2321#	0.01	%					
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg					
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg					
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg					
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg					
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg					
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg					
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg					
Aliphatic C5-C35	DETSC 3072*	10	mg/kg					
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg					
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg					
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg					
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg					
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg					
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg					
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg					
Aromatic C5-C35	DETSC 3072*	10	mg/kg					
TPH Ali/Aro	DETSC 3072*	10	mg/kg					
EPH (C10-C40)	DETSC 3311#	10	mg/kg					
PAHs								
Naphthalene	DETSC 3301	0.1	mg/kg					
Acenaphthylene	DETSC 3301	0.1	mg/kg					
Acenaphthene	DETSC 3301	0.1	mg/kg					
Fluorene	DETSC 3301	0.1	mg/kg					
Phenanthrene	DETSC 3301	0.1	mg/kg					
Anthracene	DETSC 3301	0.1	mg/kg					

Summary of Chemical Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	827159	827160	827161	827162	827163
Sample ID	TP3	TP4	TP5	TP7	TP10
Depth	3.20-3.30	1.80-2.00	1.50	2.00	3.00-3.20
Other ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	12/06/15	12/06/15	12/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Fluoranthene	DETSC 3301	0.1	mg/kg					
Pyrene	DETSC 3301	0.1	mg/kg					
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg					
Chrysene	DETSC 3301	0.1	mg/kg					
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg					
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg					
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg					
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg					
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg					
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg					
PAH	DETSC 3301	1.6	mg/kg					
PCBs								
PCB 77	DETSC 3401*	0.01	mg/kg					
PCB 81	DETSC 3401*	0.01	mg/kg					
PCB 105	DETSC 3401*	0.01	mg/kg					
PCB 114	DETSC 3401*	0.01	mg/kg					
PCB 118	DETSC 3401*	0.01	mg/kg					
PCB 123	DETSC 3401*	0.01	mg/kg					
PCB 126	DETSC 3401*	0.01	mg/kg					
PCB 156	DETSC 3401*	0.01	mg/kg					
PCB 157	DETSC 3401*	0.01	mg/kg					
PCB 167	DETSC 3401*	0.01	mg/kg					
PCB 169	DETSC 3401*	0.01	mg/kg					
PCB 189	DETSC 3401*	0.01	mg/kg					
Phenols								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg					

Summary of Chemical Analysis

Leachate Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	835743	835744	835745	835746	835747	835748
Sample ID	TP3	TP4	TP6	TP7	TP10	TP12
Depth	0.60-1.00	0.50-1.00	0.30-0.50	0.30-0.50	0.30-0.50	0.60-1.00
Other ID						
Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date	11/06/15	11/06/15	11/06/15	11/06/15	12/06/15	12/06/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
NRA Leachate Preparation	DETS 036*			Y	Y	Y	Y	Y	Y
Metals									
Arsenic, Dissolved	DETS 2306	0.16	ug/l	42					4.5
Copper, Dissolved	DETS 2306	0.4	ug/l						13
Lead, Dissolved	DETS 2306	0.09	ug/l		1.4		0.27		1.1
Petroleum Hydrocarbons									
EPH (C10-C40)	DETS 3311	10	ug/l		130	140		120	150
PAHs									
Naphthalene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Acenaphthylene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Acenaphthene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Fluorene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Phenanthrene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Anthracene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Fluoranthene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Pyrene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Benzo(a)anthracene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Chrysene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Benzo(b)fluoranthene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Benzo(k)fluoranthene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Benzo(a)pyrene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Indeno(1,2,3-c,d)pyrene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Dibenzo(a,h)anthracene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
Benzo(g,h,i)perylene	DETS 074*	0.01	ug/l		< 0.01				< 0.01
PAH	DETS 074*	0.2	ug/l		< 0.20				< 0.20

Summary of Asbestos Analysis

Soil Samples

Our Ref 15-37966-1

Client Ref INV/01

Contract Title DOWKER STREET, MILNSBRIDGE

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
827147	TP1 0.50-1.00	SOIL	NAD	none	J Woodmansey
827148	TP2 0.50	SOIL	NAD	none	J Woodmansey
827149	TP3 0.60-1.00	SOIL	NAD	none	J Woodmansey
827150	TP4 0.50-1.00	SOIL	NAD	none	J Woodmansey
827151	TP6 0.30-0.50	SOIL	Chrysotile	clumps of Chrysotile	J Woodmansey
827152	TP7 0.30-0.50	SOIL	NAD	none	J Woodmansey
827153	TP8 0.50-1.00	SOIL	Chrysotile	bundles of Chrysotile	J Woodmansey
827154	TP9 0.30-0.60	SOIL	NAD	none	J Woodmansey
827155	TP10 0.30-0.50	SOIL	Chrysotile	bundles of Chrysotile	J Woodmansey
827156	TP11 1.20	SOIL	NAD	none	J Woodmansey
827157	TP12 0.60-1.00	SOIL	Chrysotile	bundles of Chrysotile	J Woodmansey

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 15-37966-1
 Client Ref INV/01
 Contract DOWKER STREET, MILNSBRIDGE

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
827147	TP1 0.50-1.00 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827148	TP2 0.50 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827149	TP3 0.60-1.00 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827150	TP4 0.50-1.00 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827151	TP6 0.30-0.50 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827152	TP7 0.30-0.50 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827153	TP8 0.50-1.00 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827154	TP9 0.30-0.60 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827155	TP10 0.30-0.50 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827156	TP11 1.20 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827157	TP12 0.60-1.00 SOIL	12/06/15	GJ 250ml, GJ 60ml, PG		
827158	TP2 3.00 SOIL	12/06/15	PG		
827159	TP3 3.20-3.30 SOIL	12/06/15	PG		
827160	TP4 1.80-2.00 SOIL	12/06/15	PG		
827161	TP5 1.50 SOIL	12/06/15	PG		
827162	TP7 2.00 SOIL	12/06/15	PG		
827163	TP10 3.00-3.20 SOIL	12/06/15	PG		
835743	TP3 0.60-1.00 LEACHATE	11/06/15	GJ 1L (1L)		
835744	TP4 0.50-1.00 LEACHATE	11/06/15	GJ 1L (1L)		
835745	TP6 0.30-0.50 LEACHATE	11/06/15	GJ 1L (1L)		
835746	TP7 0.30-0.50 LEACHATE	11/06/15	GJ 1L (1L)		
835747	TP10 0.30-0.50 LEACHATE	12/06/15	GJ 1L (1L)		
835748	TP12 0.60-1.00 LEACHATE	12/06/15	GJ 1L (1L)		

Key: G-Glass P-Plastic J-Jar G-Bag

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



LABORATORY REPORT



4043

Contract Number: PSL15/2904

Client's Reference:

Report Date: 23 June 2015

Client Name: ARP Associates
Northwest House
5/6 Northwest Business Park
Servia Hill
Leeds
LS6 2QH

For the attention of: Jim Wilson

Contract Title: Dowker Street, Milnsbridge

Date Received: 15/6/2015

Date Commenced: 15/6/2015

Date Completed: 23/6/2015

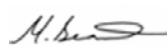
Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

R Gunson
(Director)

A Watkins
(Director)


M Beastall
(Laboratory Manager)

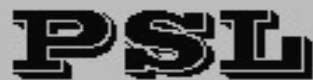
D Lambe
(Senior Technician)

S Royle
(Senior Technician)

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awatkins@prosoils.co.uk

Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

[illegible]

Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	22/06/15		22/06/15		22/06/15
DOWKER STREET, MILNSBRIDGE.				Contract No:	PSL15/2904
				Client Ref:	INV/01

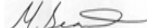
SUMMARY OF SOIL CLASSIFICATION TESTS

(B.S. 1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Depth m	Moisture Content % Clause 3.2	Bulk Density Mg/m ³ Clause 7.2	Dry Density Mg/m ³ Clause 7.2	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4.4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	% Passing .425mm	Remarks
TP5		B	0.60	31				72	29	43	100	Very high plasticity CV.
TP6		B	0.90	22				40	22	18	100	Intermediate plasticity CI.
TP9		B	2.00	30				41	22	19	100	Intermediate plasticity CI.

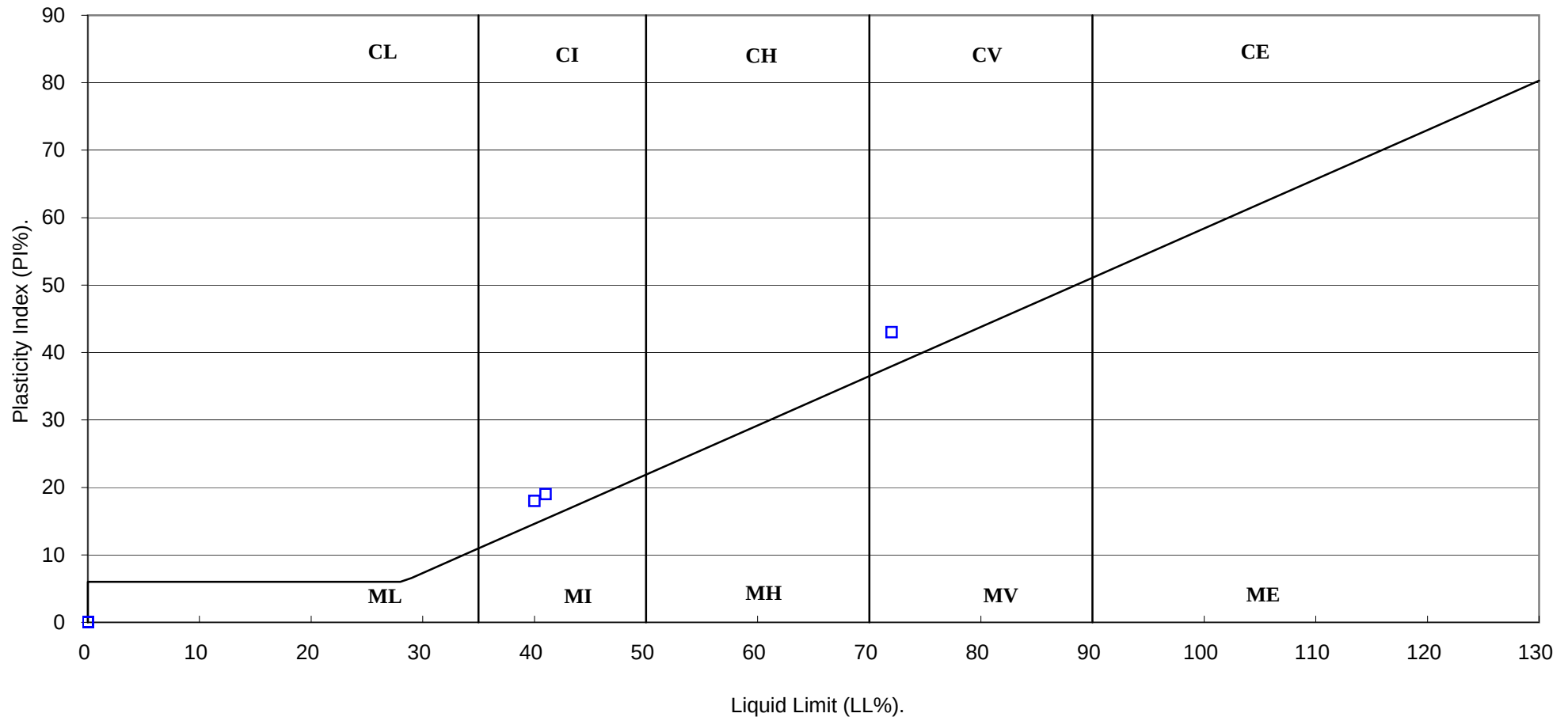
SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.

 Professional Soils Laboratory	Compiled by	Date	Checked by	Date	Approved by	Date
		22/06/15		22/06/15		22/06/15
	DOWKER STREET, MILNSBRIDGE.					Contract No: PSL15/2904
						Client Ref: INV/01

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(B.S.5930 : 1999)



PSL

Professional Soils Laboratory

Compiled by	Date	Checked by	Date	Approved by	Date
	22/06/15		22/06/15		22/06/15
DOWKER STREET, MILNSBRIDGE.				Contract No:	PSL15/2904
				Client Ref:	INV/01