

EPR/DP3590ZP MIDDLE WOODSTOCK LAGOONS

Analysis of liquid sludge

Sample Ref: EPR DP3590ZP MW

Report Number: 32312

Sample Number: 174802

Date: 08/12/2025

Application rate (t/ha) 250.0
Application rate (t/acre) 101.2
pH 5.72
Dry solids (%) 1.50

NUTRIENT CONTENT

	result	units	Total		Available	
			(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.01	%	0.1	25	0.0	3
Ammonium-N	25.00	mg/kg	0.0	6		
Phosphorus (P)	5.00	mg/kg	0.0	1		
Phosphate (P ₂ O ₅)			0.0	3	0.0	1
Potassium (K)	10.00	mg/kg	0.0	3		
Potash (K ₂ O)			0.0	3	0.0	1
Magnesium (Mg)	10.00	mg/kg	0.0	3		
Magnesium (MgO)			0.0	4	0.0	1
Sulphur (S)	138.00	mg/kg	0.1	35		
Sulphur (SO ₃)			0.3	86	0.0	9

POTENTIALLY TOXIC ELEMENTS

	result	units	Rate		Limit	% of Annual Addition Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	1.00	mg/kg	1.00	0.25	15.00	2%
Copper	0.47	mg/kg	0.47	0.12	7.50	2%
Nickel	0.20	mg/kg	0.20	0.05	3.00	2%
Lead	0.50	mg/kg	0.50	0.13	15.00	1%
Cadmium	0.01	mg/kg	0.01	0.00	0.15	2%
Chromium	0.20	mg/kg	0.20	0.05	15.00	0%
Arsenic	0.68	mg/kg	0.68	0.17	0.70	24%
Mercury	0.05	mg/kg	0.05	0.01	0.10	13%
Molybdenum	0.05	mg/kg	0.05	0.01	0.20	6%
Selenium	0.05	mg/kg	0.05	0.01	0.15	8%
Flouride	10.00	mg/kg	10.00	2.50	20.00	13%
Other Elements						
Iron	74.20	mg/kg	74.20	19		
Aluminium	2248.00	mg/kg	2248.00	562		

All results expressed on sample as received.

STEPSIDE AGRI
 CARDIGAN MART
 STATION ROAD
 CARDIGAN
 CEREDIGION
 SA43 3AD

V850

Please quote above code for all enquiries

STEPSIDE AGRI

LIQUID WASTE

SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

EPR DP3590ZP MW

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number 32312
 Sample Number 174802

Date Received 08-DEC-2025
 Date Reported 13-JAN-2026

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Oven Dry Solids	1.50	%
E Coli [Fresh]	<10	cfu/g
Conductivity 1:6	29.0	uS/cm
Total Kjeldahl Nitrogen	0.01	% w/w
Nitrate Nitrogen	<10	mg/kg
Ammonium Nitrogen	<25	mg/kg
Total Phosphorus (P)	<5	mg/kg
Total Potassium (K)	<10	mg/kg
Total Magnesium (Mg)	<10	mg/kg
Total Copper (Cu)	0.47	mg/kg

Released by *Teresa Clyne*

Date *13/01/26*

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LIQUID WASTE

SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

EPR DP3590ZP MW

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number	32312
Sample Number	174802

Date Received	08-DEC-2025
Date Reported	13-JAN-2026

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Total Zinc (Zn)	1.00	mg/kg
Total Sulphur (S)	138	mg/kg
Total Calcium (Ca)	19.4	mg/kg
Total Iron (Fe)	74.2	mg/kg
Total Molybdenum (Mo)	<0.05	mg/kg
Total Manganese (Mn)	10.8	mg/kg
Total Lead (Pb)	<0.5	mg/kg
Total Cadmium (Cd)	<0.01	mg/kg
Total Mercury (Hg)	<0.05	mg/kg
Total Nickel (Ni)	<0.2	mg/kg

Released by *Teresa Clyne*

Date *13/01/26*

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STEPSIDE AGRI

LIQUID WASTE

SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

EPR DP3590ZP MW

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number	32312
Sample Number	174802

Date Received	08-DEC-2025
Date Reported	13-JAN-2026

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Total Chromium (Cr)	<0.2	mg/kg
Total Sodium (Na)	<15	mg/kg
pH 1:6 [Fresh]	5.72	
Organic Matter LOI	0.90	% w/w
Total Aluminium	2248	mg/kg
Fluoride [100:1 H2S04 Soluble]	<10	mg/kg
Total Arsenic (As)	0.68	mg/kg
Total Selenium (Se)	0.05	mg/kg
B.O.D. [fresh]	50	mg/l
C.O.D. [fresh]	8700	mg/kg

Released by *Teresa Clyne*

Date *13/01/26*

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STEPSIDE AGRI

LIQUID WASTE

SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

EPR DP3590ZP MW

Sample Matrix : SLURRY/SLUDGE

Laboratory References

Report Number	32312
Sample Number	174802

Date Received	08-DEC-2025
Date Reported	13-JAN-2026

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

ANALYTICAL RESULTS *on 'as received' basis.*

Determinand	Value	Units
Oils,Fats and Grease	<200	mg/kg
Salmonella spp [fresh]	Negative	in 25g
EC [Neat]	103	uS/cm

Released by *Teresa Clyne*

Date *13/01/26*

DWR CYMRU WELSH WATER - BOLTON HILL WTW

Analysis of liquid water clarification sludge

Sampling Point No: 120038

Sample ID: 8443907

Date: 10/07/2025

Application rate (t/ha)	200.0
Application rate (t/acre)	80.9
pH	6.6
Dry solids (%)	3.34

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.21	0.04	%	0.4	81	0.0	8
Ammonium N	183	6.11	mg/kg	0.0	1		
Phosphorus (P)	3470	115.90	mg/kg	0.1	23		
Phosphate (P ₂ O ₅)		0.00		0.3	53	0.1	11
Potassium (K)	865	28.89	mg/kg	0.0	6		
Potash (K ₂ O)		0.00		0.0	7	0.0	1
Magnesium (Mg)	1490	49.77	mg/kg	0.0	10		
Magnesium (MgO)		0.00		0.1	17	0.0	3
Sulphur (S)	6120	204.41	mg/kg	0.2	41		
Sulphur (SO ₃)		0.00		0.5	102	0.1	10

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	108	3.61	mg/kg	3.61	0.72	15.00	5%
Copper	60.8	2.03	mg/kg	2.03	0.41	7.50	5%
Nickel	30.3	1.01	mg/kg	1.01	0.20	3.00	7%
Lead	36.8	1.23	mg/kg	1.23	0.25	15.00	2%
Cadmium	0.65	0.02	mg/kg	0.02	0.00	0.15	3%
Chromium	25.5	0.85	mg/kg	0.85	0.17	15.00	1%
Arsenic	16.4	0.55	mg/kg	0.55	0.11	0.70	16%
Mercury	0.59	0.02	mg/kg	0.02	0.00	0.10	4%
Other Elements							
Iron	24000	801.60	mg/kg	801.60	160		
Aluminium	140000	4676.00	mg/kg	4676.00	935		

Sampling Point No:	120038	Location:	BOLTON HILL Sludge Tankering Point
Date Sampled:	10/07/2025	Time Taken:	10:10
Laboratory:	ALS	Sample ID:	8443907
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	1490	mg/kg		
288 Aluminium	140000	mg/kg		
357 Arsenic	16.4	mg/kg		
4620 pH	6.6	pH		
7774 Mercury	0.59	mg/kg	<	
8241 Volatile solids	40.7	%		
9233 Ammoniacal nitrogen	183	mg/kg	<	
9234 Sulphur	6120	mg/kg		
9271 Cadmium	0.65	mg/kg	<	
9272 Chromium	25.5	mg/kg	<	
9273 Copper	60.8	mg/kg		
9275 Nickel	30.3	mg/kg	<	
9276 Lead	36.8	mg/kg	<	
9277 Zinc	108	mg/kg		
9278 Iron	24000	mg/kg		
9281 % Dry solids	3.34	%		
9282 % Minerals	59.3	%		
9283 % K (dry weight)	0.0865	mg/kg		
9284 % P (dry weight)	0.347	%	<	
9285 % N (dry weight)	1.21	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - PRESELI WTW

Analysis of liquid water clarification sludge

Sampling Point No: 100506

Sample ID: 8443873

Date: 10/07/2025

Application rate (t/ha)	200.0
Application rate (t/acre)	80.9
pH	6.6
Dry solids (%)	2.50

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.11	0.03	%	0.3	56	0.0	6
Ammonium N	245	6.13	mg/kg	0.0	1		
Phosphorus (P)	4700	117.50	mg/kg	0.1	24		
Phosphate (P ₂ O ₅)		0.00		0.3	54	0.1	11
Potassium (K)	767	19.18	mg/kg	0.0	4		
Potash (K ₂ O)		0.00		0.0	5	0.0	1
Magnesium (Mg)	1040	26.00	mg/kg	0.0	5		
Magnesium (MgO)		0.00		0.0	9	0.0	2
Sulphur (S)	6590	164.75	mg/kg	0.2	33		
Sulphur (SO ₃)		0.00		0.4	82	0.0	8

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	119	2.98	mg/kg	2.98	0.60	15.00	4%
Copper	63.4	1.59	mg/kg	1.59	0.32	7.50	4%
Nickel	41	1.03	mg/kg	1.03	0.21	3.00	7%
Lead	49.9	1.25	mg/kg	1.25	0.25	15.00	2%
Cadmium	0.88	0.02	mg/kg	0.02	0.00	0.15	3%
Chromium	34.6	0.87	mg/kg	0.87	0.17	15.00	1%
Arsenic	34.5	0.86	mg/kg	0.86	0.17	0.70	25%
Mercury	0.8	0.02	mg/kg	0.02	0.00	0.10	4%
<u>Other Elements</u>							
Iron	15400	385.00	mg/kg	385.00	77		
Aluminium	158000	3950.00	mg/kg	3950.00	790		

Sampling Point No:	100506	Location:	PRESELI WTW SLUDGE Tankering Point (New Works)
Date Sampled:	10/07/2025	Time Taken:	09:57
Laboratory:	ALS	Sample ID:	8443873
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	1040	mg/kg		
288 Aluminium	158000	mg/kg		
357 Arsenic	34.5	mg/kg		
4620 pH	6.6	pH		
7774 Mercury	0.80	mg/kg	<	
8241 Volatile solids	47.6	%		
9233 Ammoniacal nitrogen	245	mg/kg	<	
9234 Sulphur	6590	mg/kg		
9271 Cadmium	0.88	mg/kg	<	
9272 Chromium	34.6	mg/kg	<	
9273 Copper	63.4	mg/kg		
9275 Nickel	41.0	mg/kg	<	
9276 Lead	49.9	mg/kg	<	
9277 Zinc	119	mg/kg		
9278 Iron	15400	mg/kg		
9281 % Dry solids	2.50	%		
9282 % Minerals	52.4	%		
9283 % K (dry weight)	0.0767	mg/kg		
9284 % P (dry weight)	0.470	%	<	
9285 % N (dry weight)	1.11	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - BRYNGWYN WTW

Analysis of liquid water clarification sludge

Sampling Point No: 79131

Sample ID: 8268999

Date: 05/02/2025

Application rate (t/ha)	250.0
Application rate (t/acre)	101.2
pH	6.5
Dry solids (%)	2.92

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.564	0.02	%	0.2	41	0.0	4
Ammonium N	209	6.10	mg/kg	0.0	2		
Phosphorus (P)	1260	36.79	mg/kg	0.0	9		
Phosphate (P ₂ O ₅)		0.00		0.1	21	0.0	4
Potassium (K)	509	14.86	mg/kg	0.0	4		
Potash (K ₂ O)		0.00		0.0	4	0.0	1
Magnesium (Mg)	1460	42.63	mg/kg	0.0	11		
Magnesium (MgO)		0.00		0.1	18	0.0	4
Sulphur (S)	3010	87.89	mg/kg	0.1	22		
Sulphur (SO ₃)		0.00		0.2	55	0.0	5

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	200	5.84	mg/kg	5.84	1.46	15.00	10%
Copper	12.6	0.37	mg/kg	0.37	0.09	7.50	1%
Nickel	17.7	0.52	mg/kg	0.52	0.13	3.00	4%
Lead	38	1.11	mg/kg	1.11	0.28	15.00	2%
Cadmium	0.32	0.01	mg/kg	0.01	0.00	0.15	2%
Chromium	12.5	0.37	mg/kg	0.37	0.09	15.00	1%
Arsenic	19.4	0.57	mg/kg	0.57	0.14	0.70	20%
Mercury	1.38	0.04	mg/kg	0.04	0.01	0.10	10%
Other Elements							
Iron	367000	10716.40	mg/kg	10716.40	2679		
Aluminium	6150	179.58	mg/kg	179.58	45		

Sampling Point No:	79131	Location:	BRYNGWYN WTW SLUDGE TANKERING POINT
Date Sampled:	05/02/2025	Time Taken:	10:12
Laboratory:	ALS	Sample ID:	8268999
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	1460	mg/kg		
288 Aluminium	6150	mg/kg		
357 Arsenic	19.4	mg/kg		
4620 pH	6.5	pH		
7774 Mercury	1.38	mg/kg	<	
8241 Volatile solids	26.8	%		
9233 Ammoniacal nitrogen	209	mg/kg	<	
9234 Sulphur	3010	mg/kg		
9271 Cadmium	0.32	mg/kg	<	
9272 Chromium	12.5	mg/kg		
9273 Copper	12.6	mg/kg		
9275 Nickel	17.7	mg/kg		
9276 Lead	38	mg/kg		
9277 Zinc	200	mg/kg		
9278 Iron	367000	mg/kg		
9281 % Dry solids	2.92	%		
9282 % Minerals	73.2	%		
9283 % K (dry weight)	0.0509	mg/kg		
9284 % P (dry weight)	0.126	%		
9285 % N (dry weight)	0.564	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - CAPEL DEWI WTW

Analysis of liquid water clarification sludge

Sampling Point No: 122055

Sample ID: 8443877

Date: 10/07/2025

Application rate (t/ha)	190.0
Application rate (t/acre)	76.9
pH	6.2
Dry solids (%)	4.66

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.553	0.03	%	0.3	49	0.0	5
Ammonium N	131	6.10	mg/kg	0.0	1		
Phosphorus (P)	2500	116.50	mg/kg	0.1	22		
Phosphate (P ₂ O ₅)		0.00		0.3	51	0.1	10
Potassium (K)	397	18.50	mg/kg	0.0	4		
Potash (K ₂ O)		0.00		0.0	4	0.0	1
Magnesium (Mg)	1160	54.06	mg/kg	0.1	10		
Magnesium (MgO)		0.00		0.1	17	0.0	3
Sulphur (S)	2330	108.58	mg/kg	0.1	21		
Sulphur (SO ₃)		0.00		0.3	52	0.0	5

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	196	9.13	mg/kg	9.13	1.74	15.00	12%
Copper	39.7	1.85	mg/kg	1.85	0.35	7.50	5%
Nickel	21.8	1.02	mg/kg	1.02	0.19	3.00	6%
Lead	55	2.56	mg/kg	2.56	0.49	15.00	3%
Cadmium	0.47	0.02	mg/kg	0.02	0.00	0.15	3%
Chromium	38.3	1.78	mg/kg	1.78	0.34	15.00	2%
Arsenic	23.8	1.11	mg/kg	1.11	0.21	0.70	30%
Mercury	0.43	0.02	mg/kg	0.02	0.00	0.10	4%
Other Elements							
Iron	450000	20970.00	mg/kg	20970.00	3984		
Aluminium	4740	220.88	mg/kg	220.88	42		

Sampling Point No:	122055	Location:	Capel Dewi WTW Sludge Tankering Point
Date Sampled:	10/07/2025	Time Taken:	09:59
Laboratory:	ALS	Sample ID:	8443877
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	1160	mg/kg		
288 Aluminium	4740	mg/kg		
357 Arsenic	23.8	mg/kg		
4620 pH	6.2	pH		
7774 Mercury	0.43	mg/kg	<	
8241 Volatile solids	24.6	%		
9233 Ammoniacal nitrogen	131	mg/kg	<	
9234 Sulphur	2330	mg/kg		
9271 Cadmium	0.47	mg/kg	<	
9272 Chromium	38.3	mg/kg		
9273 Copper	39.7	mg/kg		
9275 Nickel	21.8	mg/kg	<	
9276 Lead	55.0	mg/kg		
9277 Zinc	196	mg/kg		
9278 Iron	450000	mg/kg		
9281 % Dry solids	4.66	%		
9282 % Minerals	75.4	%		
9283 % K (dry weight)	0.0397	mg/kg		
9284 % P (dry weight)	0.250	%	<	
9285 % N (dry weight)	0.553	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - CRAY WTW

Analysis of liquid water clarification sludge

Sampling Point No: 79114

Sample ID: 8269009

Date: 05/02/2025

Application rate (t/ha)	250.0
Application rate (t/acre)	101.2
pH	6.1
Dry solids (%)	2.27

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.68	0.02	%	0.2	39	0.0	4
Ammonium N	269	6.11	mg/kg	0.0	2		
Phosphorus (P)	523	11.87	mg/kg	0.0	3		
Phosphate (P ₂ O ₅)		0.00		0.0	7	0.0	1
Potassium (K)	126	2.86	mg/kg	0.0	1		
Potash (K ₂ O)		0.00		0.0	1	0.0	0
Magnesium (Mg)	399	9.06	mg/kg	0.0	2		
Magnesium (MgO)		0.00		0.0	4	0.0	1
Sulphur (S)	9690	219.96	mg/kg	0.2	55		
Sulphur (SO ₃)		0.00		0.5	137	0.1	14

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	160	3.63	mg/kg	3.63	0.91	15.00	6%
Copper	14.7	0.33	mg/kg	0.33	0.08	7.50	1%
Nickel	17.2	0.39	mg/kg	0.39	0.10	3.00	3%
Lead	23.5	0.53	mg/kg	0.53	0.13	15.00	1%
Cadmium	0.41	0.01	mg/kg	0.01	0.00	0.15	2%
Chromium	10.9	0.25	mg/kg	0.25	0.06	15.00	0%
Arsenic	51.8	1.18	mg/kg	1.18	0.29	0.70	42%
Mercury	1.76	0.04	mg/kg	0.04	0.01	0.10	10%
Other Elements							
Iron	427000	9692.90	mg/kg	9692.90	2423		
Aluminium	2500	56.75	mg/kg	56.75	14		

Sampling Point No:	79114	Location:	CRAY WTW SLUDGE TANKERING POINT
Date Sampled:	05/02/2025	Time Taken:	10:18
Laboratory:	ALS	Sample ID:	8269009
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	399	mg/kg		
288 Aluminium	2500	mg/kg		
357 Arsenic	51.8	mg/kg		
4620 pH	6.1	pH		
7774 Mercury	1.76	mg/kg	<	
8241 Volatile solids	33.6	%		
9233 Ammoniacal nitrogen	269	mg/kg	<	
9234 Sulphur	9690	mg/kg		
9271 Cadmium	0.41	mg/kg	<	
9272 Chromium	10.9	mg/kg		
9273 Copper	14.7	mg/kg		
9275 Nickel	17.2	mg/kg		
9276 Lead	23.5	mg/kg		
9277 Zinc	160	mg/kg		
9278 Iron	427000	mg/kg		
9281 % Dry solids	2.27	%		
9282 % Minerals	66.4	%		
9283 % K (dry weight)	0.0126	mg/kg		
9284 % P (dry weight)	0.0523	%		
9285 % N (dry weight)	0.68	%	<	

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - HIRWAUN WTW

Analysis of liquid water clarification sludge

Sampling Point No: 303551

Sample ID: 8443897

Date: 10/07/2025

Application rate (t/ha)	200.0
Application rate (t/acre)	80.9
pH	6.0
Dry solids (%)	2.98

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.913	0.03	%	0.3	54	0.0	5
Ammonium N	325	9.69	mg/kg	0.0	2		
Phosphorus (P)	3920	116.82	mg/kg	0.1	23		
Phosphate (P ₂ O ₅)		0.00		0.3	54	0.1	11
Potassium (K)	584	17.40	mg/kg	0.0	3		
Potash (K ₂ O)		0.00		0.0	4	0.0	1
Magnesium (Mg)	440	13.11	mg/kg	0.0	3		
Magnesium (MgO)		0.00		0.0	4	0.0	1
Sulphur (S)	8930	266.11	mg/kg	0.3	53		
Sulphur (SO ₃)		0.00		0.7	133	0.1	13

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	137	4.08	mg/kg	4.08	0.82	15.00	5%
Copper	52.3	1.56	mg/kg	1.56	0.31	7.50	4%
Nickel	34.2	1.02	mg/kg	1.02	0.20	3.00	7%
Lead	41.6	1.24	mg/kg	1.24	0.25	15.00	2%
Cadmium	0.74	0.02	mg/kg	0.02	0.00	0.15	3%
Chromium	41.5	1.24	mg/kg	1.24	0.25	15.00	2%
Arsenic	80.1	2.39	mg/kg	2.39	0.48	0.70	68%
Mercury	0.67	0.02	mg/kg	0.02	0.00	0.10	4%
Other Elements							
Iron	403000	12009.40	mg/kg	12009.40	2402		
Aluminium	2290	68.24	mg/kg	68.24	14		

Sampling Point No:	303551	Location:	HIRWAUN WTW SLUDGE TANKERING POINT
Date Sampled:	10/07/2025	Time Taken:	10:06
Laboratory:	ALS	Sample ID:	8443897
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	440	mg/kg		
288 Aluminium	2290	mg/kg		
357 Arsenic	80.1	mg/kg		
4620 pH	6.0	pH		
7774 Mercury	0.67	mg/kg	<	
8241 Volatile solids	37.3	%		
9233 Ammoniacal nitrogen	325	mg/kg		
9234 Sulphur	8930	mg/kg		
9271 Cadmium	0.74	mg/kg	<	
9272 Chromium	41.5	mg/kg		
9273 Copper	52.3	mg/kg	<	
9275 Nickel	34.2	mg/kg	<	
9276 Lead	41.6	mg/kg	<	
9277 Zinc	137	mg/kg		
9278 Iron	403000	mg/kg		
9281 % Dry solids	2.98	%		
9282 % Minerals	62.6	%		
9283 % K (dry weight)	0.0584	mg/kg	<	
9284 % P (dry weight)	0.392	%	<	
9285 % N (dry weight)	0.913	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - Cefn Dryskoed WTW

Analysis of liquid water clarification sludge

Sampling Point No: 79186

Sample ID: 8443871

Date: 10/07/2025

Application rate (t/ha)	200.0
Application rate (t/acre)	80.9
pH	6.4
Dry solids (%)	2.42

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.14	0.03	%	0.3	55	0.0	6
Ammonium N	251	6.07	mg/kg	0.0	1		
Phosphorus (P)	4820	116.64	mg/kg	0.1	23		
Phosphate (P ₂ O ₅)		0.00		0.3	53	0.1	11
Potassium (K)	718	17.38	mg/kg	0.0	3		
Potash (K ₂ O)		0.00		0.0	4	0.0	1
Magnesium (Mg)	545	13.19	mg/kg	0.0	3		
Magnesium (MgO)		0.00		0.0	4	0.0	1
Sulphur (S)	6730	162.87	mg/kg	0.2	33		
Sulphur (SO ₃)		0.00		0.4	81	0.0	8

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	110	2.66	mg/kg	2.66	0.53	15.00	4%
Copper	64.3	1.56	mg/kg	1.56	0.31	7.50	4%
Nickel	42.1	1.02	mg/kg	1.02	0.20	3.00	7%
Lead	51.1	1.24	mg/kg	1.24	0.25	15.00	2%
Cadmium	1.26	0.03	mg/kg	0.03	0.01	0.15	4%
Chromium	35.5	0.86	mg/kg	0.86	0.17	15.00	1%
Arsenic	52.8	1.28	mg/kg	1.28	0.26	0.70	37%
Mercury	0.82	0.02	mg/kg	0.02	0.00	0.10	4%
<u>Other Elements</u>							
Iron	6470	156.57	mg/kg	156.57	31		
Aluminium	166000	4017.20	mg/kg	4017.20	803		

Sampling Point No:	79186	Location:	CEFN DRYSCOED WTW SLUDGE TANKERING POINT
Date Sampled:	10/07/2025	Time Taken:	09:56
Laboratory:	ALS	Sample ID:	8443871
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	545	mg/kg		
288 Aluminium	166000	mg/kg		
357 Arsenic	52.8	mg/kg		
4620 pH	6.4	pH		
7774 Mercury	0.82	mg/kg	<	
8241 Volatile solids	54.7	%		
9233 Ammoniacal nitrogen	251	mg/kg	<	
9234 Sulphur	6730	mg/kg		
9271 Cadmium	1.26	mg/kg		
9272 Chromium	35.5	mg/kg	<	
9273 Copper	64.3	mg/kg	<	
9275 Nickel	42.1	mg/kg	<	
9276 Lead	51.1	mg/kg	<	
9277 Zinc	110	mg/kg		
9278 Iron	6470	mg/kg		
9281 % Dry solids	2.42	%		
9282 % Minerals	45.2	%		
9283 % K (dry weight)	0.0718	mg/kg	<	
9284 % P (dry weight)	0.482	%	<	
9285 % N (dry weight)	1.14	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - LLECHRYD WTW

Analysis of liquid water clarification sludge

Sampling Point No: 100504

Sample ID: 8511042

Date: 04/09/2025

Application rate (t/ha)	144.0
Application rate (t/acre)	58.3
pH	6.9
Dry solids (%)	3.06

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.976	0.03	%	0.3	43	0.0	4
Ammonium N	200	6.12	mg/kg	0.0	1		
Phosphorus (P)	5550	169.83	mg/kg	0.2	24		
Phosphate (P ₂ O ₅)		0.00		0.4	56	0.1	11
Potassium (K)	572	17.50	mg/kg	0.0	3		
Potash (K ₂ O)		0.00		0.0	3	0.0	1
Magnesium (Mg)	841	25.73	mg/kg	0.0	4		
Magnesium (MgO)		0.00		0.0	6	0.0	1
Sulphur (S)	3160	96.70	mg/kg	0.1	14		
Sulphur (SO ₃)		0.00		0.2	35	0.0	3

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	133	4.07	mg/kg	4.07	0.59	15.00	4%
Copper	51.3	1.57	mg/kg	1.57	0.23	7.50	3%
Nickel	33.5	1.03	mg/kg	1.03	0.15	3.00	5%
Lead	40.8	1.25	mg/kg	1.25	0.18	15.00	1%
Cadmium	0.72	0.02	mg/kg	0.02	0.00	0.15	2%
Chromium	28.3	0.87	mg/kg	0.87	0.12	15.00	1%
Arsenic	28.2	0.86	mg/kg	0.86	0.12	0.70	18%
Mercury	0.66	0.02	mg/kg	0.02	0.00	0.10	3%
Other Elements							
Iron	314000	9608.40	mg/kg	9608.40	1384		
Aluminium	3080	94.25	mg/kg	94.25	14		

Sampling Point No:	100504	Location:	LLECHRYD WTW SLUDGE TANKERING POINT
Date Sampled:	04/09/2025	Time Taken:	09:26
Laboratory:	ALS	Sample ID:	8511042
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	841	mg/kg		
288 Aluminium	3080	mg/kg		
357 Arsenic	28.2	mg/kg		
4620 pH	6.9	pH		
7774 Mercury	0.66	mg/kg	<	
8241 Volatile solids	42.6	%		
9233 Ammoniacal nitrogen	200	mg/kg	<	
9234 Sulphur	3160	mg/kg		
9271 Cadmium	0.72	mg/kg	<	
9272 Chromium	28.3	mg/kg	<	
9273 Copper	51.3	mg/kg	<	
9275 Nickel	33.5	mg/kg	<	
9276 Lead	40.8	mg/kg	<	
9277 Zinc	133	mg/kg		
9278 Iron	314000	mg/kg		
9281 % Dry solids	3.06	%		
9282 % Minerals	57.4	%		
9283 % K (dry weight)	0.0572	mg/kg	<	
9284 % P (dry weight)	0.555	%		
9285 % N (dry weight)	0.976	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit
