

LoCAL Deliverable 1.3

Baseline data from UK sites

WP number	WP 1
Partner responsible	UoG



University
of Glasgow



Research & Innovation
Research Fund for Coal and Steel

LoCAL

Low-Carbon After-Life (LoCAL): sustainable use of flooded coal mine voids as a thermal energy source - a baseline activity for minimising post-closure environmental risks



Deliverable 1.3

Baseline data from UK sites

The follow data initially proposed for month 12. The UK sampling schedule was delayed to allow for a synchronised programme across all European partner sites (Barredo and Bytom). A 12 month sampling regime will be carried out across all project sites. The following table represents the first 6 months of analysis from Markham and Caphouse in the UK.



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Site	Date	Field Measurements							Cations [mg/L]						Anions [mg/L]				Stable Isotopes		
		EC [uS/cm]	T [°C]	TDS [ppm]	pH	O ₂ [%]	ORP [Mv]	CaCO ₃ [mg/L]	Ca	Mg	Na	K	NH ₄	Li	Cl	SO ₄	NO ₃	Br	δ ¹⁸ O	δ ² H	δ ³⁴ S
Caphouse	04/03/15	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm	-8.2	-52	23.8
	21/05/15	2774	15	2088	6.91	nm	16	438	93	60	471	43	37	0.5	303	565	0.7	nm	-7.8	-52	nd
	30/06/15	2800	15.5	2145	6.82	27.5	-2	440	91	61	491	53	45	1.5	329	567	0.6	nm	-8.5	-54	23.2
	18/08/15	2927	15.3	2230	6.86	30.4	-18	470	89	60	513	51	49	0.7	326	576	nd	3.3	-7.8	-51	21.4
	09/09/15	2266	14.5	2266	6.67	40.8	54	300	88	58	340	40	35	1.7	166	583	nd	1.6	-8.1	-53	19.7
	09/10/15	2995	14.3	2236	6.88	nm	-14	400+	90	59	524	50	30	1.2	285	656	nd	2.6	-8	-52	23.2
	02/12/15	2765	17.8	2056	7.01	nm	nm	461	107	67	480	54	nd	1.2	211	686	nd	4.2	p	p	p
	17/12/15	2772	14.3	2076	6.83	35.4	30	468	105	67	462	57	nd	1.2	203	689	0.7	2.3	p	p	p
Markham	21/05/15	2627	13.5	2000	7.55	nd	125	265	133	47	361	57	31	1.4	663	135	5.0	nm	-7.3	-49	3.8
	30/06/15	2720	15.2	2132	7.15	33.9	223	269	134	47	397	47	nd	0.5	732	137	3.9	nm	-8.1	-51	4.7
	10/09/15	3268	13.8	2475	7.26	15.6	75	272	139	52	477	56	nd	0.8	900	129	3.1	8.3	-8.3	-54	4.8
	08/10/15	3440	14.2	2600	7.18	29.2	175	265	131	53	512	50	nd	0.1	1005	134	3.4	8.0	-8.2	-55	p
	18/11/15	3024	nm	2248	7.34	nm	nm	285	166	58	406	63	nd	1.2	821	130	4.6	9.4	-7.9	-53	p
	17/12/15	3022	13.8	2260	7.24	54.6	155	288	161	57	393	65	nd	1.1	818	131	4.8	10.6	-8	-54	p

Baseline data from UK sites, 'nm' = not measured, 'nd' = not detected, 'p' = pending.