

Operator: CWM Environmental Ltd
Permit: CP3735PB

Installation: Nantycaws Landfill Site
Form: Surface waters Q1 2021

Reporting of surface water monitoring for the period 01-Jan-2021 to 31-Mar-2021

Monitoring location	Substance / parameter ⁽⁶⁾	Test method ⁽²⁾	Date ⁽³⁾	Compliance limit ⁽⁷⁾	Result ^{(1) (4)}	Unit ⁽⁵⁾
SW201	Electrical conductivity (field)	Field	06-Jan-2021		217	µS/cm
			09-Feb-2021		191	µS/cm
	Groundwater level/dip		15-Jan-2021		42mm	mm
			09-Feb-2021		33mm	mm
			08-Mar-2021		38mm	mm
	Water temperature		06-Jan-2021		6.4	°C
			09-Feb-2021		7.2	°C
	Total Suspended solids	TM022	10-Feb-2021		<9	mg/l
			10-Mar-2021		<9	mg/l
	Total Alkalinity as CaCO ₃	TM043	07-Jan-2021		100	mg/l
	Ammoniacal Nitrogen as N	TM099	07-Jan-2021		<0.2	mg/l
			10-Feb-2021		<0.2	mg/l
			10-Mar-2021		<0.2	mg/l
	Electrical conductivity @20°C (lab)	TM120	07-Jan-2021		217	µS/cm
			10-Feb-2021		205	µS/cm
			10-Mar-2021		252	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021		<0.00008	mg/l
	Calcium (filtered)		07-Jan-2021		37	mg/l
	Chromium (filtered)		07-Jan-2021		<0.001	mg/l
	Iron (filtered)		07-Jan-2021		0.168	mg/l

Monitoring location	Substance / parameter ⁽⁶⁾	Test method ⁽²⁾	Date ⁽³⁾	Compliance limit ⁽⁷⁾	Result ⁽¹⁾ ⁽⁴⁾	Unit ⁽⁵⁾
SW201	Lead (filtered)	TM152	07-Jan-2021		0.000232	mg/l
	Magnesium (filtered)		07-Jan-2021		3.09	mg/l
	Manganese (filtered)		07-Jan-2021		0.0179	mg/l
	Nickel (filtered)		07-Jan-2021		0.000507	mg/l
	Potassium (filtered)		07-Jan-2021		1.15	mg/l
	Sodium (filtered)		07-Jan-2021		7.07	mg/l
	Zinc (filtered)		07-Jan-2021		0.017	mg/l
	4-Methylphenol	TM176	07-Jan-2021		<0.001	mg/l
	Diethyl phthalate		07-Jan-2021		<0.001	mg/l
	Chloride	TM184	07-Jan-2021		12.5	mg/l
			10-Feb-2021		10.6	mg/l
			10-Mar-2021		11	mg/l
	Nitrate as NO3		07-Jan-2021		10	mg/l
	Nitrite as NO2		07-Jan-2021		<0.05	mg/l
	Sulphate		07-Jan-2021		5.4	mg/l
	Total Oxidised Nitrogen as N		07-Jan-2021		2.27	mg/l
	Dichloromethane	TM208	07-Jan-2021		<0.003	mg/l
	pH (lab)	TM256	10-Feb-2021		8.01	pH units
			10-Mar-2021		8.01	pH units
	Mecoprop	TM411	07-Jan-2021		<0.00008	mg/l
SW202	Electrical conductivity (field)	Field	06-Jan-2021		396	µS/cm
			09-Feb-2021		285	µS/cm
	Groundwater level/dip		15-Jan-2021		35mm	mm
			09-Feb-2021		41mm	mm
			08-Mar-2021		62mm	mm
	Water temperature		06-Jan-2021		6.4	°C
			09-Feb-2021		7.1	°C

Monitoring location	Substance / parameter ⁽⁶⁾	Test method ⁽²⁾	Date ⁽³⁾	Compliance limit ⁽⁷⁾	Result ⁽¹⁾ ⁽⁴⁾	Unit ⁽⁵⁾
SW202	Total Suspended solids	TM022	10-Feb-2021		<9	mg/l
			10-Mar-2021		<9	mg/l
	Total Alkalinity as CaCO3	TM043	07-Jan-2021		180	mg/l
	Ammoniacal Nitrogen as N	TM099	07-Jan-2021		0.371	mg/l
			10-Feb-2021		0.33	mg/l
			10-Mar-2021		<0.2	mg/l
	Electrical conductivity @20°C (lab)	TM120	07-Jan-2021		405	µS/cm
			10-Feb-2021		307	µS/cm
			10-Mar-2021		349	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021		<0.00008	mg/l
	Calcium (filtered)		07-Jan-2021		66.4	mg/l
	Chromium (filtered)		07-Jan-2021		<0.001	mg/l
	Iron (filtered)		07-Jan-2021		0.239	mg/l
	Lead (filtered)		07-Jan-2021		0.000693	mg/l
	Magnesium (filtered)		07-Jan-2021		5.85	mg/l
	Manganese (filtered)		07-Jan-2021		0.111	mg/l
	Nickel (filtered)		07-Jan-2021		0.00173	mg/l
	Potassium (filtered)		07-Jan-2021		14	mg/l
	Sodium (filtered)		07-Jan-2021		11.7	mg/l
	Zinc (filtered)		07-Jan-2021		0.0285	mg/l
	4-Methylphenol	TM176	07-Jan-2021		<0.001	mg/l
	Diethyl phthalate		07-Jan-2021		<0.001	mg/l
	Chloride	TM184	07-Jan-2021		24.9	mg/l
			10-Feb-2021		19.8	mg/l
			10-Mar-2021		19.8	mg/l
	Nitrate as NO3		07-Jan-2021		12.3	mg/l
	Nitrite as NO2		07-Jan-2021		0.108	mg/l

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SW202	Sulphate	TM184	07-Jan-2021		19.3	mg/l
	Total Oxidised Nitrogen as N		07-Jan-2021		2.82	mg/l
	Dichloromethane	TM208	07-Jan-2021		<0.003	mg/l
	pH (lab)	TM256	10-Feb-2021		8.07	pH units
			10-Mar-2021		8.06	pH units
	Mecoprop	TM411	07-Jan-2021		<0.00008	mg/l
SW203	Electrical conductivity (field)	Field	06-Jan-2021		310	µS/cm
			09-Feb-2021		124	µS/cm
	Groundwater level/dip		15-Jan-2021		110mm	mm
			09-Feb-2021		100mm	mm
			08-Mar-2021		92mm	mm
			06-Jan-2021		6.2	°C
			09-Feb-2021		3	°C
			10-Feb-2021		<9	mg/l
			10-Mar-2021		<9	mg/l
			07-Jan-2021		<0.2	mg/l
			10-Feb-2021		<0.2	mg/l
			10-Mar-2021		<0.2	mg/l
	Electrical conductivity @20°C (lab)	TM120	07-Jan-2021		497	µS/cm
			10-Feb-2021		33.5	µS/cm
			10-Mar-2021		381	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021		<0.00008	mg/l
	4-Methylphenol	TM176	07-Jan-2021		<0.001	mg/l
	Diethyl phthalate		07-Jan-2021		<0.001	mg/l
	Chloride	TM184	07-Jan-2021		18.4	mg/l
			10-Feb-2021		4.2	mg/l
			10-Mar-2021		12.9	mg/l

Monitoring location	Substance / parameter ⁽⁶⁾	Test method ⁽²⁾	Date ⁽³⁾	Compliance limit ⁽⁷⁾	Result ⁽¹⁾ ⁽⁴⁾	Unit ⁽⁵⁾
SW203	Dichloromethane	TM208	07-Jan-2021		<0.003	mg/l
	pH (lab)	TM256	10-Feb-2021		7.17	pH units
			10-Mar-2021		7.89	pH units
SW204	Mecoprop	TM411	07-Jan-2021		<0.00008	mg/l
	Electrical conductivity (field)	Field	06-Jan-2021		366	µS/cm
			09-Feb-2021		409	µS/cm
	Groundwater level/dip		15-Jan-2021		38mm	mm
			09-Feb-2021		26mm	mm
			08-Mar-2021		20mm	mm
	Water temperature		06-Jan-2021		6.8	°C
			09-Feb-2021		7.6	°C
	Total Suspended solids	TM022	10-Feb-2021		14.4	mg/l
			10-Mar-2021		<9	mg/l
	Total Alkalinity as CaCO3	TM043	07-Jan-2021		170	mg/l
	Ammoniacal Nitrogen as N	TM099	07-Jan-2021		<0.2	mg/l
			10-Feb-2021		<0.2	mg/l
			10-Mar-2021		<0.2	mg/l
	Electrical conductivity @20°C (lab)	TM120	07-Jan-2021		391	µS/cm
			10-Feb-2021		424	µS/cm
			10-Mar-2021		449	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021		<0.00008	mg/l
	Calcium (filtered)		07-Jan-2021		63.9	mg/l
	Chromium (filtered)		07-Jan-2021		<0.001	mg/l
	Iron (filtered)		07-Jan-2021		0.121	mg/l
	Lead (filtered)		07-Jan-2021		0.000217	mg/l
	Magnesium (filtered)		07-Jan-2021		5.01	mg/l
	Manganese (filtered)		07-Jan-2021		0.0631	mg/l

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SW204	Nickel (filtered)	TM152	07-Jan-2021		0.00148	mg/l
	Potassium (filtered)		07-Jan-2021		18.1	mg/l
	Sodium (filtered)		07-Jan-2021		9.95	mg/l
	Zinc (filtered)		07-Jan-2021		0.0071	mg/l
	4-Methylphenol	TM176	07-Jan-2021		<0.001	mg/l
	Diethyl phthalate		07-Jan-2021		<0.001	mg/l
	Chloride	TM184	07-Jan-2021		24.1	mg/l
			10-Feb-2021		14.1	mg/l
			10-Mar-2021		24.4	mg/l
	Nitrate as NO3		07-Jan-2021		8.65	mg/l
	Nitrite as NO2		07-Jan-2021		<0.05	mg/l
	Sulphate		07-Jan-2021		25.6	mg/l
	Total Oxidised Nitrogen as N		07-Jan-2021		1.97	mg/l
	Dichloromethane	TM208	07-Jan-2021		<0.003	mg/l
	pH (lab)	TM256	10-Feb-2021		7.93	pH units
			10-Mar-2021		8.2	pH units
	Mecoprop	TM411	07-Jan-2021		<0.00004	mg/l
SW205a	Electrical conductivity (field)	Field	06-Jan-2021		392	µS/cm
			09-Feb-2021		487	µS/cm
	Groundwater level/dip		15-Jan-2021		115mm	mm
			09-Feb-2021		88mm	mm
			08-Mar-2021		52mm	mm
	Water temperature		06-Jan-2021		8.4	°C
			09-Feb-2021		4.2	°C
	Total Suspended solids	TM022	10-Feb-2021	<70 mg/l	<9	mg/l
			10-Mar-2021	<70 mg/l	<9	mg/l
	Total Alkalinity as CaCO3	TM043	07-Jan-2021		165	mg/l

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SW205a	Ammoniacal Nitrogen as N	TM099	07-Jan-2021	<1.0 mg/l	0.342	mg/l
			10-Feb-2021	<1.0 mg/l	0.256	mg/l
			10-Mar-2021	<1.0 mg/l	<0.2	mg/l
	Electrical conductivity @20°C (lab)	TM120	07-Jan-2021		413	µS/cm
			10-Feb-2021		522	µS/cm
			10-Mar-2021		420	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021	<0.0001 mg/l	<0.00008	mg/l
	Calcium (filtered)		07-Jan-2021		69.6	mg/l
	Chromium (filtered)		07-Jan-2021		<0.001	mg/l
	Iron (filtered)		07-Jan-2021		0.252	mg/l
	Lead (filtered)		07-Jan-2021		0.000852	mg/l
	Magnesium (filtered)		07-Jan-2021		6.39	mg/l
	Manganese (filtered)		07-Jan-2021		0.0903	mg/l
	Nickel (filtered)		07-Jan-2021		0.00166	mg/l
	Potassium (filtered)		07-Jan-2021		16.1	mg/l
	Sodium (filtered)		07-Jan-2021		12.8	mg/l
	Zinc (filtered)		07-Jan-2021		0.0242	mg/l
	4-Methylphenol	TM176	07-Jan-2021	<0.001 mg/l	<0.001	mg/l
	Diethyl phthalate		07-Jan-2021	<0.003 mg/l	<0.001	mg/l
	Chloride	TM184	07-Jan-2021	<150 mg/l	27.8	mg/l
			10-Feb-2021	<150 mg/l	34.1	mg/l
			10-Mar-2021	<150 mg/l	18.1	mg/l
	Nitrate as NO3		07-Jan-2021		11	mg/l
	Nitrite as NO2		07-Jan-2021		0.205	mg/l
	Sulphate		07-Jan-2021		19.5	mg/l
	Total Oxidised Nitrogen as N		07-Jan-2021		2.54	mg/l
	Dichloromethane	TM208	07-Jan-2021	<0.002 mg/l	<0.003	mg/l

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SW205a	pH (lab)	TM256	10-Feb-2021	6 to 9 pH units	8.26	pH units
			10-Mar-2021	6 to 9 pH units	8.25	pH units
SW206	Mecoprop	TM411	07-Jan-2021	<0.000055 mg/l	<0.00004	mg/l
	Electrical conductivity (field)	Field	06-Jan-2021		245	µS/cm
			09-Feb-2021		181	µS/cm
	Groundwater level/dip		15-Jan-2021		101mm	mm
			09-Feb-2021		88mm	mm
			08-Mar-2021		67mm	mm
	Water temperature		06-Jan-2021		6.7	°C
			09-Feb-2021		4.8	°C
	Total Suspended solids	TM022	10-Feb-2021	<50 mg/l	<9	mg/l
			10-Mar-2021	<50 mg/l	<9	mg/l
	Total Alkalinity as CaCO3	TM043	07-Jan-2021		120	mg/l
	Ammoniacal Nitrogen as N	TM099	07-Jan-2021	<1.0 mg/l	<0.2	mg/l
			10-Feb-2021	<1.0 mg/l	<0.2	mg/l
			10-Mar-2021	<1.0 mg/l	<0.2	mg/l
	Electrical conductivity @20°C (lab)	TM120	07-Jan-2021		233	µS/cm
			10-Feb-2021		229	µS/cm
			10-Mar-2021		274	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021	<0.0001 mg/l	<0.00008	mg/l
	Calcium (filtered)		07-Jan-2021		46.9	mg/l
	Chromium (filtered)		07-Jan-2021		<0.001	mg/l
	Iron (filtered)		07-Jan-2021		0.097	mg/l
	Lead (filtered)		07-Jan-2021		0.000399	mg/l
	Magnesium (filtered)		07-Jan-2021		3.66	mg/l
	Manganese (filtered)		07-Jan-2021		0.02	mg/l
	Nickel (filtered)		07-Jan-2021		0.000769	mg/l

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SW206	Potassium (filtered)	TM152	07-Jan-2021		1.54	mg/l
	Sodium (filtered)		07-Jan-2021		7.28	mg/l
	Zinc (filtered)		07-Jan-2021		0.00681	mg/l
	4-Methylphenol	TM176	07-Jan-2021	<0.001 mg/l	<0.001	mg/l
	Diethyl phthalate		07-Jan-2021	<0.003 mg/l	<0.001	mg/l
	Chloride	TM184	07-Jan-2021	<150 mg/l	11.1	mg/l
			10-Feb-2021	<150 mg/l	9.8	mg/l
			10-Mar-2021	<150 mg/l	9.6	mg/l
	Nitrate as NO3		07-Jan-2021		7.36	mg/l
	Nitrite as NO2		07-Jan-2021		<0.05	mg/l
	Sulphate		07-Jan-2021		8.2	mg/l
	Total Oxidised Nitrogen as N		07-Jan-2021		1.67	mg/l
	Dichloromethane	TM208	07-Jan-2021	<0.002 mg/l	<0.003	mg/l
	pH (lab)	TM256	10-Feb-2021	6 to 9 pH units	8.2	pH units
			10-Mar-2021	6 to 9 pH units	8.22	pH units
	Mecoprop	TM411	07-Jan-2021	<0.000055 mg/l	<0.00008	mg/l
SW207	Electrical conductivity (field)	Field	06-Jan-2021		298	µS/cm
			09-Feb-2021		281	µS/cm
	Groundwater level/dip		15-Jan-2021		142mm	mm
			09-Feb-2021		120mm	mm
			08-Mar-2021		120mm	mm
	Water temperature		06-Jan-2021		4.2	°C
			09-Feb-2021		7	°C
	Total Suspended solids	TM022	10-Feb-2021		45.3	mg/l
			10-Mar-2021		<9	mg/l
	Total Alkalinity as CaCO3	TM043	07-Jan-2021		130	mg/l
	Ammoniacal Nitrogen as N	TM099	07-Jan-2021		0.511	mg/l

Monitoring location	Substance / parameter ⁽⁶⁾	Test method ⁽²⁾	Date ⁽³⁾	Compliance limit ⁽⁷⁾	Result ⁽¹⁾ ⁽⁴⁾	Unit ⁽⁵⁾
SW207	Ammoniacal Nitrogen as N	TM099	10-Feb-2021		0.243	mg/l
			10-Mar-2021		<0.2	mg/l
			07-Jan-2021		302	µS/cm
	Electrical conductivity @20°C (lab)	TM120	10-Feb-2021		307	µS/cm
			10-Mar-2021		340	µS/cm
	Cadmium (filtered)	TM152	07-Jan-2021		<0.00008	mg/l
	Calcium (filtered)		07-Jan-2021		50.3	mg/l
	Chromium (filtered)		07-Jan-2021		<0.001	mg/l
	Iron (filtered)		07-Jan-2021		0.249	mg/l
	Lead (filtered)		07-Jan-2021		0.000891	mg/l
	Magnesium (filtered)		07-Jan-2021		4.48	mg/l
	Manganese (filtered)		07-Jan-2021		0.0565	mg/l
	Nickel (filtered)		07-Jan-2021		0.00148	mg/l
	Potassium (filtered)		07-Jan-2021		12.2	mg/l
	Sodium (filtered)		07-Jan-2021		9.59	mg/l
	Zinc (filtered)		07-Jan-2021		0.0125	mg/l
	4-Methylphenol	TM176	07-Jan-2021		<0.001	mg/l
	Diethyl phthalate		07-Jan-2021		<0.001	mg/l
	Chloride	TM184	07-Jan-2021		19.7	mg/l
			10-Feb-2021		19.4	mg/l
			10-Mar-2021		20.1	mg/l
	Nitrate as NO3		07-Jan-2021		10.3	mg/l
	Nitrite as NO2		07-Jan-2021		0.105	mg/l
	Sulphate		07-Jan-2021		12.7	mg/l
	Total Oxidised Nitrogen as N		07-Jan-2021		2.37	mg/l
	Dichloromethane	TM208	07-Jan-2021		<0.003	mg/l
	pH (lab)	TM256	10-Feb-2021		8.12	pH units

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SW207	pH (lab)	TM256	10-Mar-2021		8.16	pH units
	Mecoprop	TM411	07-Jan-2021		<0.00008	mg/l

(1) The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

(2) Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. gas chromatography.

(3) For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

(4) The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated; refer to laboratory data sheets for specific uncertainty.

(5) Depths reported as metres (m) are metres above base of ditch / stream.

(6) For details of the sampling method, frequency and parameters measured / analysed for, refer to the site Environmental Monitoring Management Plan (EMMP).

(7) Where blank, there is no defined compliance limit specified for the monitoring location / parameter.

Signature:.....

Date: 30 March 2021

(Authorised to sign as representative of
Operator)