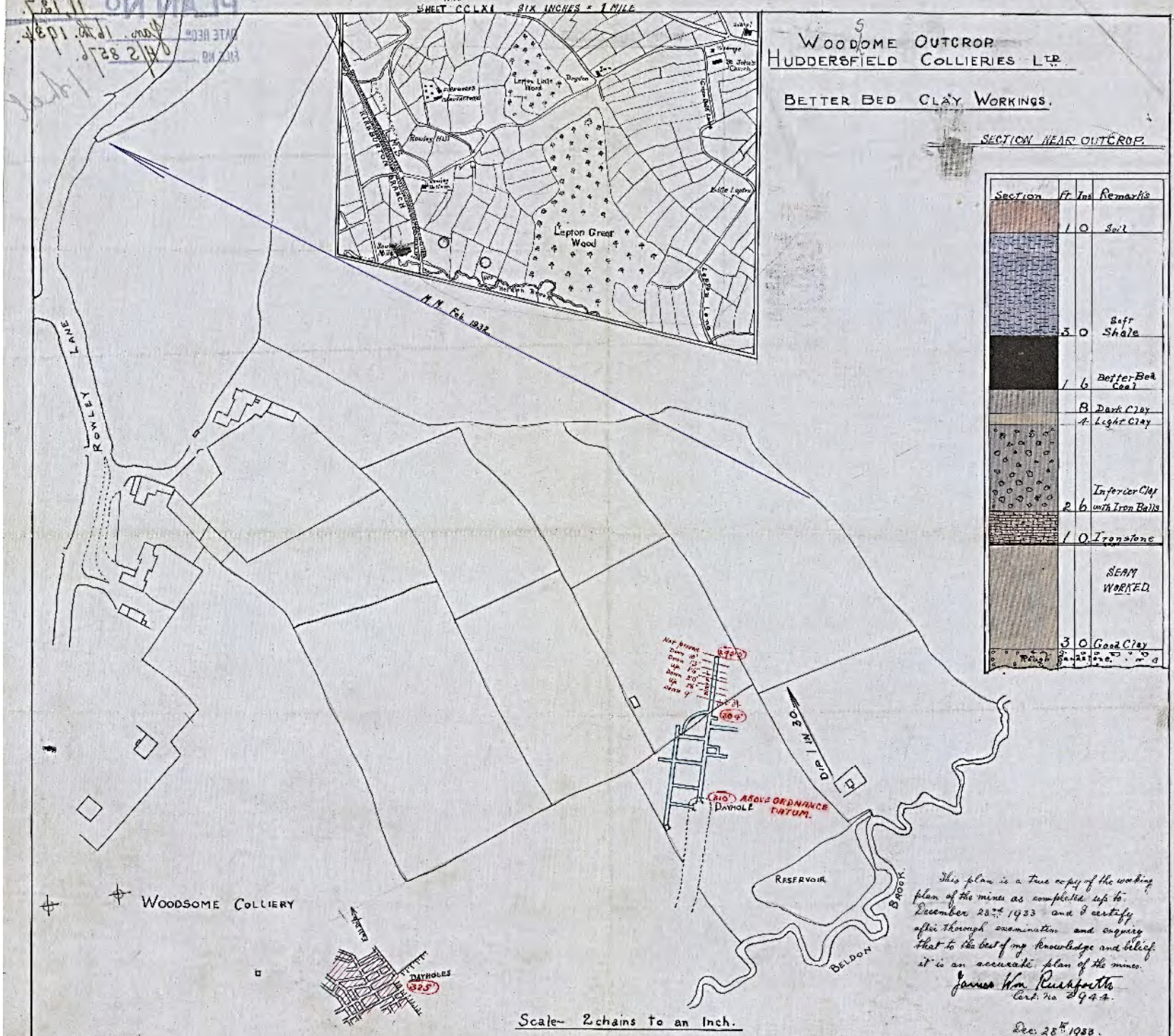

This plan is a true copy of the working plan of the mines as completed up to December 28th 1933 and I certify after thorough examination and enquiry that to the best of my knowledge and belief it is an accurate plan of the mines.

James Wm Rushforth
Cert: No 2944.

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Appendix 3: Chemical Analyses

Exploratory Hole	Arsenic	Cadmium	Chromium (total)	Copper	Lead	Mercury	Nickel	Selenium	Zinc		pH		Asbestos
TPD01, 0.10 m, 16/08/17	**-**	-	-	-	**-**	**-**	-	-	-		-		None Detected
TPD02, 0.20 m, 16/08/17	-	-	-	-	**-**	-	-	-	-		-		None Detected
TPD03, 0.10 m, 16/08/17	-	-	-	-	-	-	**-**	-	-		-		None Detected
TPD04, 0.10 m, 16/08/17	**41.9**	-	-	-	**-**	**-**	**-**	-	-		6.45		None Detected
TPD04, 0.50 m, 16/08/17	-	-	-	-	-	-	-	-	-		5.47		None Detected
TPD05, 0.20 m, 16/08/17	-	-	-	-	**-**	**2.2**	-	-	-		-		None Detected
TPD05, 0.70 m, 16/08/17	-	-	-	-	-	-	-	-	-		7.32		None Detected
TPD06, 0.40 m, 16/08/17	-	-	-	-	-	-	-	-	-		-		None Detected
BHD03, 0.30 m, 23/08/17	**42.4**	-	-	-	**-**	**-**	-	-	-		-		None Detected
GQRA Threshold Value (mg/kg)	37	11	910	2400	200	1.2	130	250	3700		N/A		0.0001 %
Maximum (mg/kg)	**42.4**	0.513	40	52.5	108	**2.2**	47.5	5.4	121		7.32		None Detected
Minimum (mg/kg)	5.2	<0.02	<0.9	36.9	21.2	0.368	20.5	<1.0	91.7		5.47		None Detected

ENVIRONMENTAL CONSULTANTS

Brook Holt, 3 Blackburn Road, Sheffield S61 2DW

Tel: 0114 266 92 92 | contactus@ecusltd.co.uk

NOTES:

1. All values are given in mg/kg unless otherwise stated.
2. All chemical levels below relevant GQRA threshold values shown as "-"
3. For actual chemical results refer to laboratory testing certificates in Appendix 2.

CHEMICAL ASSESSMENT TABLE (METALS):
RESIDENTIAL WITH HOMEGROWN PRODUCE

SITE: Land east of Penistone Road, Fenay Bridge, Huddersfield

CONTRACT: 12358

CLIENT: Engie Regeneration Ltd

APPENDIX 3, TABLE A

Exploratory Hole	Naphthalene	Acenaphthalene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a) anthracene	Chrysene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Benzo(a)pyrene	Indeno(1,2,3,-cd) pyrene	Dibenz(a,h) anthracene	Benzo(g,h,i) perylene		Soil Organic Matter (%)
TPD01, 0.10 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		7.05
TPD02, 0.20 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
TPD03, 0.10 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		5.67
TPD04, 0.10 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		6.67
TPD04, 0.50 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
TPD05, 0.20 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
TPD05, 0.70 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		1.11
TPD06, 0.40 m, 16/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
BHD03, 0.30 m, 23/08/17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
GQRA Threshold Value (mg/kg)	2.3	170	210	170	95	2400	280	620	7.2	15	2.6	77	2.2	27	0.24	320		-
Maximum (mg/kg)	0.335	0.017	0.0104	<0.01	0.473	0.142	0.359	0.308	0.171	0.235	0.293	0.098	0.185	0.113	0.0378	0.145		7.05
Minimum (mg/kg)	<0.009	<0.012	<0.008	<0.01	<0.015	<0.016	<0.017	<0.015	<0.014	<0.01	<0.015	<0.014	<0.015	<0.018	<0.023	<0.024		1.11

ecus
ENVIRONMENTAL CONSULTANTS
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NOTES:

1. All values are given in mg/kg unless otherwise stated.
2. All chemical levels below relevant GQRA threshold values shown as "-"
3. For actual chemical results refer to laboratory testing certificates in Appendix 2.
4. GQRA values assume 1% Soil Organic Matter (SOM) unless specified otherwise.

CHEMICAL ASSESSMENT TABLE (SPECIATED PAH):
RESIDENTIAL WITH HOMEGROWN PRODUCE

SITE: Land east of Penistone Road, Fenay Bridge, Huddersfield
CONTRACT: 12358
CLIENT: Engie Regeneration Ltd

APPENDIX 3, TABLE B

Client/client ref	Engie Regeneration Ltd
Project ref	12358
Site ref	Land east of Penistone Road, Fenay Bridge, Huddersfield
Data description	Soil chemical testing exceedances
Contaminant(s)	Arsenic, Mercury
Test scenario	Planning: is true mean lower than critical concentration (μ < Cc)?
Date	20 December 2018
User details	MMcD

Statistics calculator (version 1)

Input data

This spreadsheet has been produced based on the document 'Guidance on Comparing Soil Contamination Data with a Critical Concentration (CIEH/CL:AIRE, 2008)'. Users of this spreadsheet should always refer to this guidance, the User Manual and to relevant guidance on UK legislation and policy, in order to understand how the procedure should be applied in an appropriate context.

ESI Ltd (ESI) do not promise that the spreadsheet will provide any particular facilities or functions. The user must ensure that the spreadsheet meets their needs and they remain solely responsible for the competent use of the spreadsheet. Users are entirely responsible for the consequences of any use of the spreadsheet, ESI do not provide any warranty about the fitness for purpose or performance of any part of the spreadsheet. We do not promise that the media will always be free from defects, computer viruses, software locks or other similar code or that the operation of the spreadsheet will be uninterrupted or error free. The user should carry out all necessary virus checks prior to installing on their computing system.

Go to summary

Data sheet

Project details

Easting	Northing	Sample ID	Arsenic	Mercury	Outliers: Mercury													
		TPD01, 0.10	27.4	0.368														
		TPD02, 0.10m	6.99	0.813														
		TPD03, 0.10m	27.6	0.796														
		TPD04, 0.10m	41.9	0.849														
		TPD04, 0.50m	6.2	0.55														
		TPD05, 0.20m	28.5		2.2													
		TPD05, 0.70m	5.2	0.847														
		TPD06, 0.40m	9.59	0.772														
		BHD03, 0.30m	42.4	0.894														

Client/client ref: Engie Regeneration Ltd
Project ref: 12358
Site ref: Land east of Penistone Road, Fenay Bridge, Huddersfield
Data description: Soil chemical testing exceedances
Contaminant(s): Arsenic, Mercury
Test scenario: Planning
Date: 20 December 2018

	Arsenic	Mercury	Outliers: Mercury							
Critical concentration, C_c	**37**	**1.2**	**1.2**							
Notes										
Sample size, n	9	8	1	0	0	0	0	0	0	0
Sample mean, $\overline{x}$	21.7533333	0.736125	2.2	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Standard deviation, s	15.1062098	0.18161925	0							
Number of non-detects	0	0	0							
Set non-detect values to:	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit	Half detection limit
Outliers?	No	No	N/A (n<3)							
Distribution	Normal	Non-normal	Single value							
Statistical approach	Auto: One-sample t-	Auto: Chebychev	Auto: Chebychev	Auto	Auto	Auto	Auto	Auto	Auto	Auto

Test scenario:	Planning: is true mean lower than critical concentration (μ < Cc)?			**Evidence level required:**		95%	Use Normal distribution to test for outliers			
t statistic, t_0 (or k_0)	-3.027893863	-7.224105378	N/A							
Upper confidence limit (on true mean concentration, μ)	31.1169076	1.01601907	2.2							
Evidence level	**99%**	**98%**	**0%**							
Base decision on:	evidence level	evidence level	evidence level							
Result	**μ < Cc**	**μ < Cc**	**μ ≥ Cc**							
Select dataset	○ Y	○ Y	◉ Y	○ Y	○ Y	○ Y	○ Y	○ Y	○ Y	○ Y

Back to data | **Go to outlier test** | **Go to normality test** | **Show individual summary**

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