

Analysis of Llyswen sludge

Date: 17/09/2024

Sample no. 360173

Application rate (t/ha)	250
Application rate (t/acre)	100.0
pH	7.1
Dry solids (%)	4.3
Organic matter (%)	33.3

NUTRIENT CONTENT

TOTALS	result	units	Total		Available	
			(kg/tonne)	(kg/ha)	(kg/tonne)	(kg/ha)
Nitrogen (N)	1.16	%	0.50	125.6	0.01	1.5
Ammonium-N	140	mg/kg	0.01	1.5		
Phosphorus (P)	0.12	%	0.05	13.2		
Phosphate (P2O5)			0.12	30.1	0.1	15.1
Potassium (K)	0.11	%	0.05	11.9		
Potash (K2O)			0.06	14.3	0.1	12.9
Magnesium (Mg)	3010	mg/kg	0.13	32.6		
Magnesium (MgO)			0.21	52.1	0.1	13.0
Sulphur (S)	5610	mg/kg	0.24	60.7		
Sulphur (SO ₃)			0.61	151.8	0.1	15.2
Calcium (Ca)		mg/kg	0.0	0.0		

POTENTIALLY TOXIC ELEMENTS

TOTALS	result	units	Amount		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	310.0	mg/kg	13.4	3.36	15.00
Copper	46.4	mg/kg	2.01	0.50	7.50
Nickel	24.0	mg/kg	1.04	0.26	3.00
Lead	39.8	mg/kg	1.72	0.43	15.00
Cadmium	0.44	mg/kg	0.02	0.00	0.15
Chromium	19.0	mg/kg	0.82	0.21	15.00
Mercury	0.9	mg/kg	0.04	0.01	0.10
Arsenic	23.8	mg/kg	1.03	0.26	0.70
Aluminium	118000	mg/kg	5109	1277.4	
Iron	29900	mg/kg	1295	323.7	

Analysis of Llyswen sludge

Date: 17/09/2024

Sample no. 360173

Application rate (t/ha)	100
Application rate (t/acre)	40.0
pH	7.1
Dry solids (%)	4.3
Organic matter (%)	33.3

NUTRIENT CONTENT

TOTALS	result	units	Total		Available	
			(kg/tonne)	(kg/ha)	(kg/tonne)	(kg/ha)
Nitrogen (N)	1.16	%	0.50	50.2	0.01	0.6
Ammonium-N	140	mg/kg	0.01	0.6		
Phosphorus (P)	0.12	%	0.05	5.3		
Phosphate (P2O5)			0.12	12.0	0.1	6.0
Potassium (K)	0.11	%	0.05	4.8		
Potash (K2O)			0.06	5.7	0.1	5.1
Magnesium (Mg)	3010	mg/kg	0.13	13.0		
Magnesium (MgO)			0.21	20.9	0.1	5.2
Sulphur (S)	5610	mg/kg	0.24	24.3		
Sulphur (SO ₃)			0.61	60.7	0.1	6.1
Calcium (Ca)		mg/kg	0.0	0.0		

POTENTIALLY TOXIC ELEMENTS

TOTALS	result	units	Amount		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	310.0	mg/kg	13.4	1.34	15.00
Copper	46.4	mg/kg	2.01	0.20	7.50
Nickel	24.0	mg/kg	1.04	0.10	3.00
Lead	39.8	mg/kg	1.72	0.17	15.00
Cadmium	0.44	mg/kg	0.02	0.00	0.15
Chromium	19.0	mg/kg	0.82	0.08	15.00
Mercury	0.9	mg/kg	0.04	0.00	0.10
Arsenic	23.8	mg/kg	1.03	0.10	0.70
Aluminium	118000	mg/kg	5109	510.9	
Iron	29900	mg/kg	1295	129.5	

DCWW

Analysis of Elan Valley sludge

Date: 15/07/2024

Sample no. 340282

Application rate (t/ha) 250
Application rate (t/acre) 100.0
pH 7.6
Dry solids (%) 2.5
Organic matter (%) 33.5

NUTRIENT CONTENT

TOTALS	result	units	Total		Available	
			(kg/tonne)	(kg/ha)	(kg/tonne)	(kg/ha)
Nitrogen (N)	0.72	%	0.18	45.5	0.01	1.5
Ammonium-N	242	mg/kg	0.01	1.5		
Phosphorus (P)	0.04	%	0.01	2.8		
Phosphate (P2O5)			0.03	6.4	0.0	3.2
Potassium (K)	0.01	%	0.00	0.6		
Potash (K2O)			0.00	0.8	0.0	0.7
Magnesium (Mg)	691	mg/kg	0.02	4.4		
Magnesium (MgO)			0.03	7.0	0.0	1.7
Sulphur (S)	1880	mg/kg	0.05	11.9		
Sulphur (SO ₃)			0.12	29.7	0.0	3.0
Calcium (Ca)		mg/kg	0.0	0.0		

POTENTIALLY TOXIC ELEMENTS

TOTALS	result	units	Amount		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	92.1	mg/kg	2.3	0.58	15.00
Copper	11.1	mg/kg	0.28	0.07	7.50
Nickel	21.9	mg/kg	0.55	0.14	3.00
Lead	6.2	mg/kg	0.16	0.04	15.00
Cadmium	0.11	mg/kg	0.00	0.00	0.15
Chromium	17.6	mg/kg	0.45	0.11	15.00
Mercury	1.6	mg/kg	0.04	0.01	0.10
Arsenic	40.1	mg/kg	1.01	0.25	0.70
Aluminium	1840	mg/kg	47	11.6	
Iron	363000	mg/kg	9184	2296.0	

Analysis of Talybont sludge

Date: 05/08/2024

Sample no. 363244

Application rate (t/ha)	225
Application rate (t/acre)	90.0
pH	6.6
Dry solids (%)	3.0
Organic matter (%)	37.4

NUTRIENT CONTENT

TOTALS	result	units	Total		Available	
			(kg/tonne)	(kg/ha)	(kg/tonne)	(kg/ha)
Nitrogen (N)	1.28	%	0.38	86.1	0.01	1.5
Ammonium-N	224	mg/kg	0.01	1.5		
Phosphorus (P)	0.36	%	0.11	24.4		
Phosphate (P2O5)			0.25	55.5	0.1	27.8
Potassium (K)	0.03	%	0.01	2.0		
Potash (K2O)			0.01	2.4	0.0	2.2
Magnesium (Mg)	557	mg/kg	0.02	3.7		
Magnesium (MgO)			0.03	6.0	0.0	1.5
Sulphur (S)	15300	mg/kg	0.46	102.9		
Sulphur (SO ₃)			1.14	257.3	0.1	25.7
Calcium (Ca)		mg/kg	0.0	0.0		

POTENTIALLY TOXIC ELEMENTS

TOTALS	result	units	Amount		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	161.0	mg/kg	4.8	1.08	15.00
Copper	46.0	mg/kg	1.38	0.31	7.50
Nickel	3.9	mg/kg	0.12	0.03	3.00
Lead	6.2	mg/kg	0.19	0.04	15.00
Cadmium	0.48	mg/kg	0.01	0.00	0.15
Chromium	4.3	mg/kg	0.13	0.03	15.00
Mercury	1.3	mg/kg	0.04	0.01	0.10
Arsenic	17.9	mg/kg	0.54	0.12	0.70
Aluminium	199000	mg/kg	5950	1338.8	
Iron	5400	mg/kg	161	36.3	

Analysis of Talybont sludge

Date: 05/08/2024

Sample no. 363244

Application rate (t/ha)	110
Application rate (t/acre)	44.0
pH	6.6
Dry solids (%)	3.0
Organic matter (%)	37.4

NUTRIENT CONTENT

TOTALS	result	units	Total		Available	
			(kg/tonne)	(kg/ha)	(kg/tonne)	(kg/ha)
Nitrogen (N)	1.28	%	0.38	42.1	0.01	0.7
Ammonium-N	224	mg/kg	0.01	0.7		
Phosphorus (P)	0.36	%	0.11	11.9		
Phosphate (P2O5)			0.25	27.1	0.1	13.6
Potassium (K)	0.03	%	0.01	1.0		
Potash (K2O)			0.01	1.2	0.0	1.1
Magnesium (Mg)	557	mg/kg	0.02	1.8		
Magnesium (MgO)			0.03	2.9	0.0	0.7
Sulphur (S)	15300	mg/kg	0.46	50.3		
Sulphur (SO ₃)			1.14	125.8	0.1	12.6
Calcium (Ca)		mg/kg	0.0	0.0		

POTENTIALLY TOXIC ELEMENTS

TOTALS	result	units	Amount		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	161.0	mg/kg	4.8	0.53	15.00
Copper	46.0	mg/kg	1.38	0.15	7.50
Nickel	3.9	mg/kg	0.12	0.01	3.00
Lead	6.2	mg/kg	0.19	0.02	15.00
Cadmium	0.48	mg/kg	0.01	0.00	0.15
Chromium	4.3	mg/kg	0.13	0.01	15.00
Mercury	1.3	mg/kg	0.04	0.00	0.10
Arsenic	17.9	mg/kg	0.54	0.06	0.70
Aluminium	199000	mg/kg	5950	654.5	
Iron	5400	mg/kg	161	17.8	

Analysis of Talybont sludge

Date: 05/08/2024

Sample no. 363244

Application rate (t/ha)	250
Application rate (t/acre)	100.0
pH	6.6
Dry solids (%)	3.0
Organic matter (%)	37.4

NUTRIENT CONTENT

TOTALS	result	units	Total		Available	
			(kg/tonne)	(kg/ha)	(kg/tonne)	(kg/ha)
Nitrogen (N)	1.28	%	0.38	95.7	0.01	1.7
Ammonium-N	224	mg/kg	0.01	1.7		
Phosphorus (P)	0.36	%	0.11	27.1		
Phosphate (P2O5)			0.25	61.7	0.1	30.8
Potassium (K)	0.03	%	0.01	2.2		
Potash (K2O)			0.01	2.7	0.0	2.4
Magnesium (Mg)	557	mg/kg	0.02	4.2		
Magnesium (MgO)			0.03	6.7	0.0	1.7
Sulphur (S)	15300	mg/kg	0.46	114.4		
Sulphur (SO ₃)			1.14	285.9	0.1	28.6
Calcium (Ca)		mg/kg	0.0	0.0		

POTENTIALLY TOXIC ELEMENTS

TOTALS	result	units	Amount		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	161.0	mg/kg	4.8	1.20	15.00
Copper	46.0	mg/kg	1.38	0.34	7.50
Nickel	3.9	mg/kg	0.12	0.03	3.00
Lead	6.2	mg/kg	0.19	0.05	15.00
Cadmium	0.48	mg/kg	0.01	0.00	0.15
Chromium	4.3	mg/kg	0.13	0.03	15.00
Mercury	1.3	mg/kg	0.04	0.01	0.10
Arsenic	17.9	mg/kg	0.54	0.13	0.70
Aluminium	199000	mg/kg	5950	1487.5	
Iron	5400	mg/kg	161	40.4	