

**Report Period** ▼

1/03/2024

28/03/2024

**Monthly Monitoring Summary  
for Hodgson Quarries and Plant Pty Ltd  
Roberts Road Sand Quarry, Maroota,  
NSW**

# Site Monitoring Locations



## Groundwater Levels

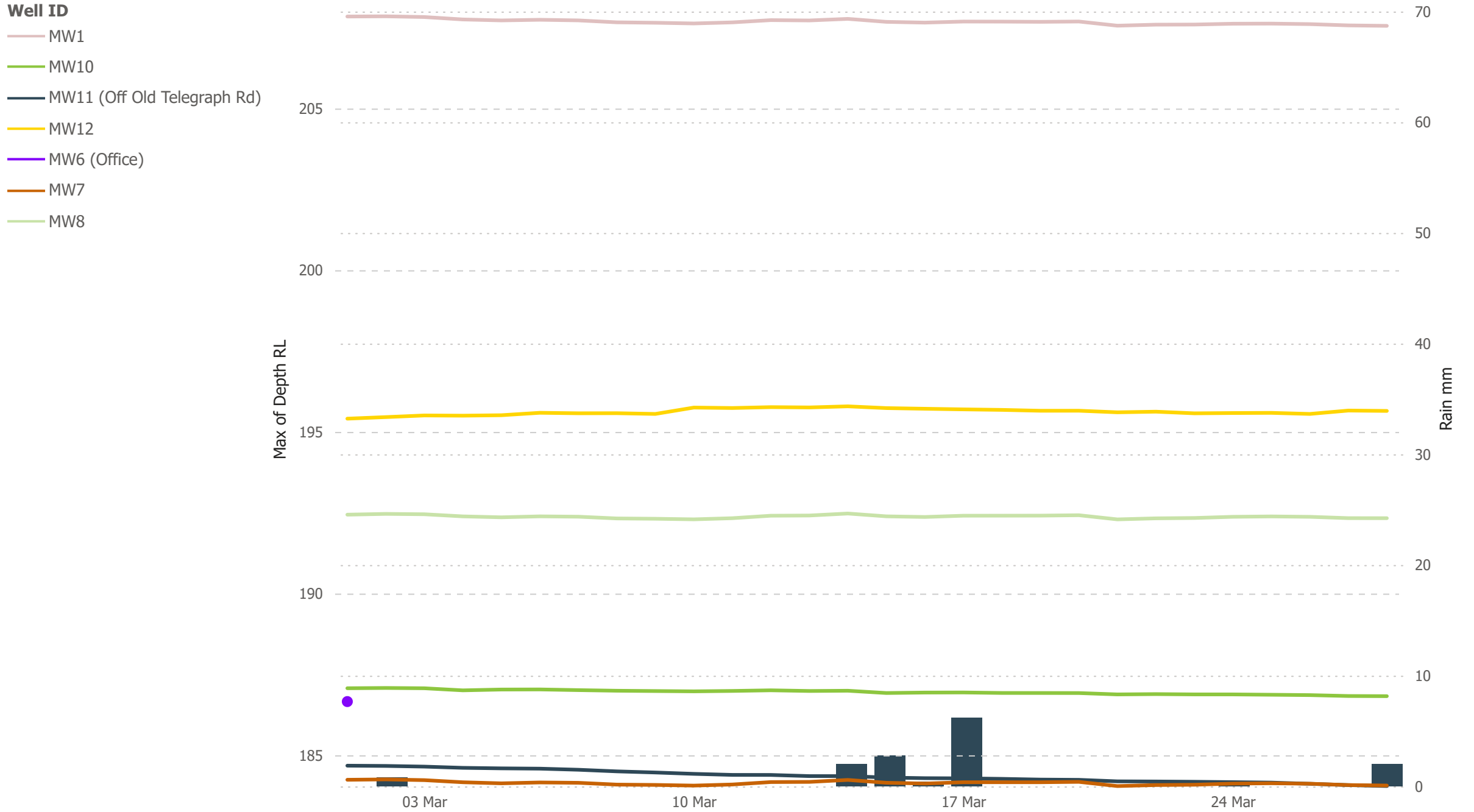
Groundwater levels are currently monitored in nine boreholes located on the site. Groundwater levels are manually measured for depth each month using a groundwater dipper. Data is downloaded from groundwater loggers where present. MW1 logger was installed prior to 2015; the remaining loggers were installed in 2017.

Graph 1 displays the depths as of January 2017. Graph 2 shows depths in the past month. Following anomalous readings from the MW5 logger, the bore was investigated and discovered to have collapsed. The logger was relocated to a functioning bore and the bore abandoned and replaced by nearby MW8.

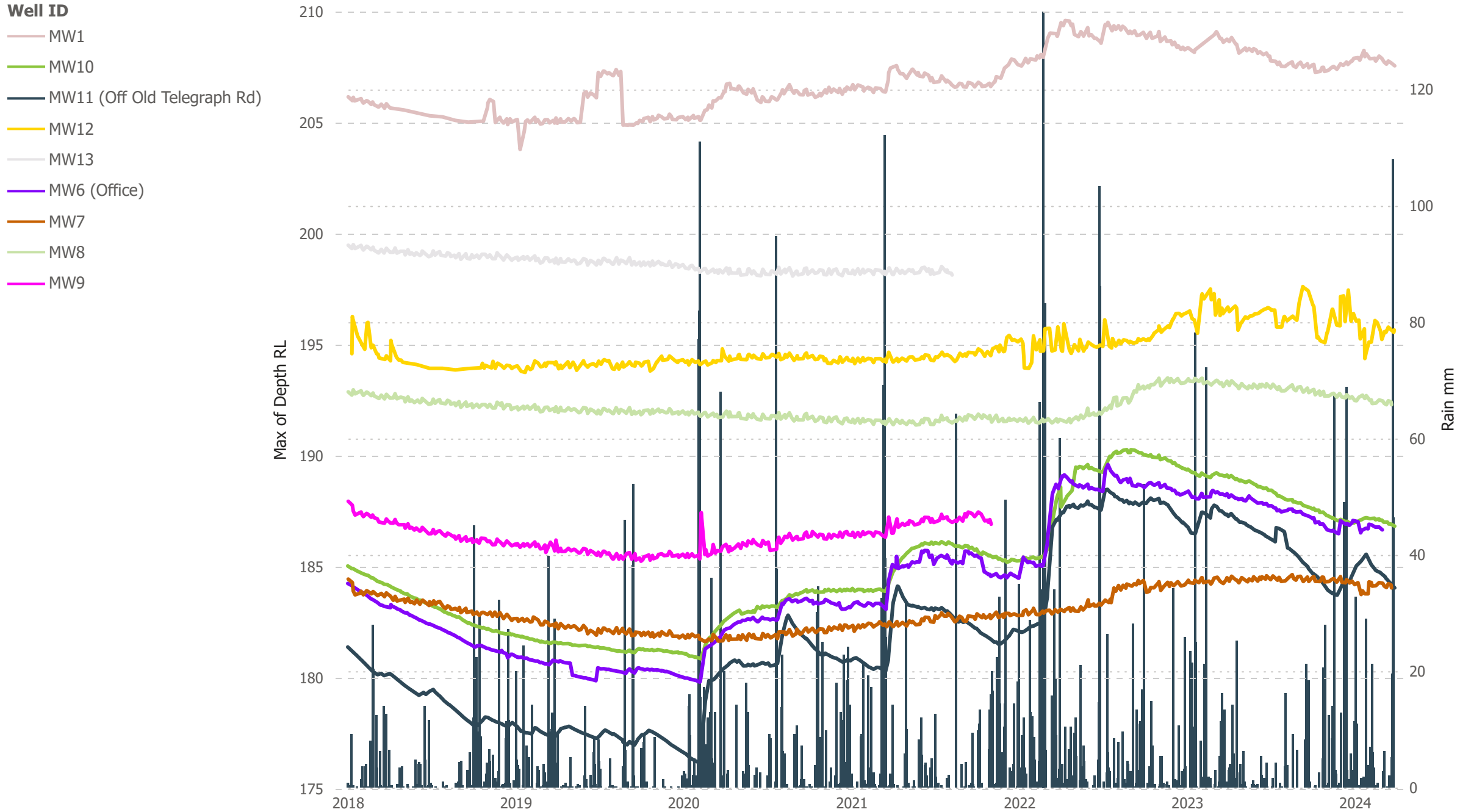
MW1 and MW12 were taken away for repairs during April 2018 and returned in October 2018, hence the gap in reporting on the following graphs.

Due to rain gauge malfunctions, rainfall was not recorded in 2020 until a new weather station was installed onsite 29th May 2020. Where available, daily rainfall received in the interim has been sourced from the Bureau of Meteorology.

**Graph 2: All Groundwater Depths with Rainfall this month**

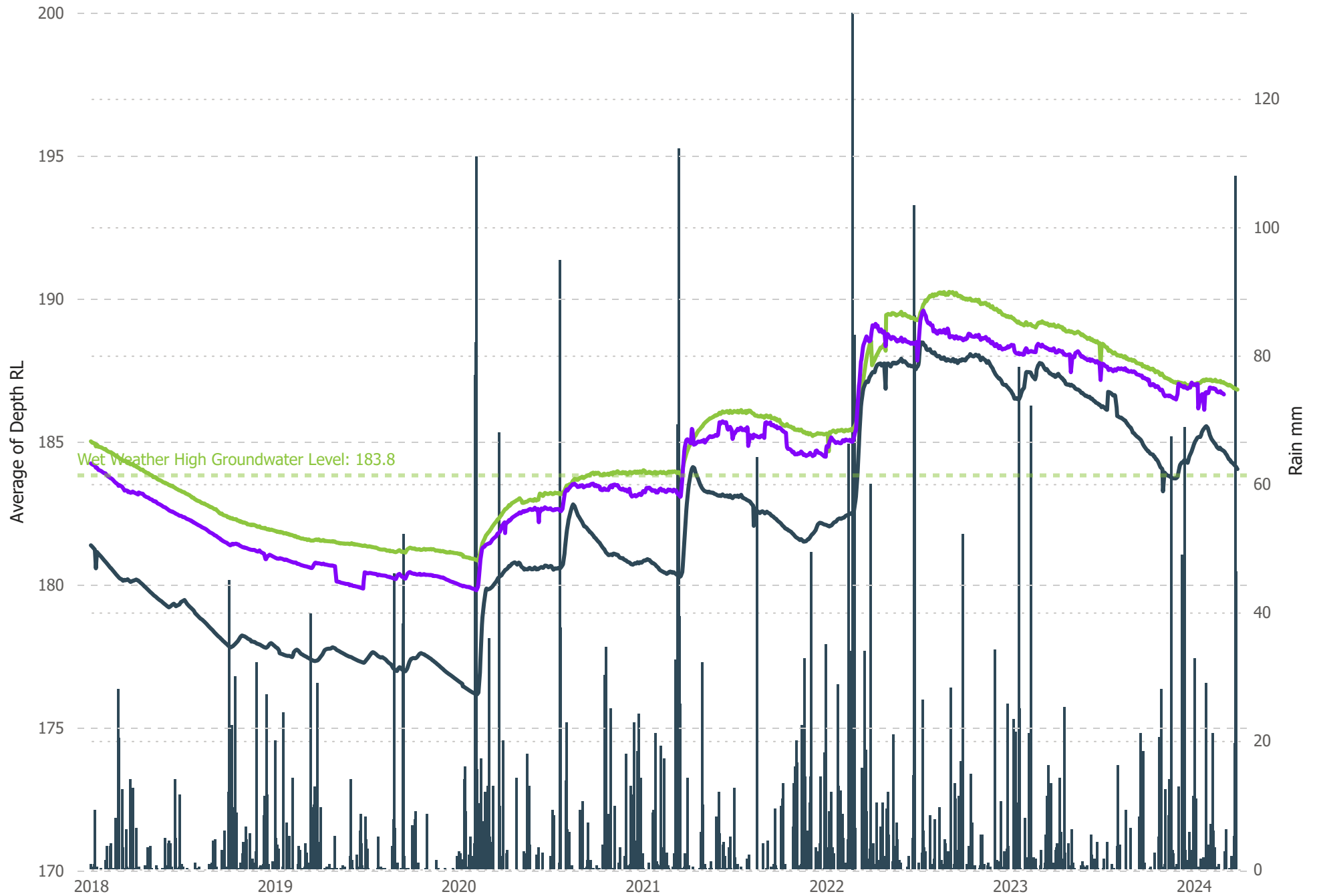


**Graph 1: All Groundwater Depths with Rainfall from 1/1/2017**

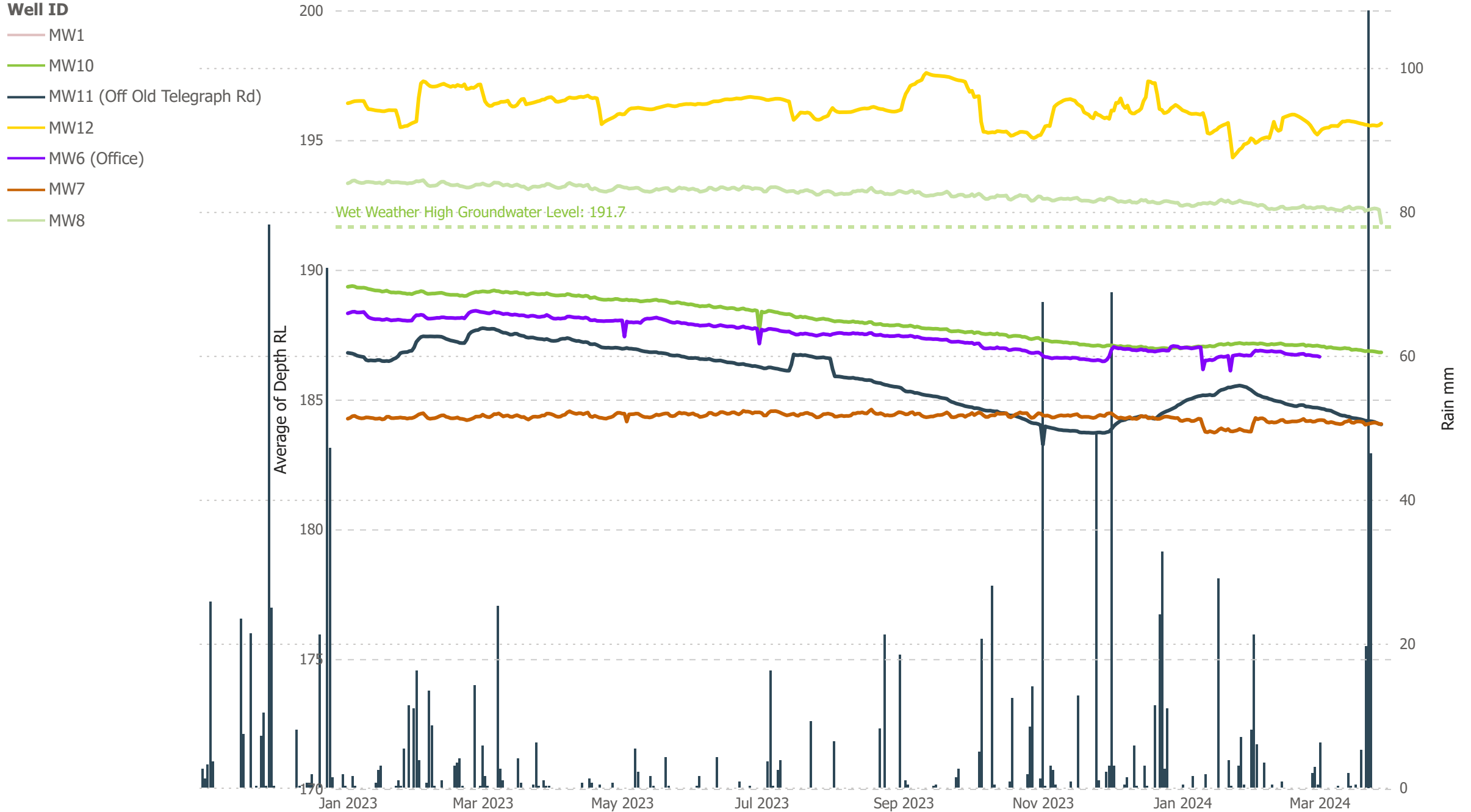


**Graph 3: All Groundwater Depths with Rainfall in Maroota Sand**

- Well ID**
- MW10
  - MW11 (Off Old Telegraph Rd)
  - MW6 (Office)

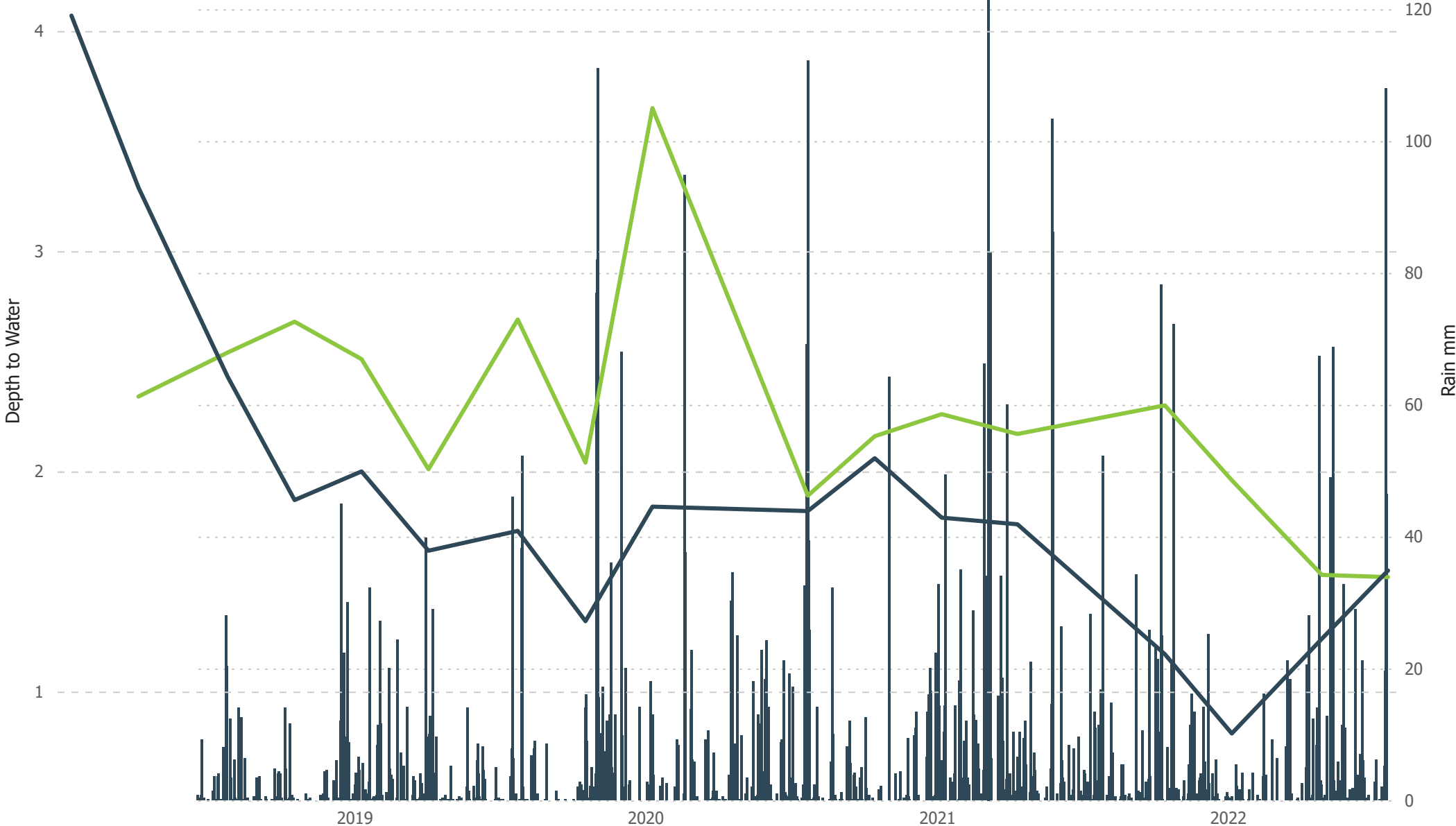


**Graph 4: All Groundwater Depths with Rainfall in Hawkesbury Sandstone**



**Graph 5: Surface Water Depths with Rainfall**

**Sample**  
— Dam 1 - Process  
— Dam 2 - Tailings





## **Weather Station Monitoring**

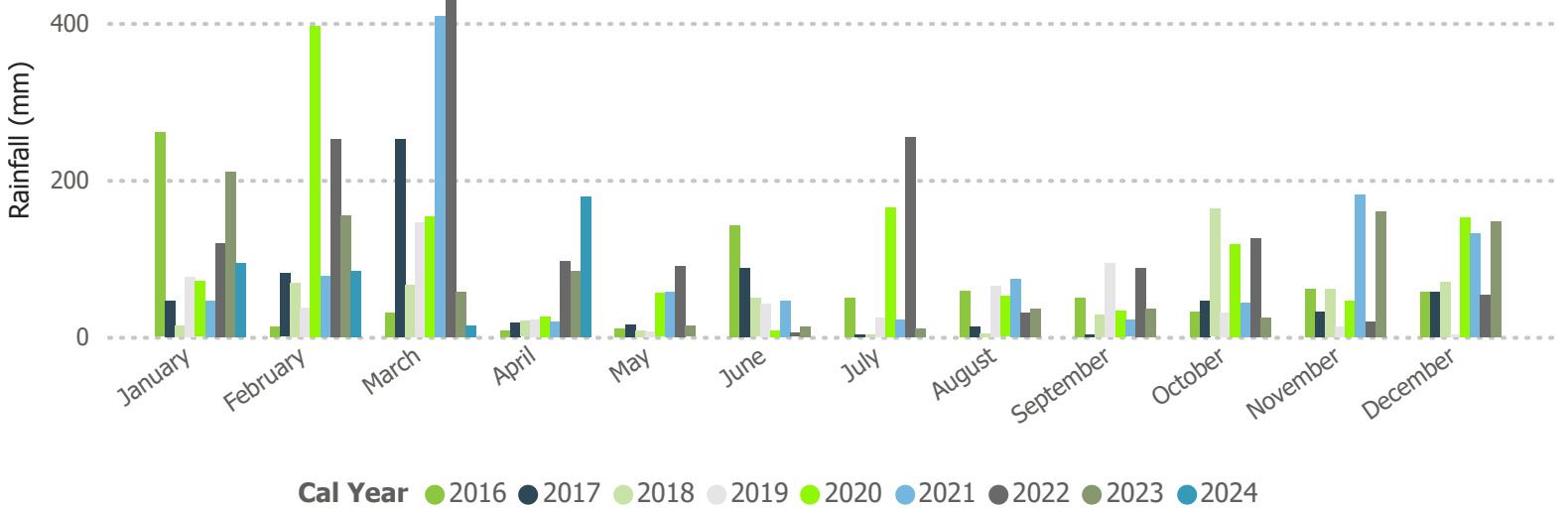
Due to gauge malfunctions, rainfall was not recorded in 2020 until a new weather station was installed onsite 29th May 2020. Where available, daily rainfall received in the interim was been sourced from the Bureau of Meteorology. Temperature monitoring during that period also shows gaps in the data. For modelling and reporting, Bureau of Meteorology averages were used

# Weather Trends

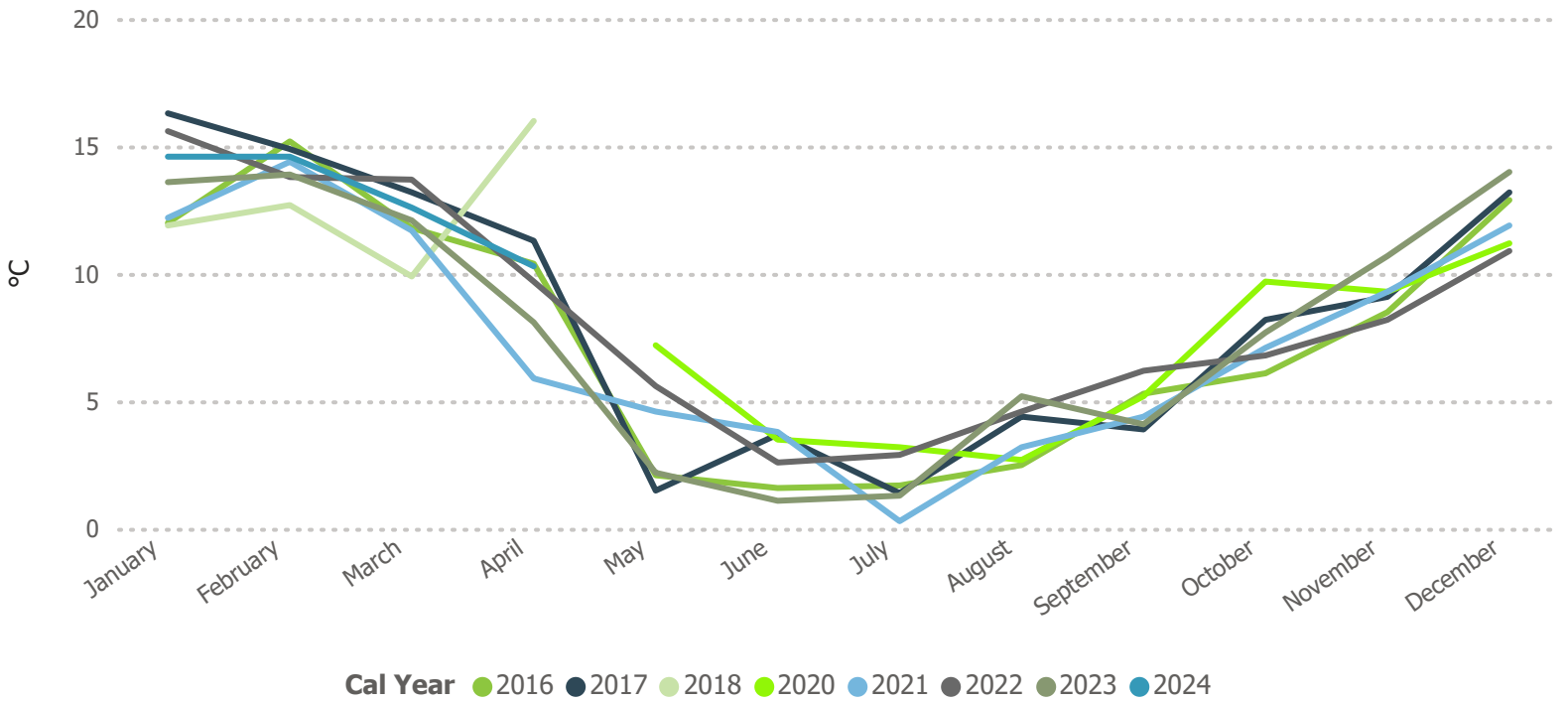
1/01/2016

30/04/2024

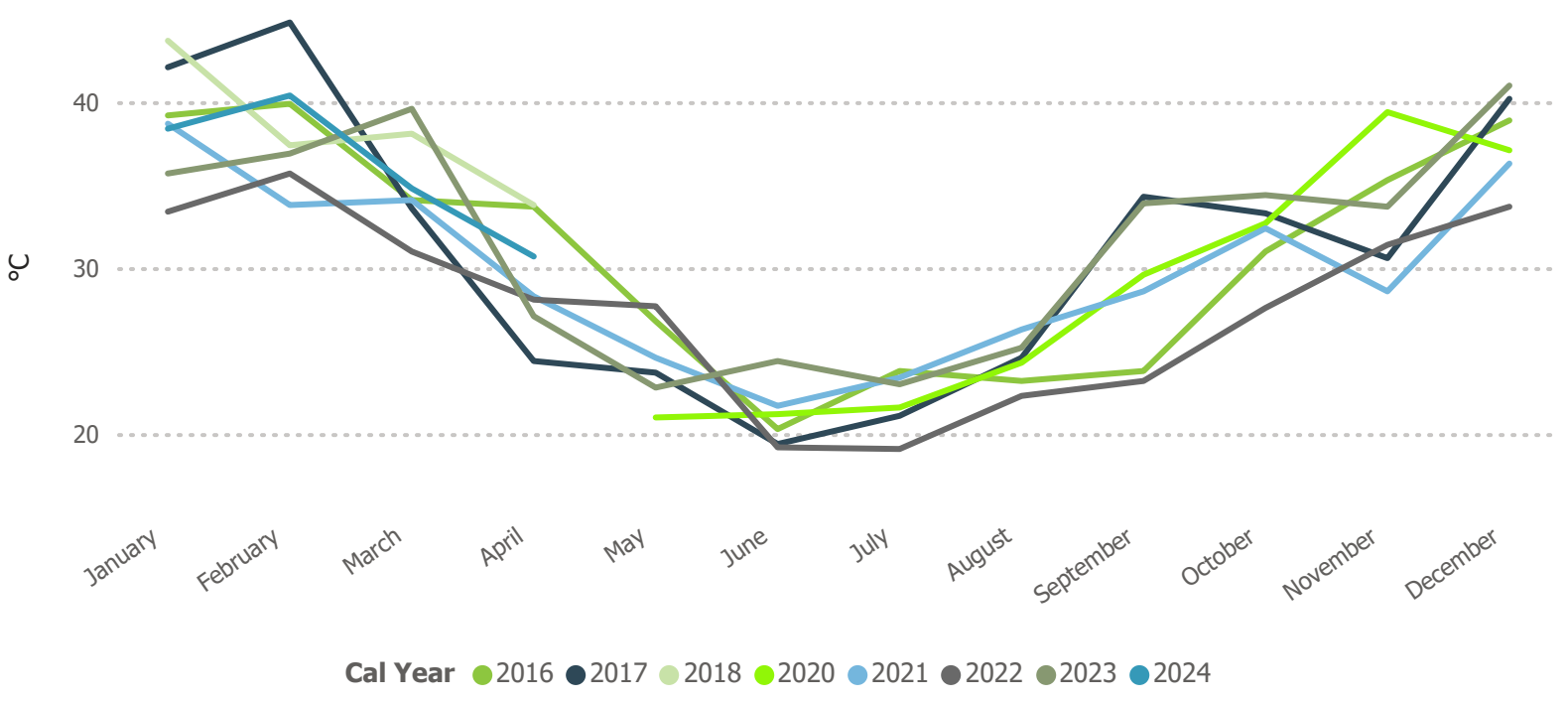
## Precipitation



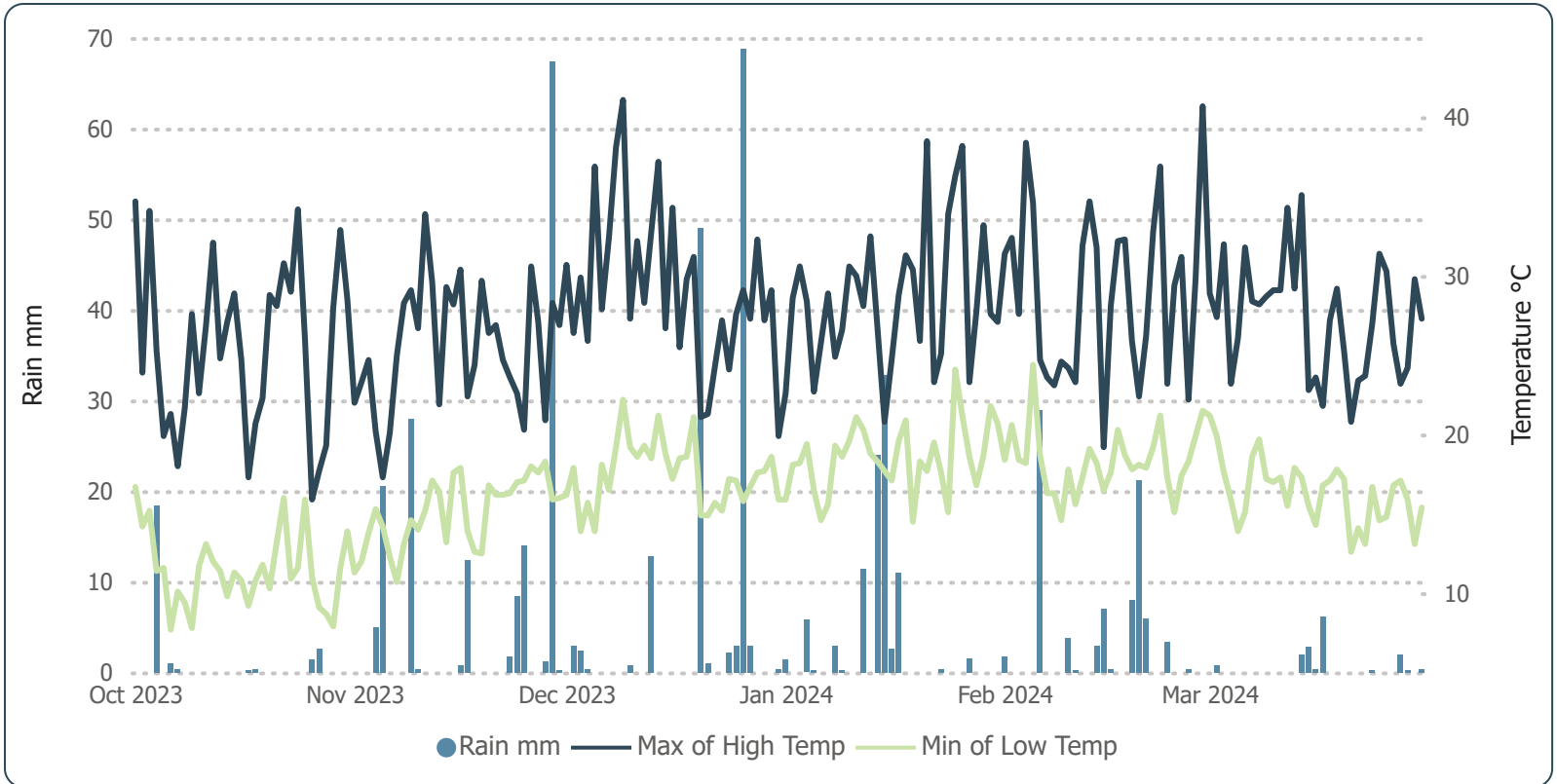
## Minimum Temperature



## Maximum Temperature



## Weather Detail for last 6 months



### Precipitation mm

Cal Year	January	February	March	October	November	December	Total
2023				24.4	160.2	146.8	<b>331.4</b>
2024	94.4	84.2	15.0				<b>193.6</b>
<b>Total</b>	<b>94.4</b>	<b>84.2</b>	<b>15.0</b>	<b>24.4</b>	<b>160.2</b>	<b>146.8</b>	<b>525.0</b>

### Minimum Temperature °C

Cal Year	January	February	March	October	November	December	Total
2023				7.7	10.7	14.0	<b>7.7</b>
2024	14.6	14.6	12.6				<b>12.6</b>
<b>Total</b>	<b>14.6</b>	<b>14.6</b>	<b>12.6</b>	<b>7.7</b>	<b>10.7</b>	<b>14.0</b>	<b>7.7</b>

### Average Temperature °C

Cal Year	January	February	March	October	November	December	Total
2023				18.1	19.4	22.4	<b>19.9</b>
2024	22.8	22.4	20.9				<b>22.0</b>
<b>Total</b>	<b>22.8</b>	<b>22.4</b>	<b>20.9</b>	<b>18.1</b>	<b>19.4</b>	<b>22.4</b>	<b>21.0</b>

### Maximum Temperature °C

Cal Year	January	February	March	October	November	December	Total
2023				34.4	33.7	41.0	<b>41.0</b>
2024	38.4	40.4	34.8				<b>40.4</b>
<b>Total</b>	<b>38.4</b>	<b>40.4</b>	<b>34.8</b>	<b>34.4</b>	<b>33.7</b>	<b>41.0</b>	<b>41.0</b>



<b>Plan of:</b>	Annual Review & Compliance Report 2022 for Roberts Road Maroota Sand Quarry - Wet Weather High Groundwater Level Maroota Sands (2022)	<b>Location:</b>	Maroota Quarry, Roberts Road, Maroota, NSW	<b>Source:</b>	nearmap - Image Date 23/06/2022 Zone MGA 56	<b>Plan By:</b>	SKUD
<b>Figure:</b>	FIVE-A	<b>Council:</b>	Hills Shire Council	<b>Survey:</b>	Fyfe Quarry Contours 24/02/2022 NSW Spatial Services ELVSDGM Surrounding Contours Dated May 2017	<b>Project Manager:</b>	LT
<b>Version/Date:</b>	V1 30/03/2023	<b>Tenure:</b>	Not Applicable	<b>Projection:</b>	GDA2020/MGA Zone 56 EPSG:7856		
<b>Our Ref:</b>	12498_HMA_AR2022_Q007_V1_F5A	<b>Client:</b>	Hodgson Quarries & Plant Pty Ltd	<b>Contour Interval:</b>	0.5m		

**vgt** environmental compliance solutions and laboratories

This figure may be based on third party data which has not been verified by vgt and may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and vgt does not warrant its accuracy.



- Legend**
- Property Boundary
  - - - Edge of Saturated Maroota Sands
  - - - Contours of Wet Weather High GW Level (mRL)
  - Groundwater Monitoring Well Location
  - Spot Heights 2023

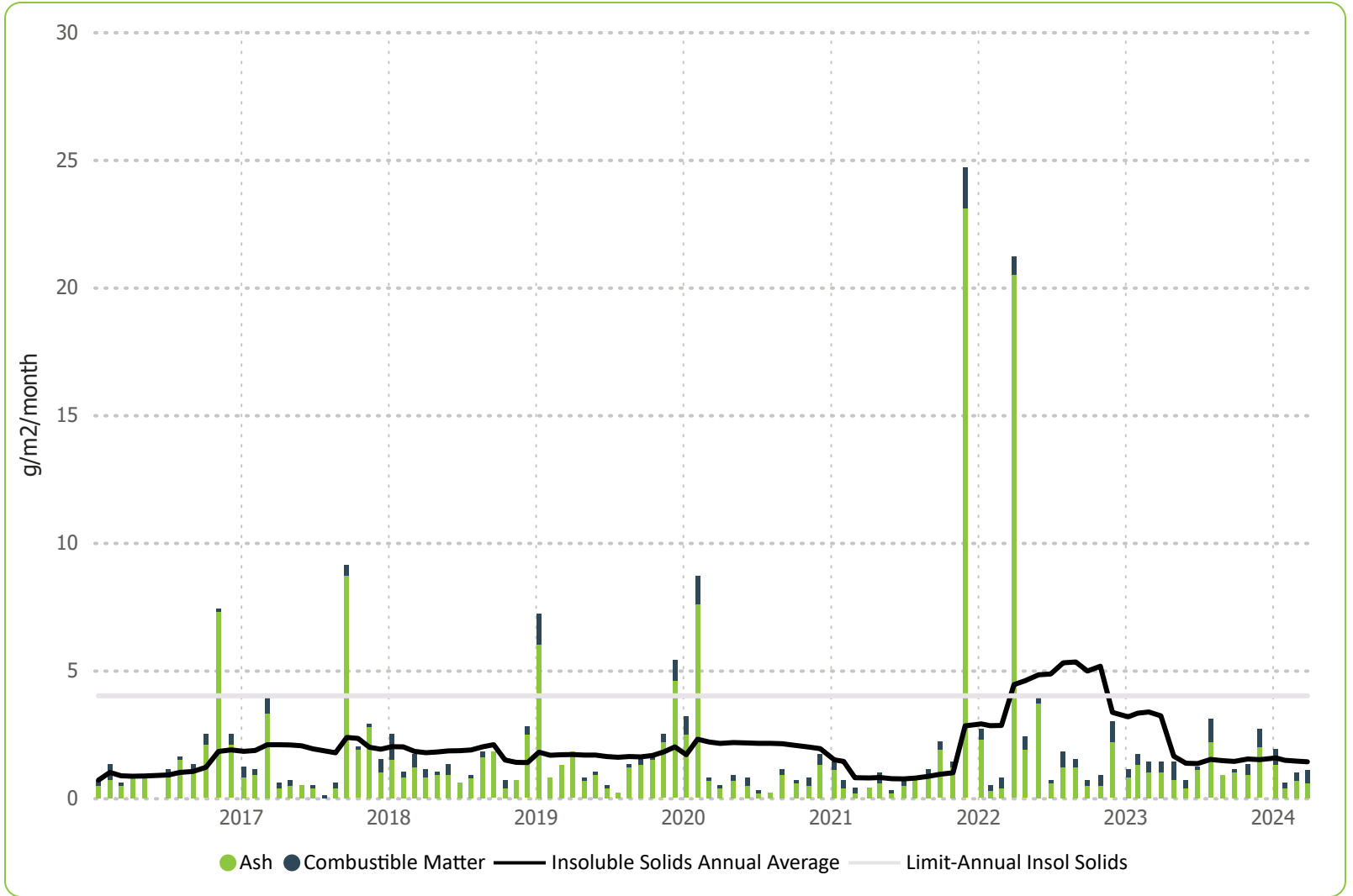
# **Depositional Dust and Particulate Matter Monitoring**

# Depositional Dusts last 12 months

D1 Gate

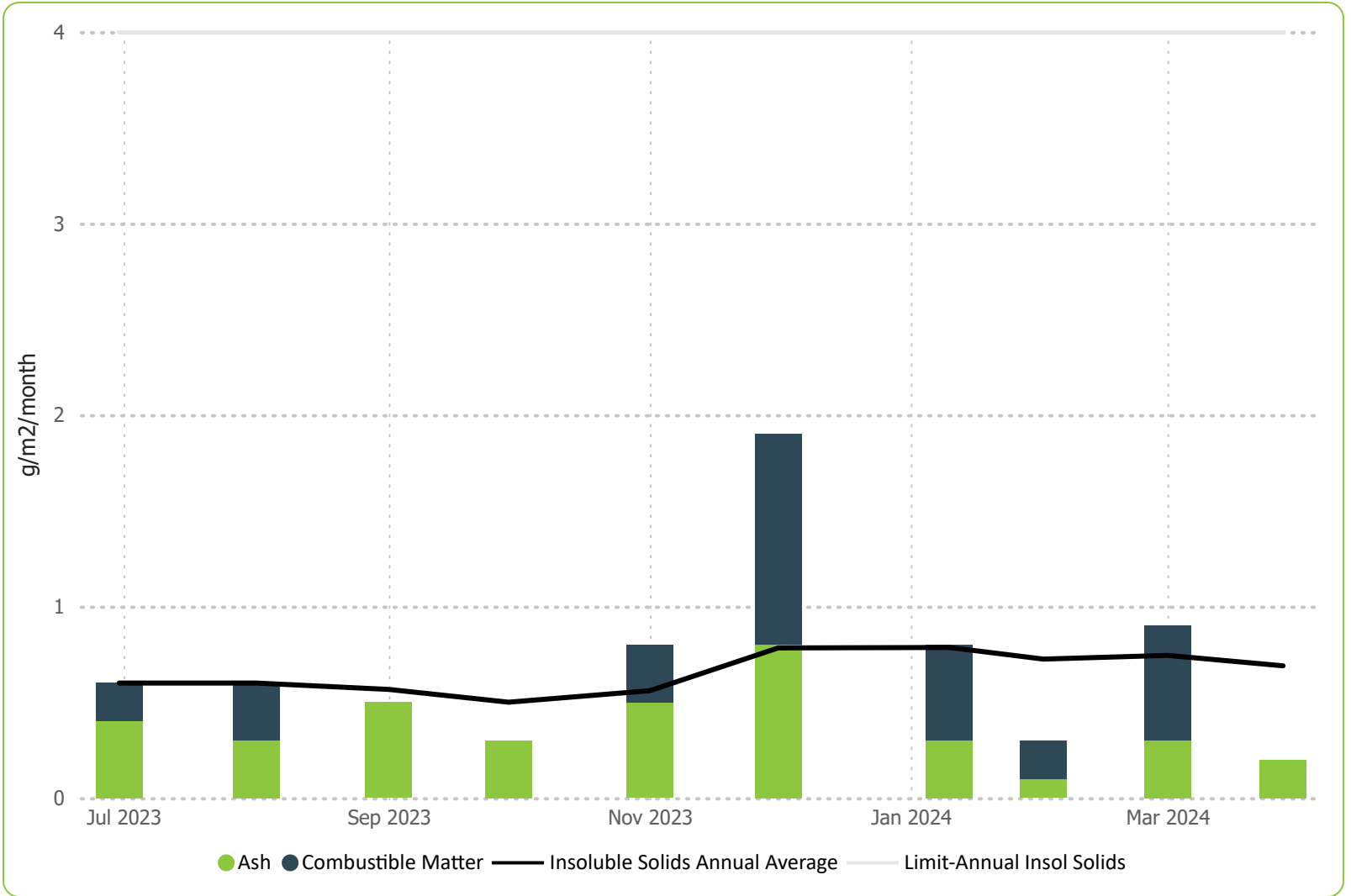


**Insoluble Solids  
Annual Average  
g/m2/month**



Date On	Comments	Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
31/03/23	Sampled by M.Mass	2/5/23	32	1.4	0.7	0.7	86
2/05/23	Sampled by M.Mass.	1/6/23	30	0.7	0.4	0.3	18
1/06/23	Sampled by M.Mass.	30/6/23	29	1.2	1.1	0.1	16
30/06/23		1/8/23	32	3.1	2.2	0.9	14
1/08/23		1/9/23	31	0.9	0.9	0.0	41
1/09/23		29/9/23	28	1.1	1.0	0.1	31
29/09/23		1/11/23	33	1.3	0.9	0.4	28
1/11/23		1/12/23	30	2.7	2.0	0.7	114
1/12/23		10/1/24	43	1.9	1.3	0.6	115
10/01/24		1/2/24	22	0.6	0.4	0.2	85
1/02/24		1/3/24	30	1.0	0.7	0.3	82
1/03/24		28/3/24	29	1.1	0.6	0.5	18

**Insoluble Solids  
Annual Average  
g/m<sup>2</sup>/month**



Date On	Comments	Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
1/06/23	Sampled by M.Mass.	30/6/23	29	0.6	0.4	0.2	9
30/06/23		1/8/23	32	0.6	0.3	0.3	3
1/08/23		1/9/23	31	0.5	0.5	0.0	32
1/09/23		29/9/23	28	0.3	0.3	0.0	28
29/09/23		1/11/23	33	0.8	0.5	0.3	8
1/11/23		1/12/23	30	1.9	0.8	1.1	115
1/12/23		10/1/24	43	0.8	0.3	0.5	114
10/01/24		1/2/24	22	0.3	0.1	0.2	72
1/02/24		1/3/24	30	0.9	0.3	0.6	69
1/03/24		28/3/24	29	0.2	0.2	0.0	9

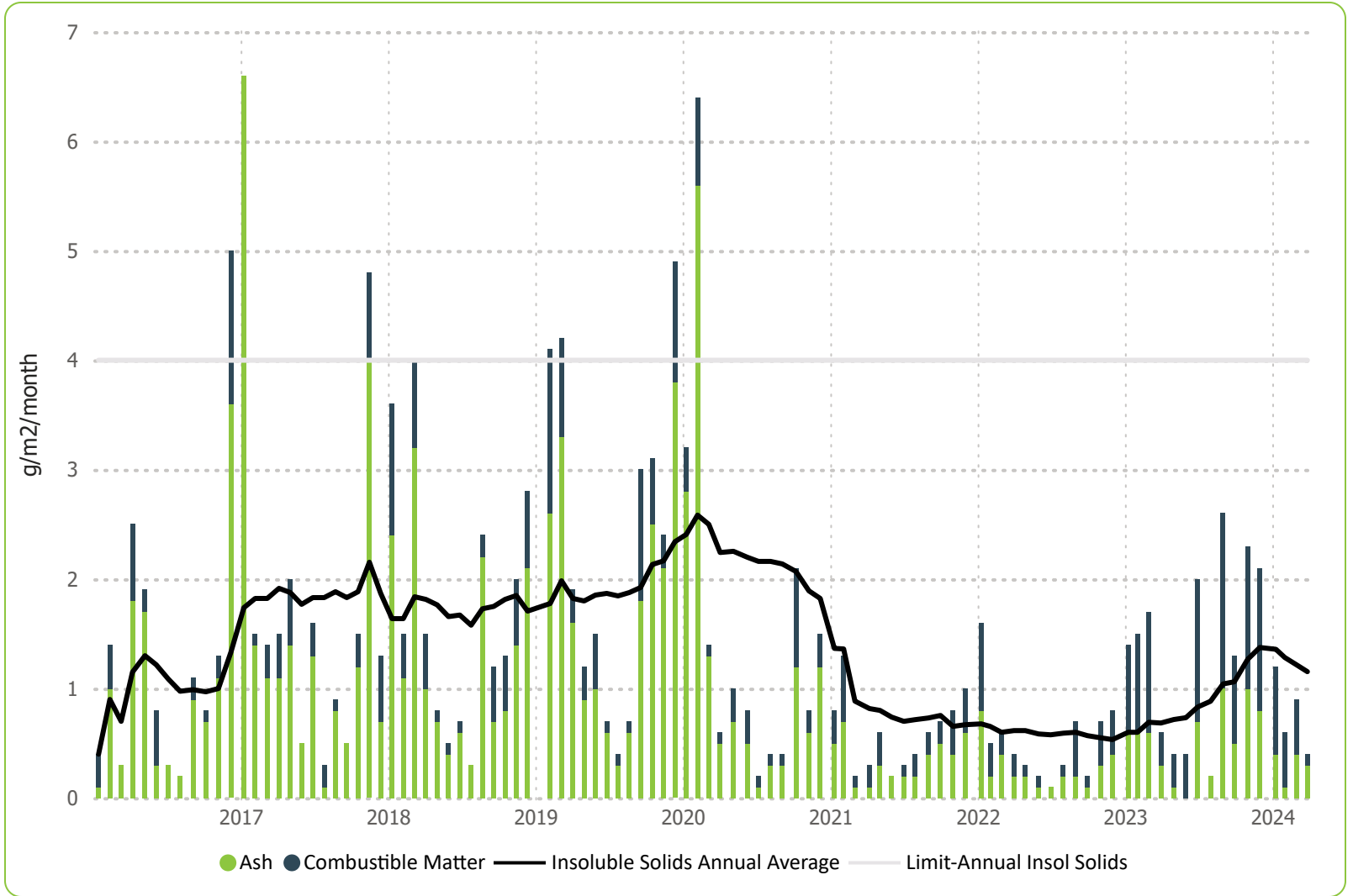


# Depositional Dusts last 12 months

D3A Bundwall



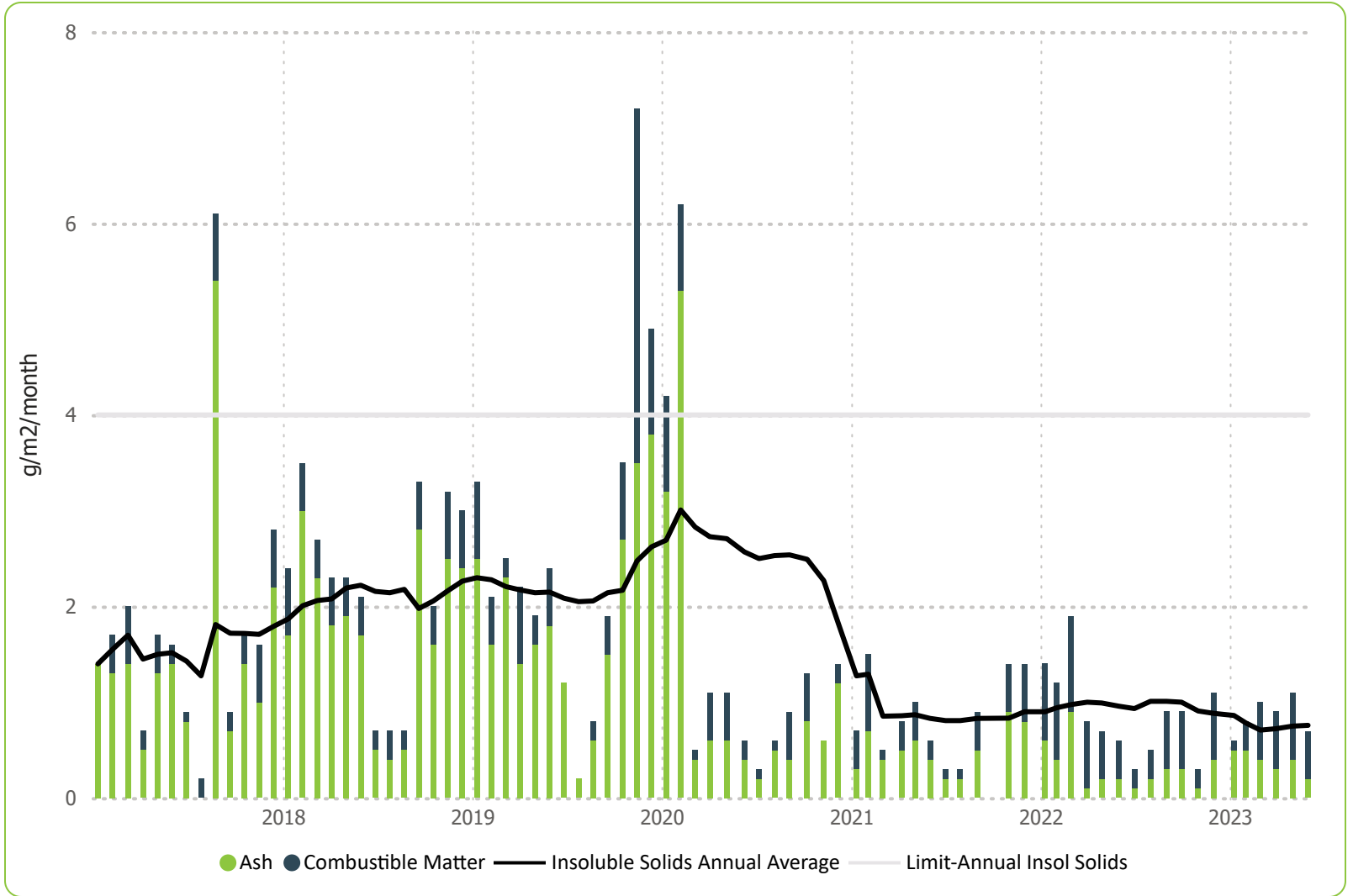
**Insoluble Solids  
Annual Average  
g/m2/month**



Date On	Comments	Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
31/03/23	Sampled by M.Mass	2/5/23	32	0.4	0.1	0.3	82
2/05/23	Sampled by M.Mass.	1/6/23	30	0.4	0.0	0.4	19
1/06/23	Sampled by M.Mass.	30/6/23	29	2.0	0.7	1.3	16
30/06/23		1/8/23	32	0.2	0.2	0.0	13
1/08/23		1/9/23	31	2.6	1.0	1.6	40
1/09/23		29/9/23	28	1.3	0.5	0.8	35
29/09/23		1/11/23	33	2.3	1.0	1.3	26
1/11/23		1/12/23	30	2.1	0.8	1.3	115
1/12/23	Funnel broken from large hail.	10/1/24	43	1.2	0.4	0.8	115
10/01/24		1/2/24	22	0.6	0.1	0.5	58
1/02/24	Vegetable farm adjacent recently ploughed	1/3/24	30	0.9	0.4	0.5	79
1/03/24		28/3/24	29	0.4	0.3	0.1	16



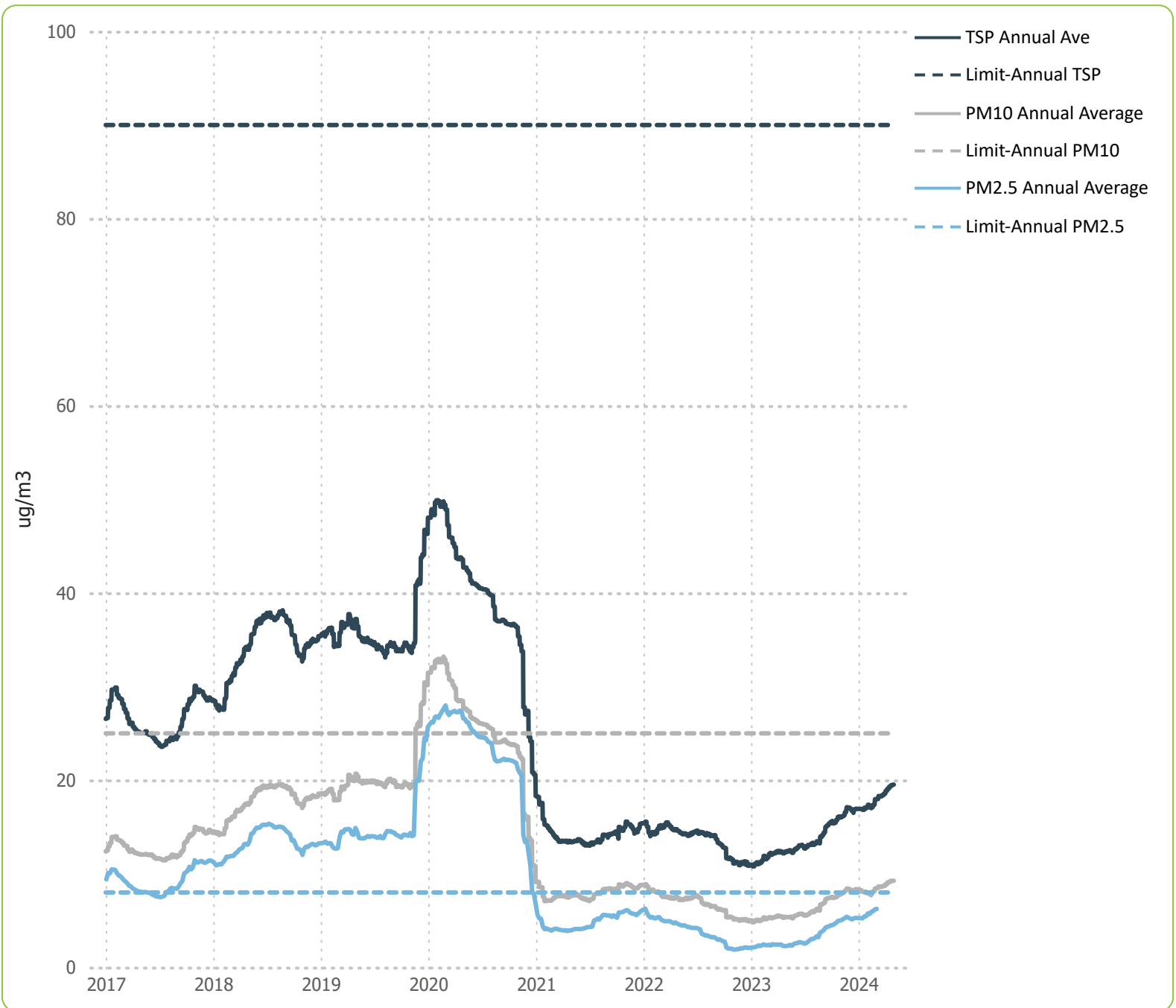
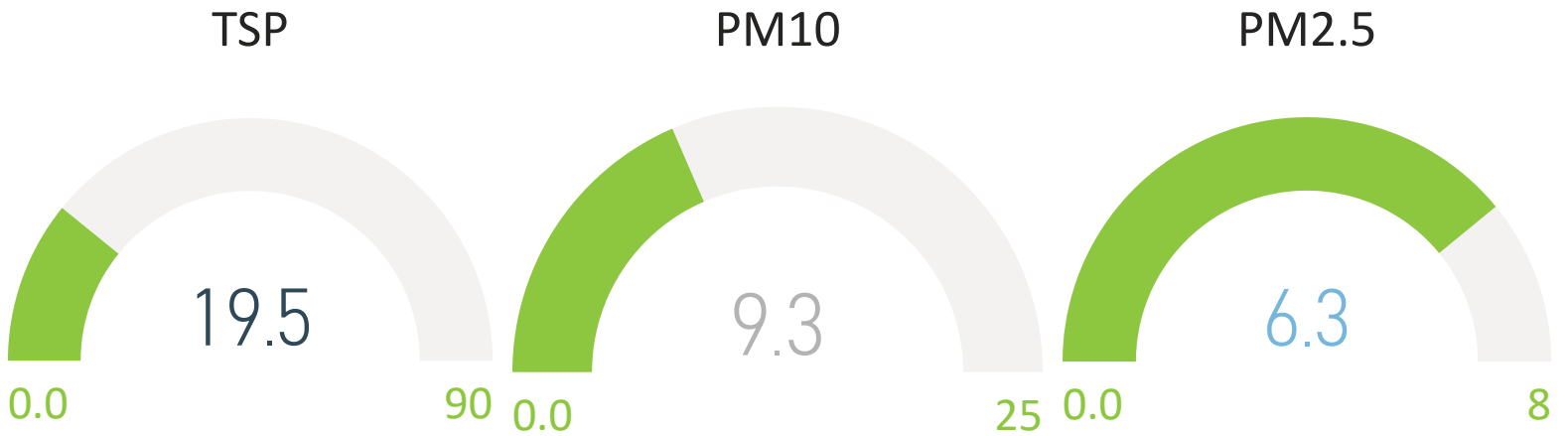
**Insoluble Solids  
Annual Average  
g/m2/month**



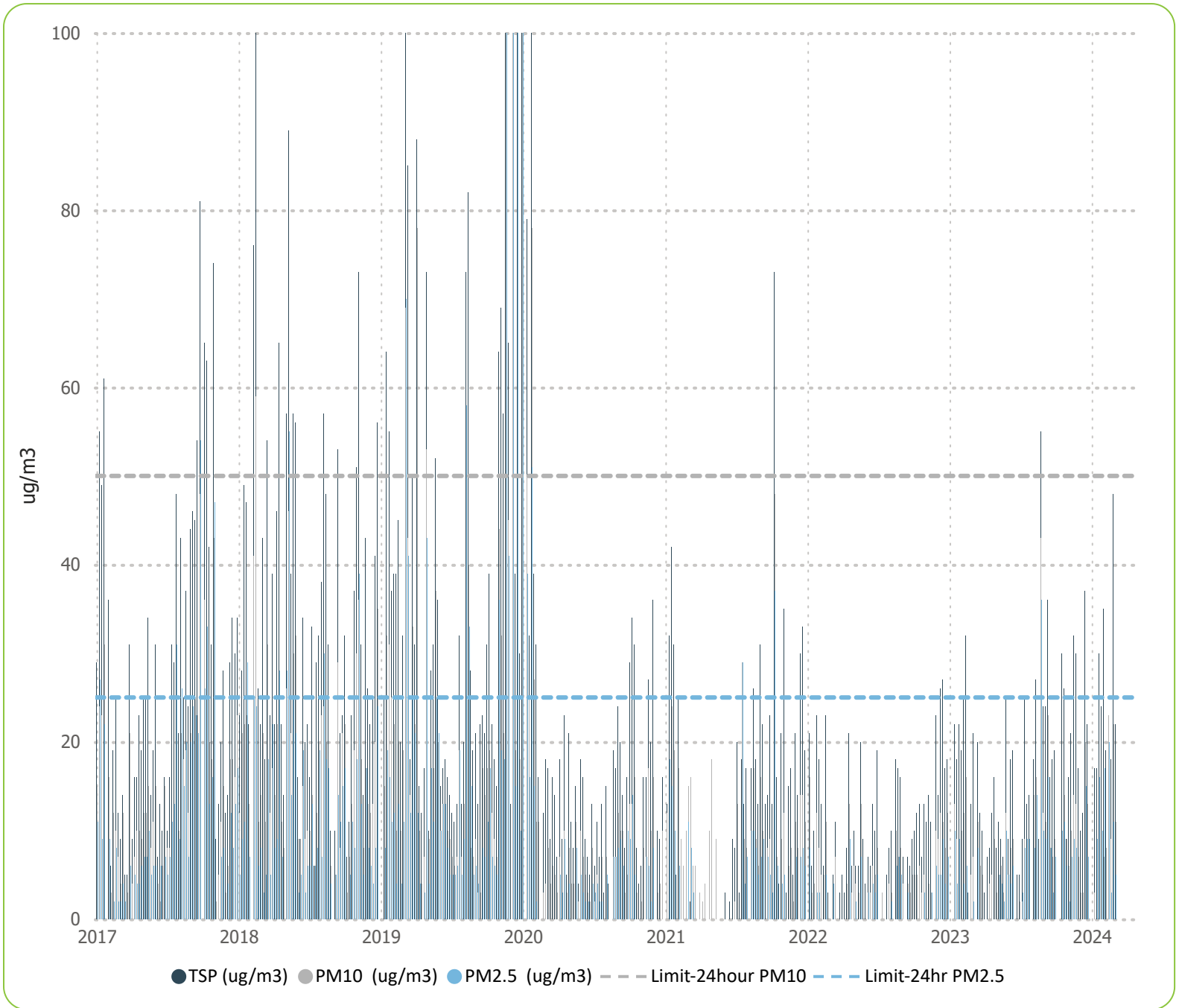
Date On	Comments
1/06/22	Sampled by Melissa Mass
1/07/22	Sampled by Melissa Mass. Flooding rainfall event during July.
1/08/22	Sampled by Melissa Mass.
1/09/22	Sampled by Melissa Mass.
30/09/22	Sampled by Melissa Mass.
1/11/22	Sampled by Melissa Mass.
1/12/22	Sampled by Melissa Mass.
9/01/23	
1/02/23	Sampled by M.Mass
1/03/23	Sampled by M.Mass. Not compliant - Clear sky/ 10m from obstacle
31/03/23	Sampled by M.Mass.
2/05/23	Sampled by M.Mass.

Date Sampled	Days On	Insoluble Solids	Ash	Combustible Matter	Calculated Rain
1/7/22	30	0.3	0.1	0.2	4
1/8/22	31	0.5	0.2	0.3	115
1/9/22	31	0.9	0.3	0.6	26
30/9/22	29	0.9	0.3	0.6	72
1/11/22	32	0.3	0.1	0.2	114
1/12/22	30	1.1	0.4	0.7	20
9/1/23	39	0.6	0.5	0.1	68
1/2/23	23	0.8	0.5	0.3	114
1/3/23	28	1.0	0.4	0.6	114
31/3/23	30	0.9	0.3	0.6	47
2/5/23	32	1.1	0.4	0.7	67
1/6/23	30	0.7	0.2	0.5	12

# Particulate Matter Annual Averages ( $\mu\text{g}/\text{m}^3$ )



# Particulate Matter 24 Hour Averages ( $\mu\text{g}/\text{m}^3$ )



## PM10 24 hour exceedances ( $>50 \mu\text{g}/\text{m}^3$ )

Date PM10 ( $\mu\text{g}/\text{m}^3$ ) Sampling Comments

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## PM2.5 24 hour exceedances ( $>25 \mu\text{g}/\text{m}^3$ )

Date PM2.5 ( $\mu\text{g}/\text{m}^3$ ) Sampling Comments

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## Sample

Dam 1 - Process

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
Dam 1 - Process	21/4/23	4.4	174	110	45	4	0.5	2.0	19	3.0
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
Dam 1 - Process	21/4/23	4.4	174	110	45	4	0.5	2.0	19	3.0
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
Dam 1 - Process	21/4/23	4.4	174	110	45	4	0.5	2.0	19	3.0
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
Dam 1 - Process	21/4/23	4.4	174	110	45	4	0.5	2.0	19	3.0
Dam 1 - Process	14/7/23	4.3	213	130	54	2	0.6	3.0	28	4.0
Dam 1 - Process	5/10/23	4.3	229	140	55	3	1.0	3.0	26	5.0
Dam 1 - Process	22/1/24	7.2	149	93	28	13	5.3	2.0	14	3.0

Sample



Dam 2 - Tailings



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Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
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Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
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Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
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Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
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## Sample

Dam 3 - Nursery

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
Dam 3 - Nursery	21/4/23	7.1	143	89	20	6	3.0	2.0	11	4.0
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
Dam 3 - Nursery	21/4/23	7.1	143	89	20	6	3.0	2.0	11	4.0
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
Dam 3 - Nursery	21/4/23	7.1	143	89	20	6	3.0	2.0	11	4.0
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
Dam 3 - Nursery	21/4/23	7.1	143	89	20	6	3.0	2.0	11	4.0
Dam 3 - Nursery	14/7/23	6.8	149	93	26	11	5.6	4.0	14	4.0
Dam 3 - Nursery	5/10/23	9.3	183	110	26	9	5.0	3.0	14	4.0
Dam 3 - Nursery	22/1/24	7.2	181	110	29	6	6.5	4.0	14	7.2

## Sample

Dam 4 - Farm

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
Dam 4 - Farm	21/4/23	7.2	68	0	37	7	0.0	0.6	6	2.0
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
Dam 4 - Farm	21/4/23	7.2	68	0	37	7	0.0	0.6	6	2.0
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
Dam 4 - Farm	21/4/23	7.2	68	0	37	7	0.0	0.6	6	2.0
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
Dam 4 - Farm	21/4/23	7.2	68	0	37	7	0.0	0.6	6	2.0
Dam 4 - Farm	14/7/23	6.6	66	0	13	5	2.0	2.0	7	3.0
Dam 4 - Farm	5/10/23	8.8	89	56	12	4	2.0	2.0	8	3.0
Dam 4 - Farm	22/1/24	8.7	74	0	14	2	1.0	1.0	8	3.0



## Sample

MW1

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW1	21/4/23	4.9	289	180	66	19	3.0	6.6	27	2.0
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW1	21/4/23	4.9	289	180	66	19	3.0	6.6	27	2.0
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW1	21/4/23	4.9	289	180	66	19	3.0	6.6	27	2.0
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW1	21/4/23	4.9	289	180	66	19	3.0	6.6	27	2.0
MW1	14/7/23	4.5	288	180	45	28	5.2	11.0	20	4.0
MW1	5/10/23	4.0	332	210	42	22	5.1	14.0	17	4.0
MW1	22/1/24	4.4	283	180	44	24	5.2	12.0	17	4.0

## Sample

MW10

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW10	21/4/23	4.1	552	340	160	5	1.0	9.3	67	0.7
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW10	21/4/23	4.1	552	340	160	5	1.0	9.3	67	0.7
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW10	21/4/23	4.1	552	340	160	5	1.0	9.3	67	0.7
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW10	21/4/23	4.1	552	340	160	5	1.0	9.3	67	0.7
MW10	14/7/23	4.0	507	320	140	42	1.0	9.7	72	1.0
MW10	5/10/23	4.5	262	160	63	3	2.0	5.0	29	1.0
MW10	22/1/24	4.4	289	180	74	3	1.0	5.6	31	1.0

## Sample

MW11 (Off Old Telegraph Rd)

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW11 (Off Old Telegraph Rd)	21/4/23	6.5	269	170	30	9	12.0	3.0	15	5.6
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW11 (Off Old Telegraph Rd)	21/4/23	6.5	269	170	30	9	12.0	3.0	15	5.6
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW11 (Off Old Telegraph Rd)	21/4/23	6.5	269	170	30	9	12.0	3.0	15	5.6
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW11 (Off Old Telegraph Rd)	21/4/23	6.5	269	170	30	9	12.0	3.0	15	5.6
MW11 (Off Old Telegraph Rd)	14/7/23	6.6	345	220	32	19	36.0	7.0	17	6.2
MW11 (Off Old Telegraph Rd)	5/10/23	6.0	202	130	31	11	11.0	3.0	13	8.2
MW11 (Off Old Telegraph Rd)	22/1/24	6.0	267	170	32	20	19.0	4.0	15	6.0

Sample

MW12

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW12	21/4/23	4.8	109	68	21	9	0.7	0.6	13	0.0
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW12	21/4/23	4.8	109	68	21	9	0.7	0.6	13	0.0
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW12	21/4/23	4.8	109	68	21	9	0.7	0.6	13	0.0
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW12	21/4/23	4.8	109	68	21	9	0.7	0.6	13	0.0
MW12	14/7/23	4.9	117	73	19	10	2.0	1.0	14	0.5
MW12	5/10/23	4.9	107	67	17	7	2.0	0.9	14	0.0
MW12	22/1/24	4.9	110	69	20	9	2.0	1.0	14	0.9

Sample

MW6 (Office)

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW6 (Office)	21/4/23	8.2	382	240	87	6	2.0	3.0	49	2.0
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW6 (Office)	21/4/23	8.2	382	240	87	6	2.0	3.0	49	2.0
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW6 (Office)	21/4/23	8.2	382	240	87	6	2.0	3.0	49	2.0
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW6 (Office)	21/4/23	8.2	382	240	87	6	2.0	3.0	49	2.0
MW6 (Office)	14/7/23	7.0	368	230	86	2	6.3	5.0	61	3.0
MW6 (Office)	5/10/23	7.5	354	220	83	0	4.0	3.0	49	2.0
MW6 (Office)	22/1/24	8.3	341	210	87	0	3.0	2.0	49	2.0

Sample

MW7

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW7	21/4/23	5.5	190	120	31	13	0.0	0.0	29	0.0
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW7	21/4/23	5.5	190	120	31	13	0.0	0.0	29	0.0
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5

Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW7	21/4/23	5.5	190	120	31	13	0.0	0.0	29	0.0
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW7	21/4/23	5.5	190	120	31	13	0.0	0.0	29	0.0
MW7	14/7/23	4.6	149	93	27	9	2.0	4.0	17	0.6
MW7	5/10/23	5.4	186	120	28	6	1.0	0.8	30	0.0
MW7	22/1/24	5.4	185	120	30	9	1.0	0.8	28	0.5

## Sample

MW8

Sample	Date	pH	Electrical Conductivity	Total Dissolved Solids	Chloride	Sulphate	Calcium	Magnesium	Sodium	Potassium
MW8	21/4/23	4.3	163	100	40	2	0.5	2.0	18	0.0
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0

Sample	Date	Average of pH	Average of Electrical Conductivity	Average of Total Dissolved Solids	Average of Chloride	Average of Sulphate	Average of Calcium	Average of Magnesium	Average of Sodium	Average of Potassium
MW8	21/4/23	4.3	163	100	40	2	0.5	2.0	18	0.0
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0

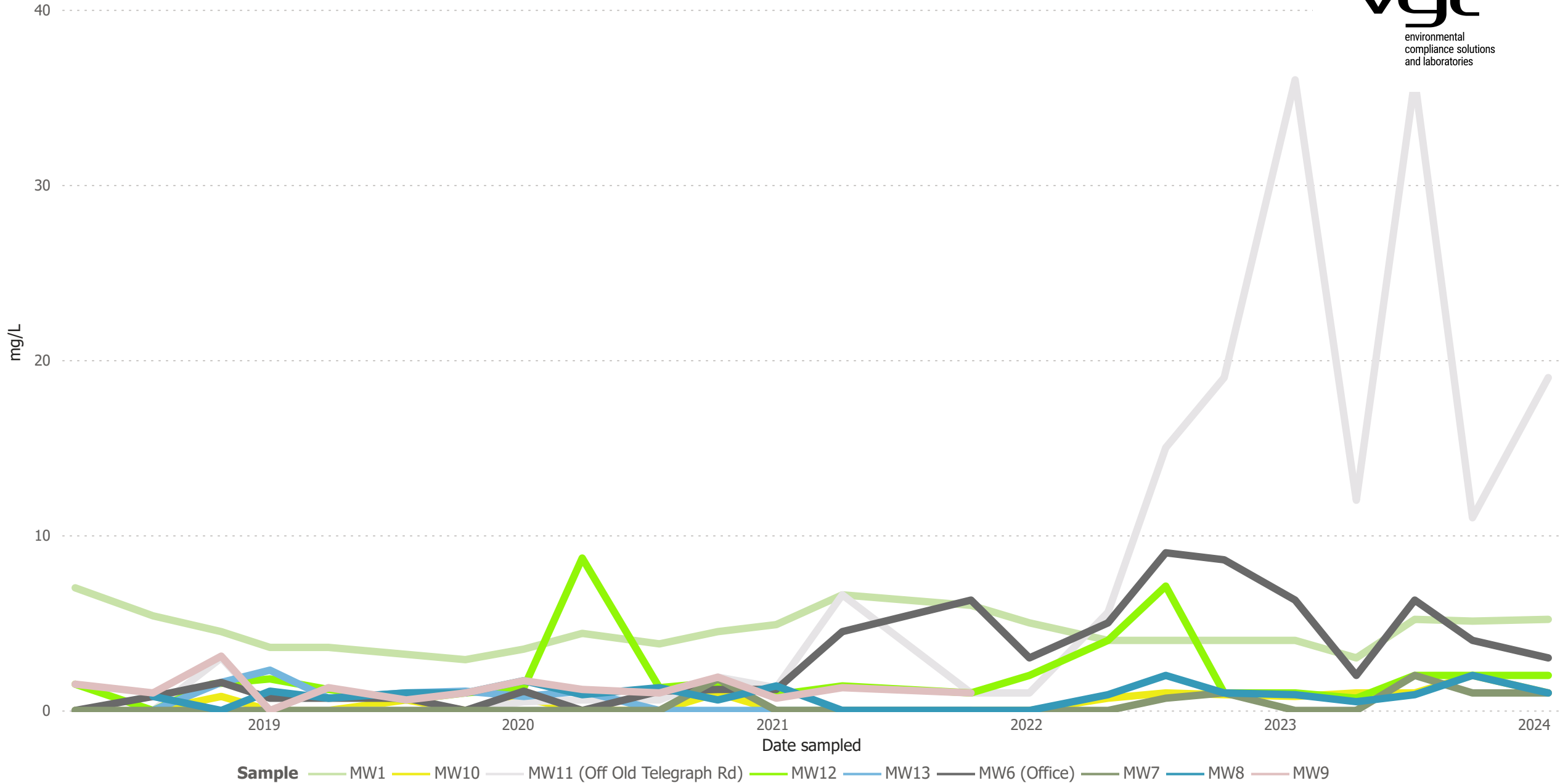
Sample	Date	Min of pH	Min of Electrical Conductivity	Min of Total Dissolved Solids	Min of Chloride	Min of Sulphate	Min of Calcium	Min of Magnesium	Min of Sodium	Min of Potassium
MW8	21/4/23	4.3	163	100	40	2	0.5	2.0	18	0.0
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0

Sample	Date	Max of pH	Max of Electrical Conductivity	Max of Total Dissolved Solids	Max of Chloride	Max of Sulphate	Max of Calcium	Max of Magnesium	Max of Sodium	Max of Potassium
MW8	21/4/23	4.3	163	100	40	2	0.5	2.0	18	0.0
MW8	14/7/23	4.3	184	110	45	4	0.9	3.0	20	0.0
MW8	5/10/23	4.4	198	120	47	2	2.0	3.0	22	0.0
MW8	22/1/24	4.4	202	130	49	2	1.0	3.0	22	0.0

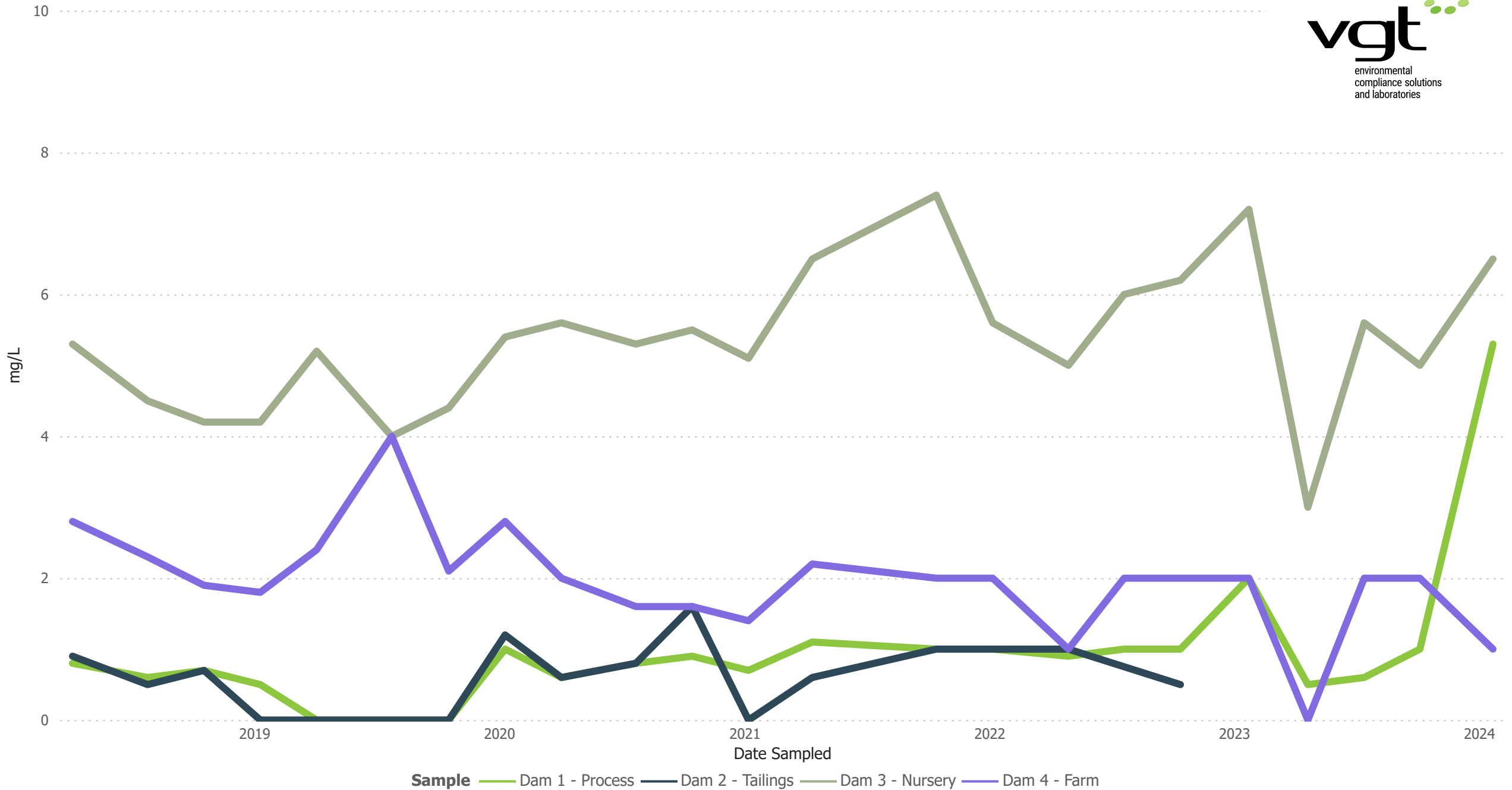
# Water Quality Trends



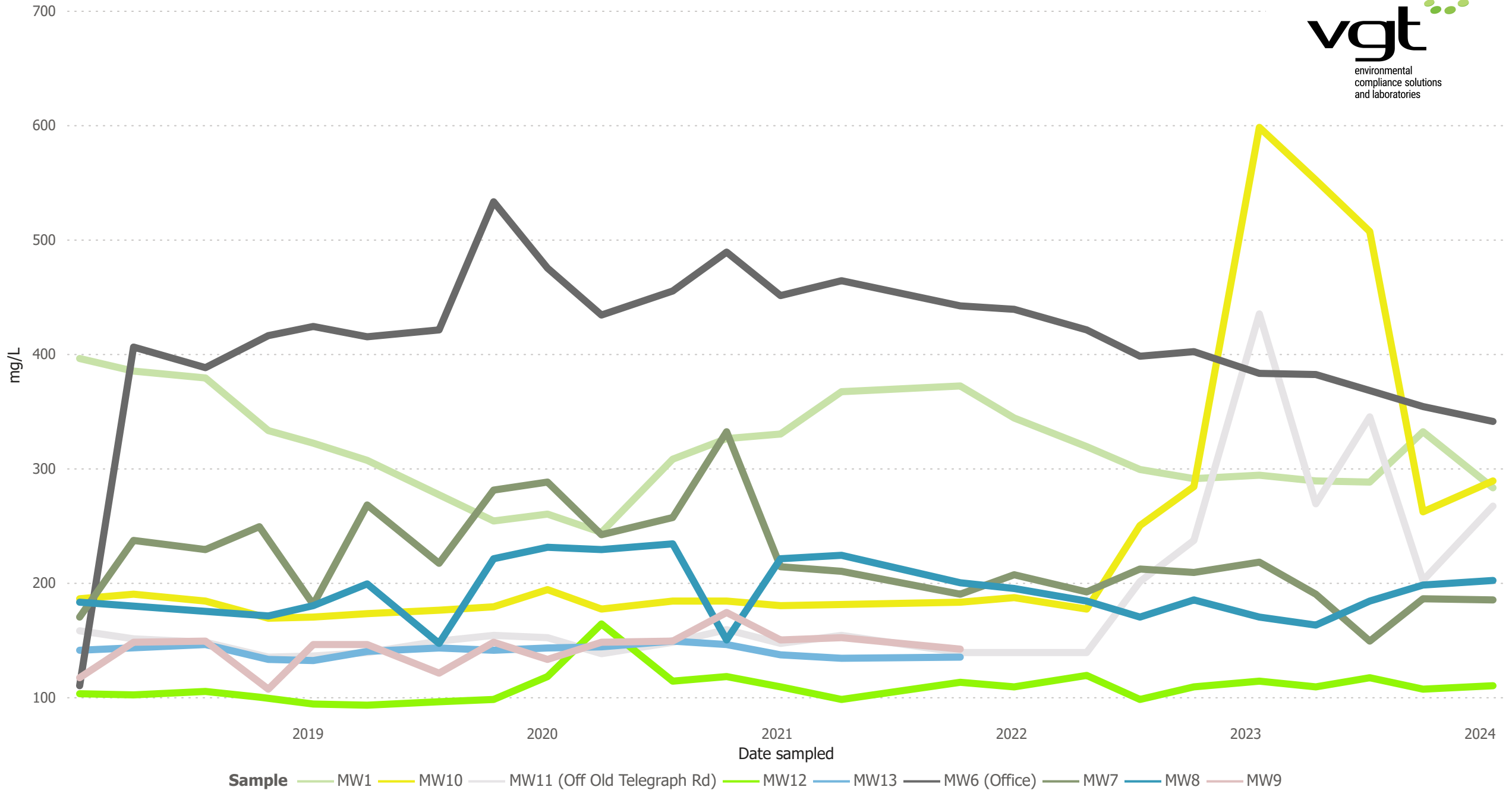
# Calcium



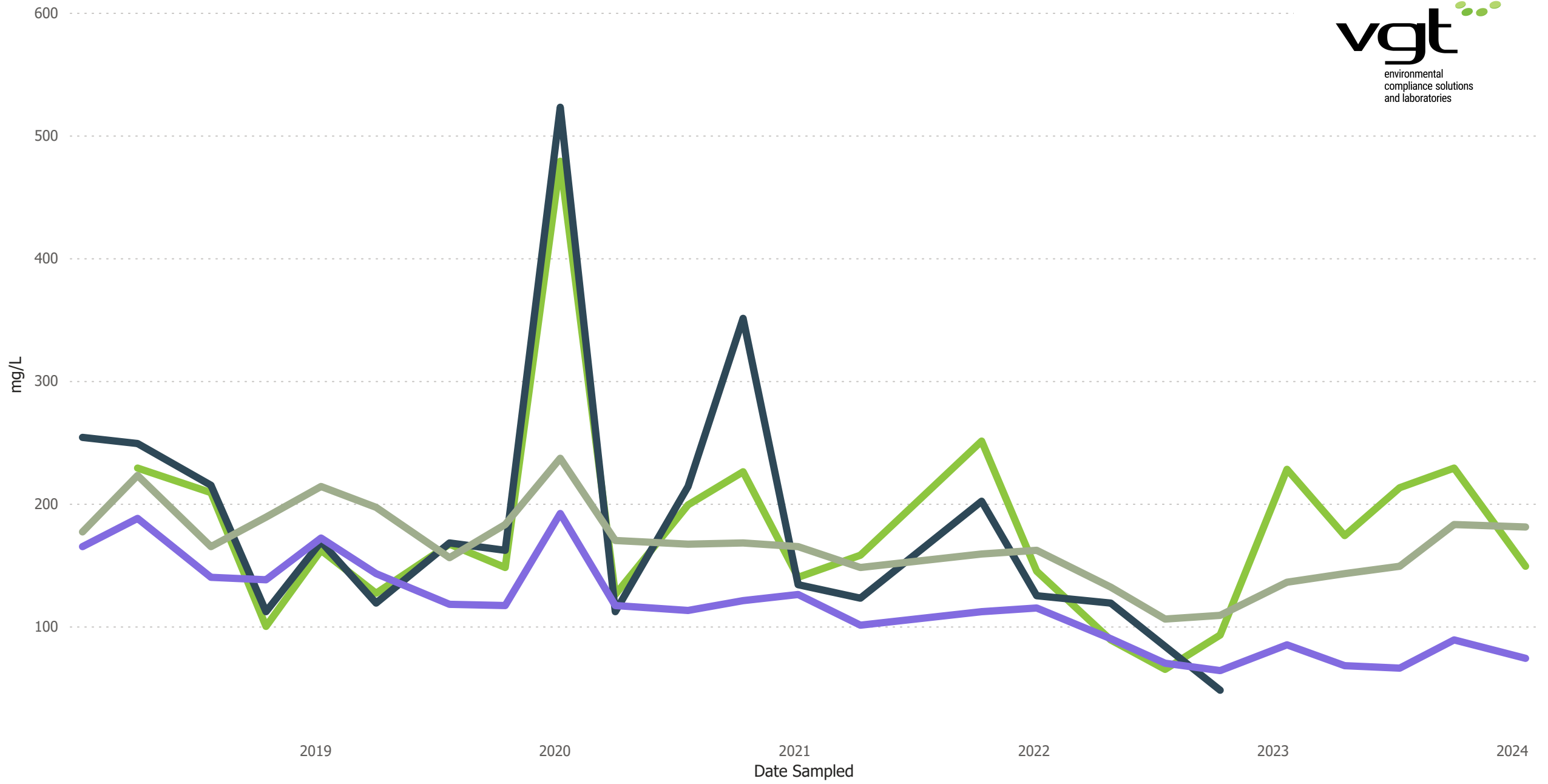
# Calcium



# Electrical Conductivity

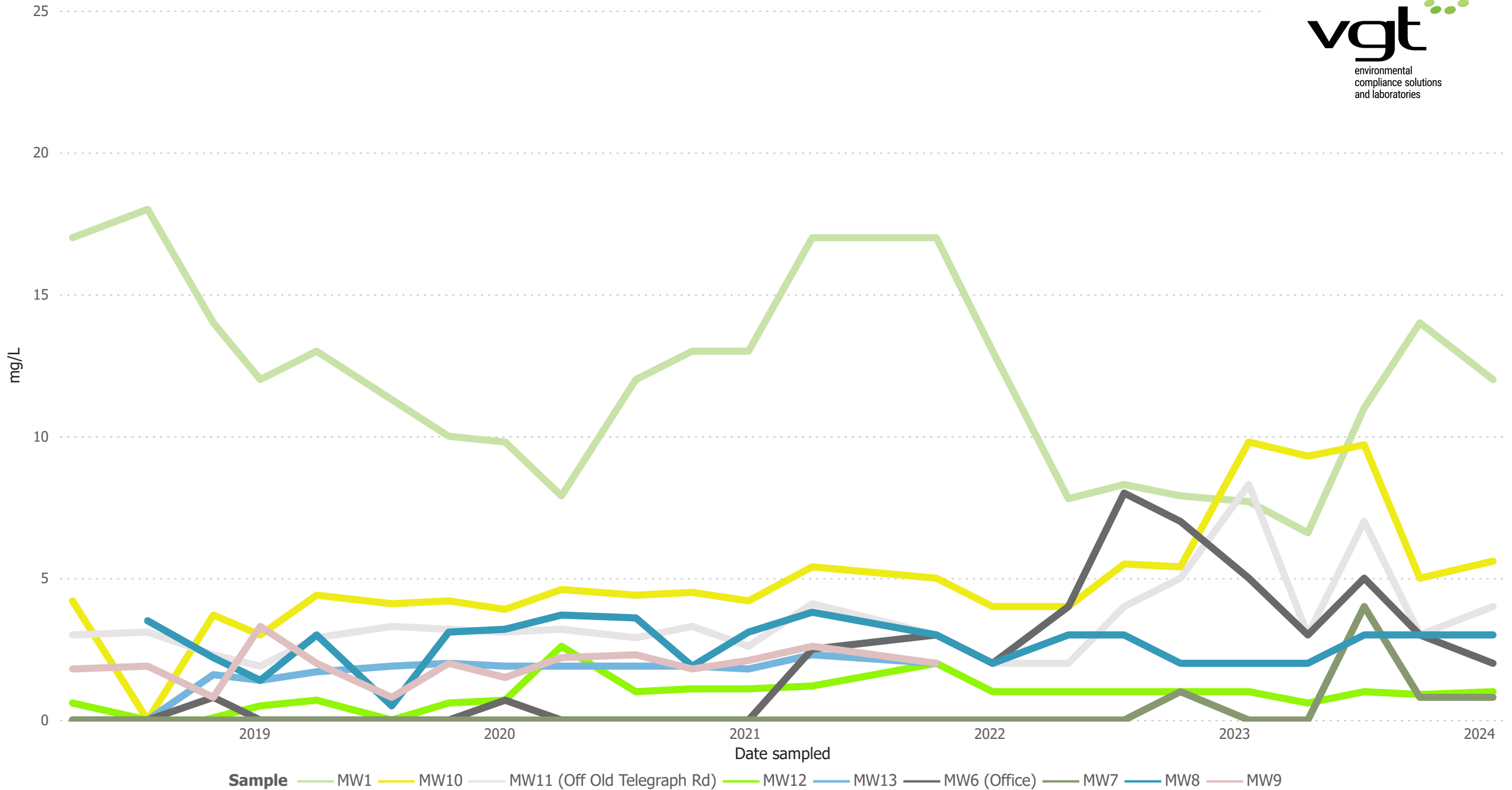


# Electrical Conductivity

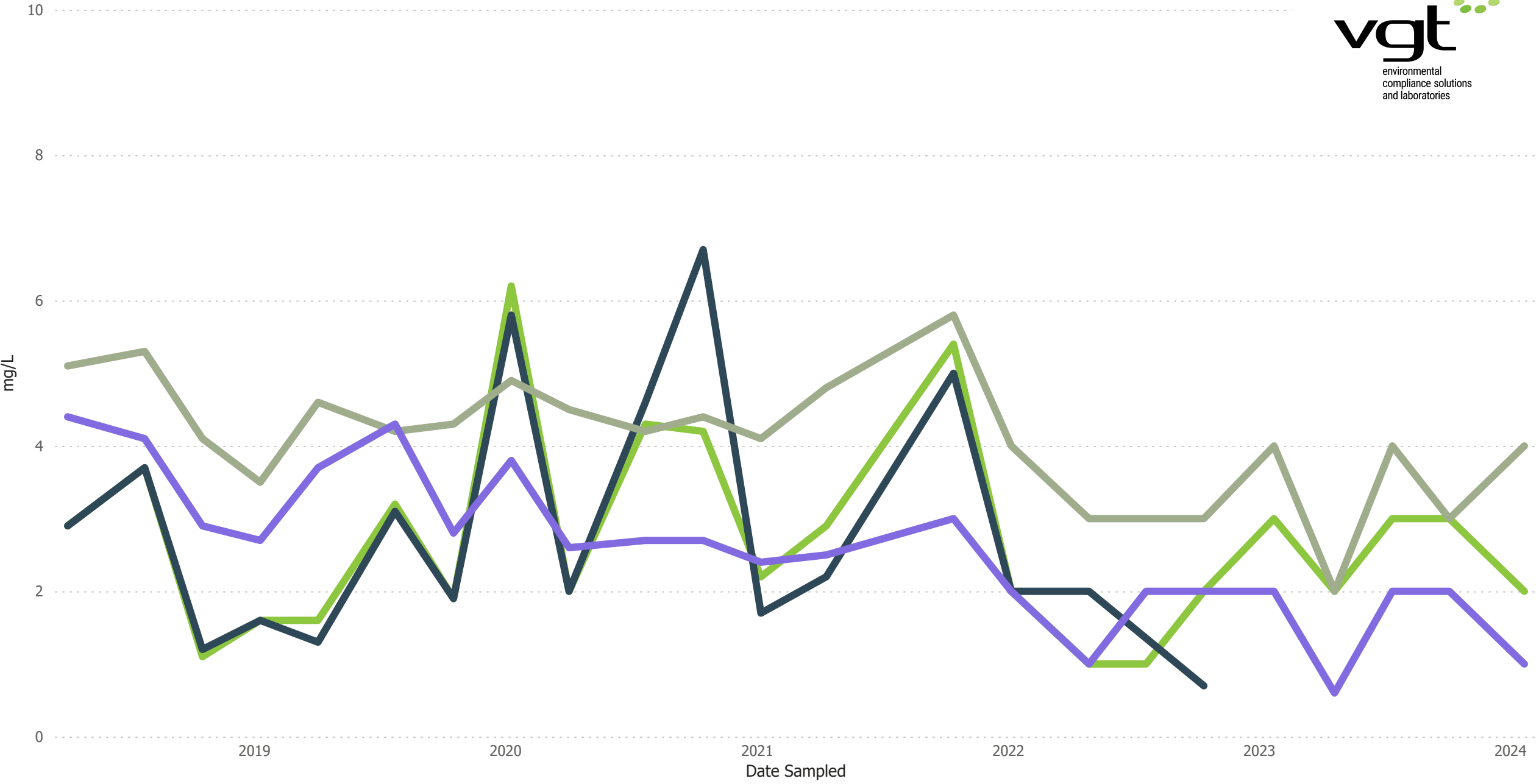


Sample — Dam 1 - Process — Dam 2 - Tailings — Dam 3 - Nursery — Dam 4 - Farm

# Magnesium

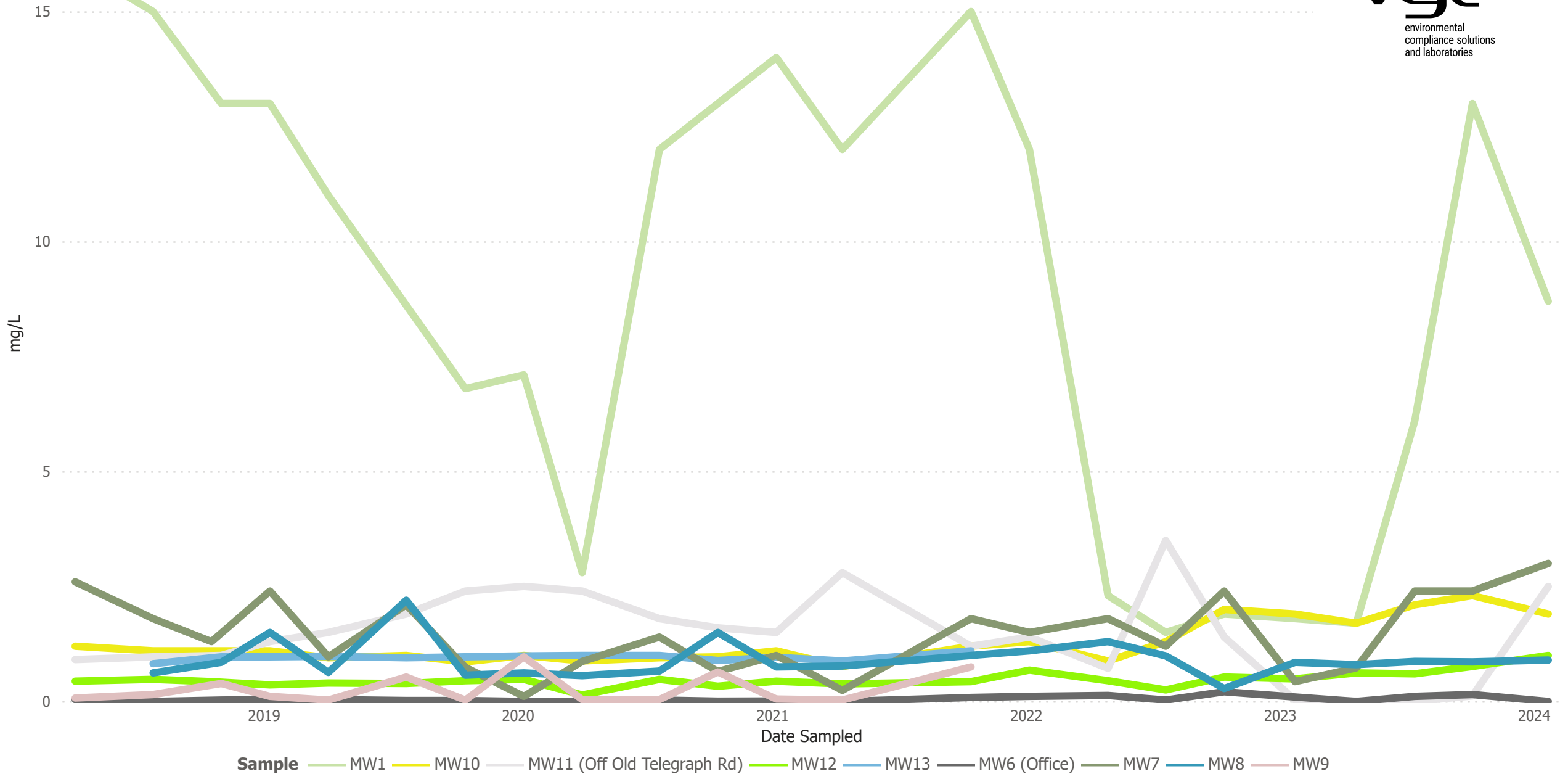


# Magnesium

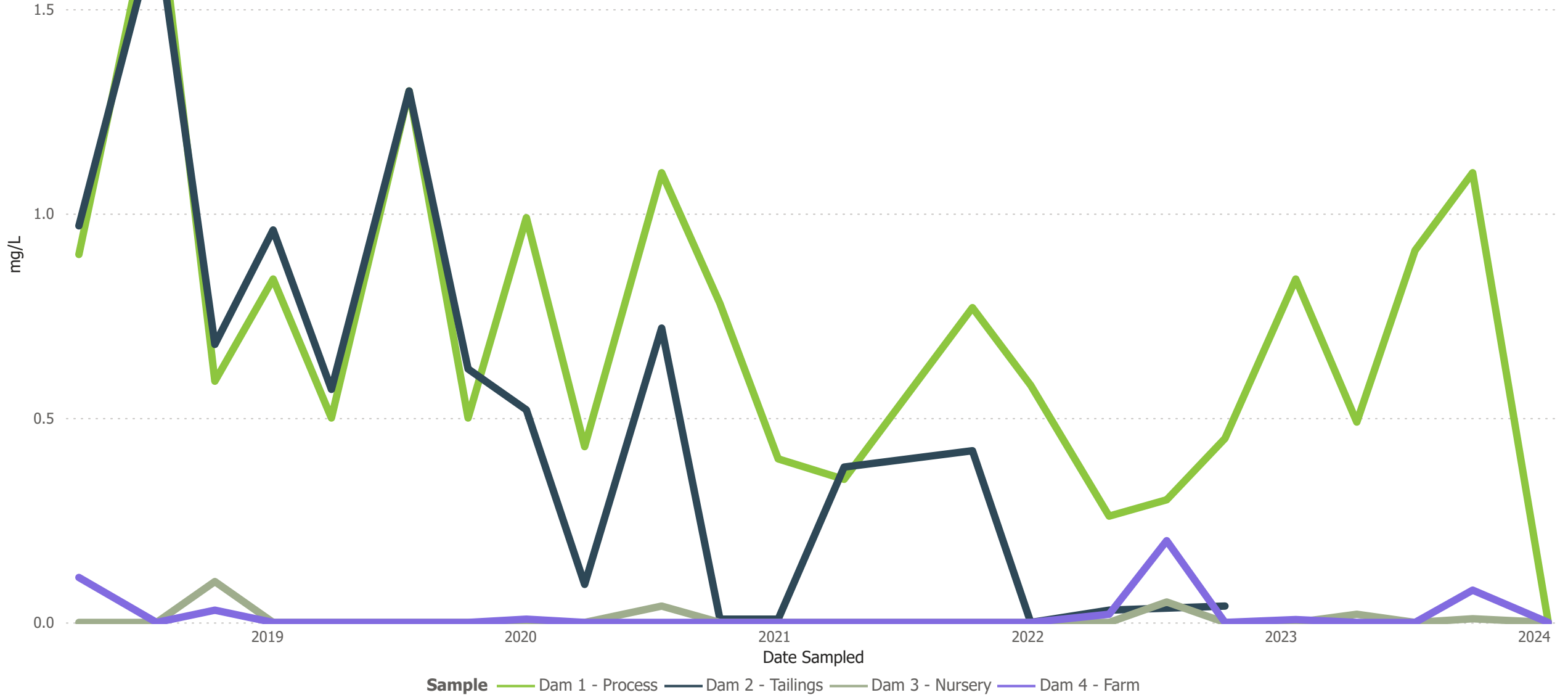


Sample — Dam 1 - Process — Dam 2 - Tailings — Dam 3 - Nursery — Dam 4 - Farm

# Nitrate as N

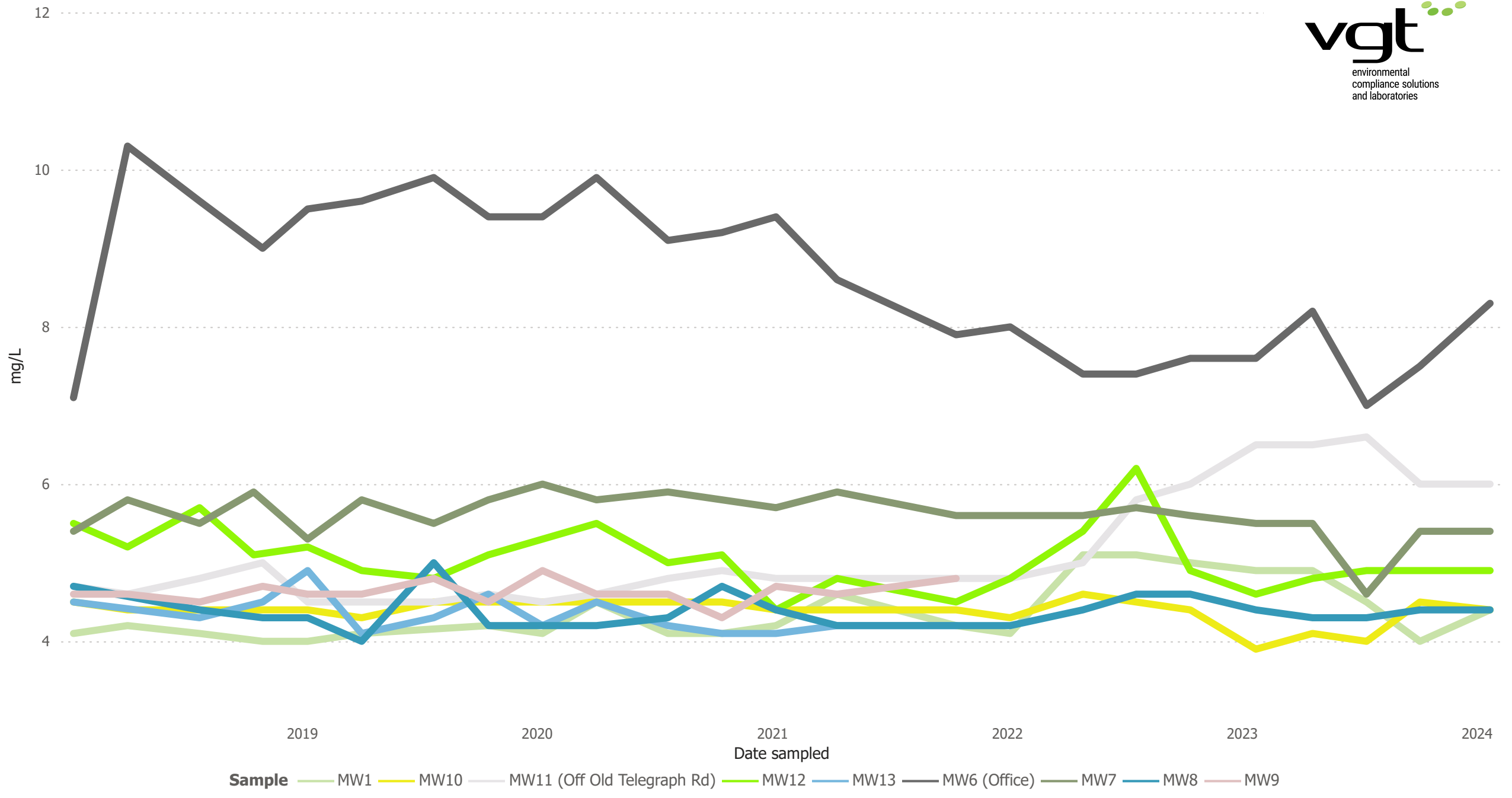


# Nitrate as N

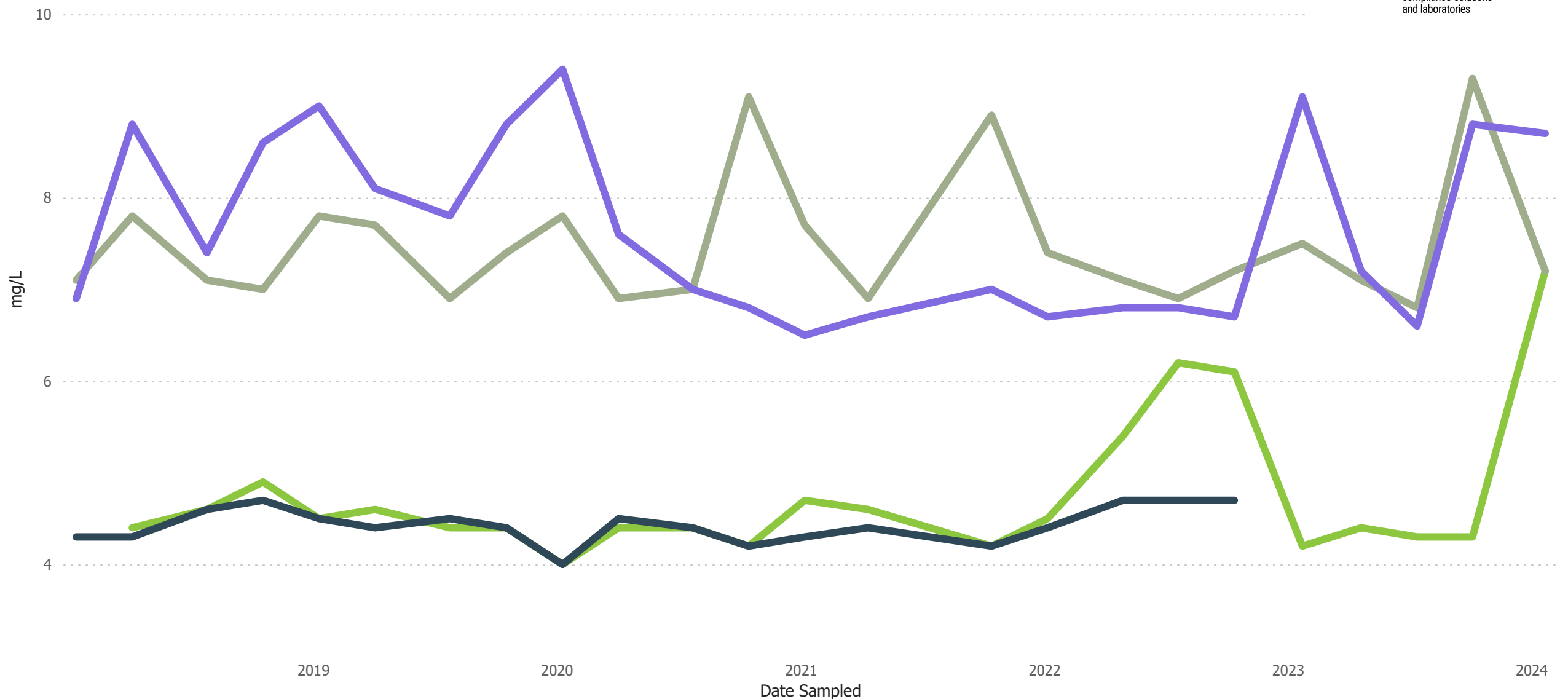




# pH

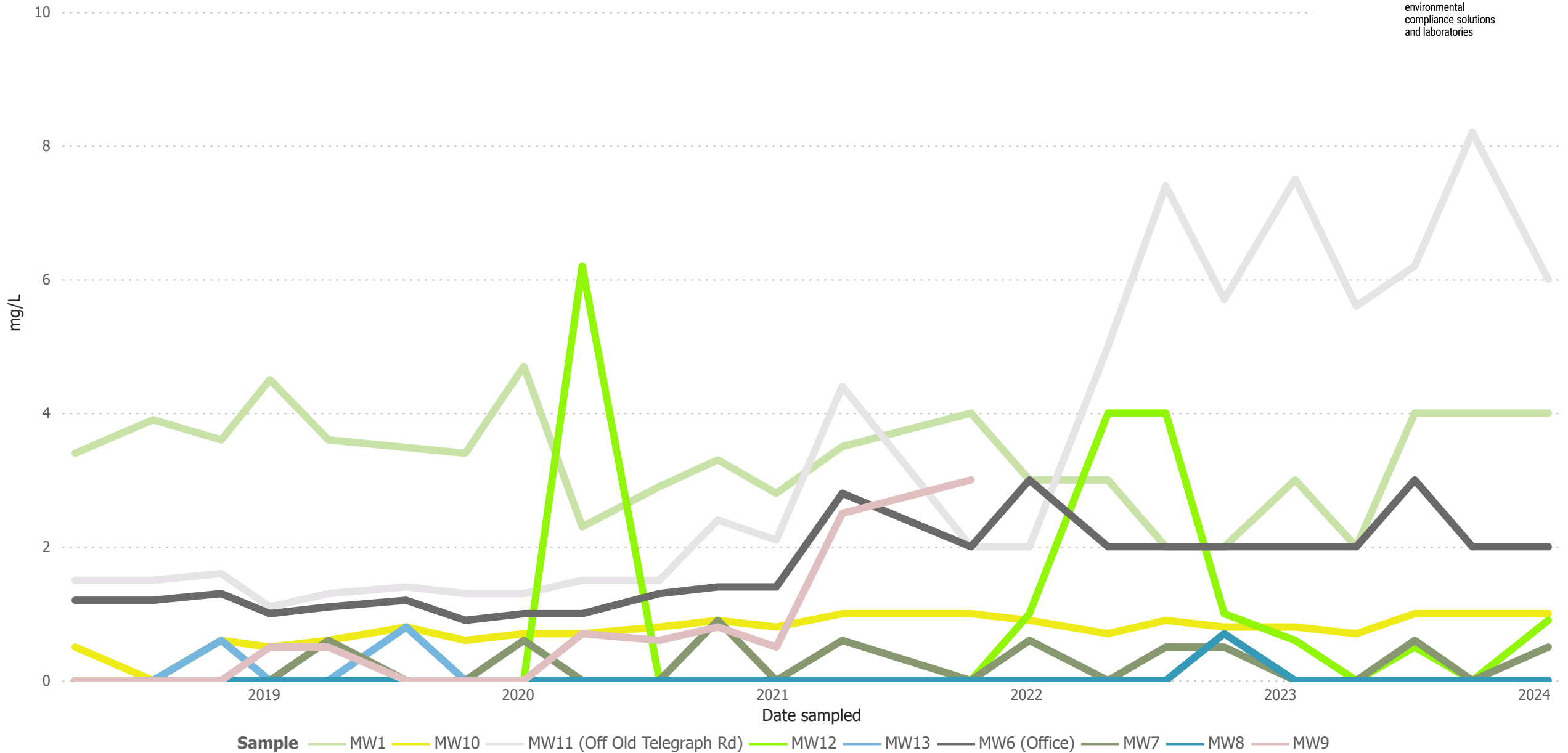


# pH

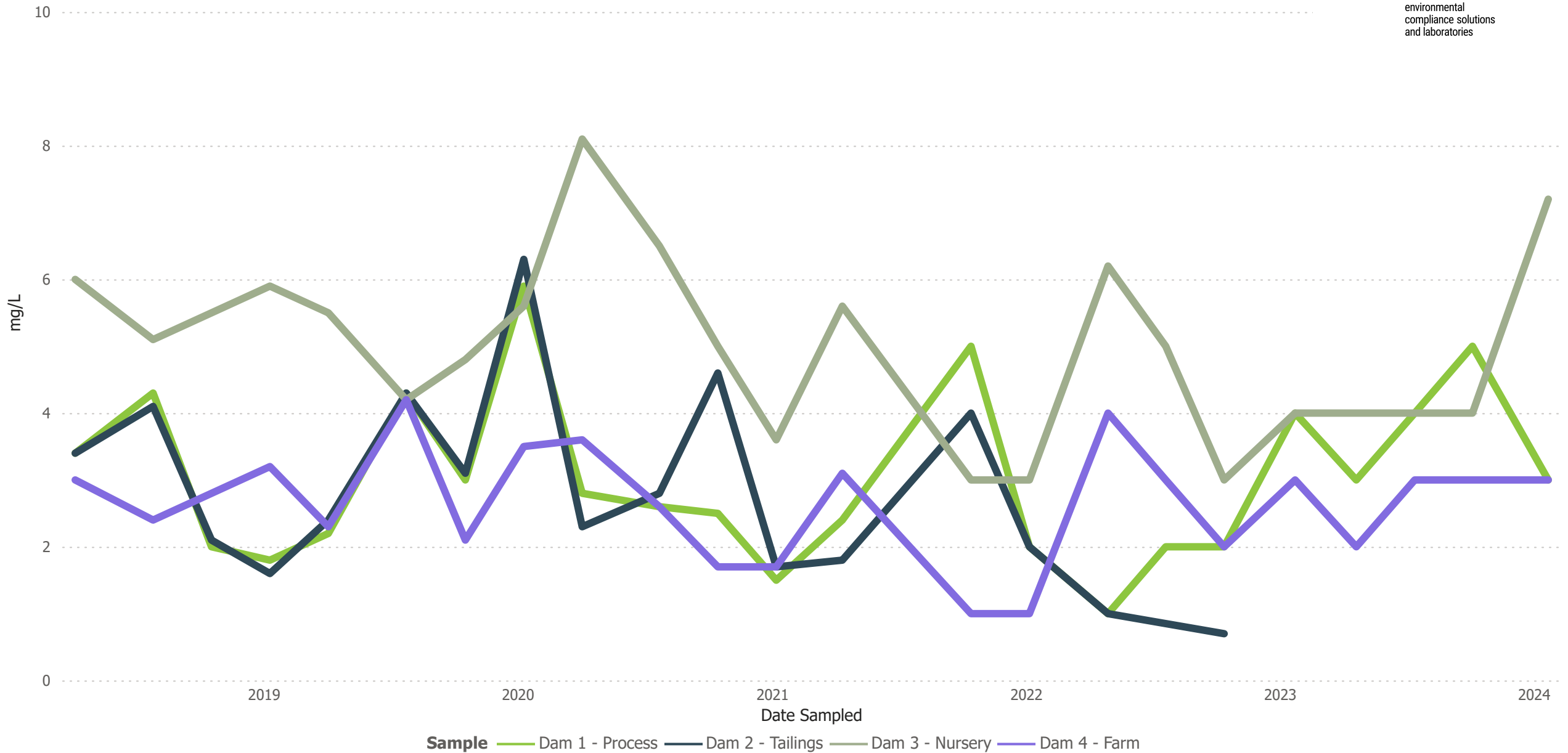


Sample — Dam 1 - Process — Dam 2 - Tailings — Dam 3 - Nursery — Dam 4 - Farm

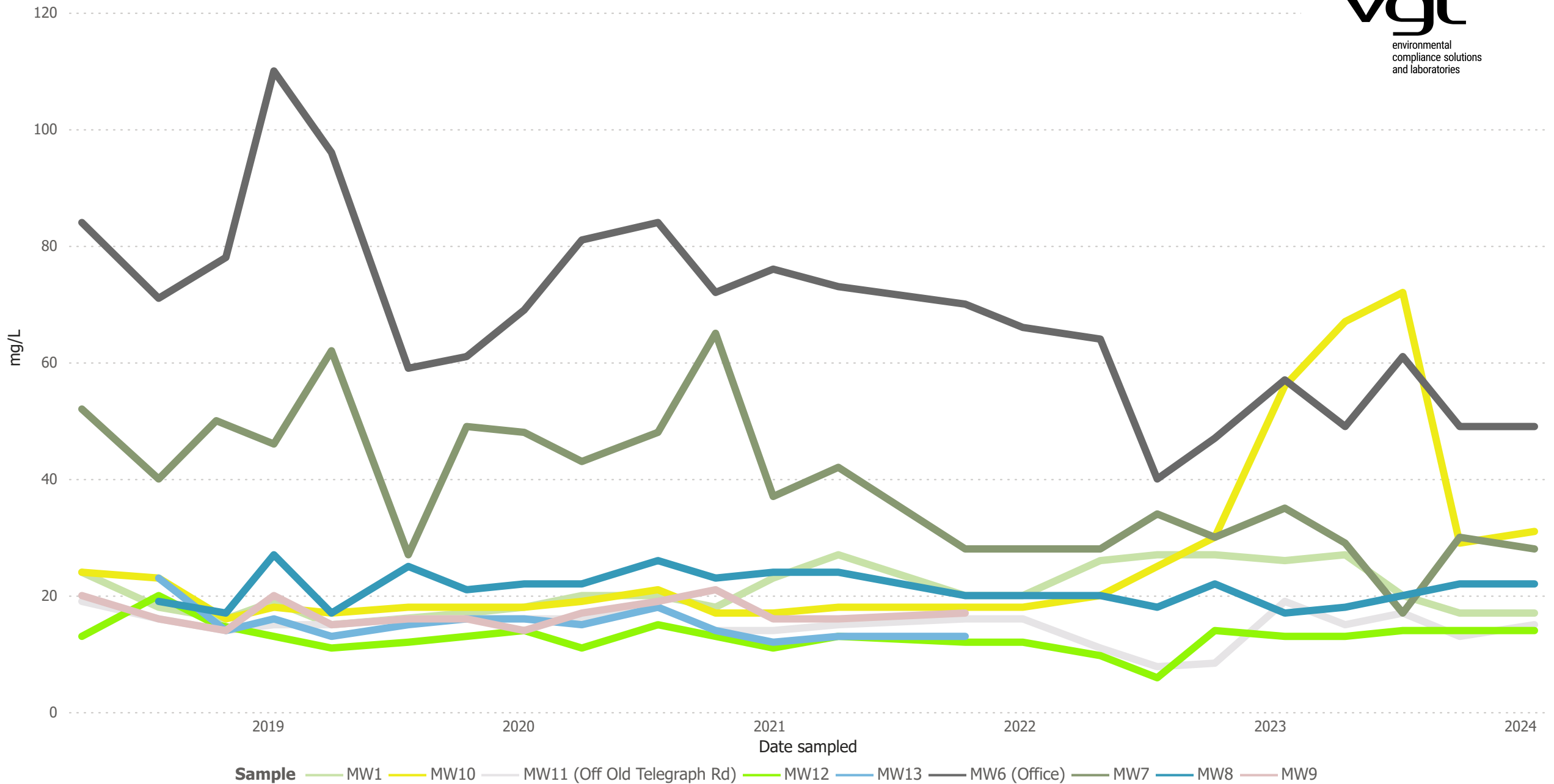
# Potassium



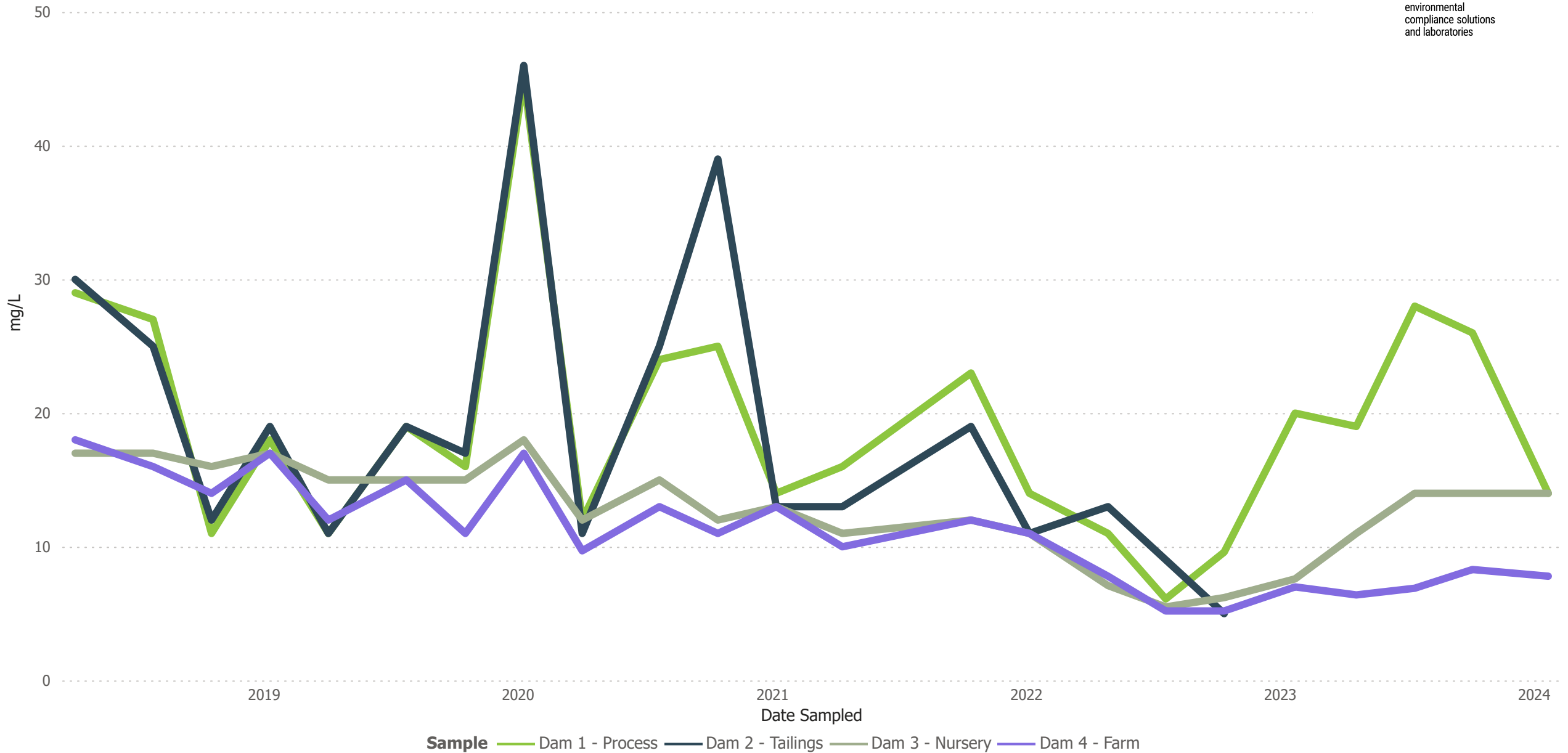
# Potassium



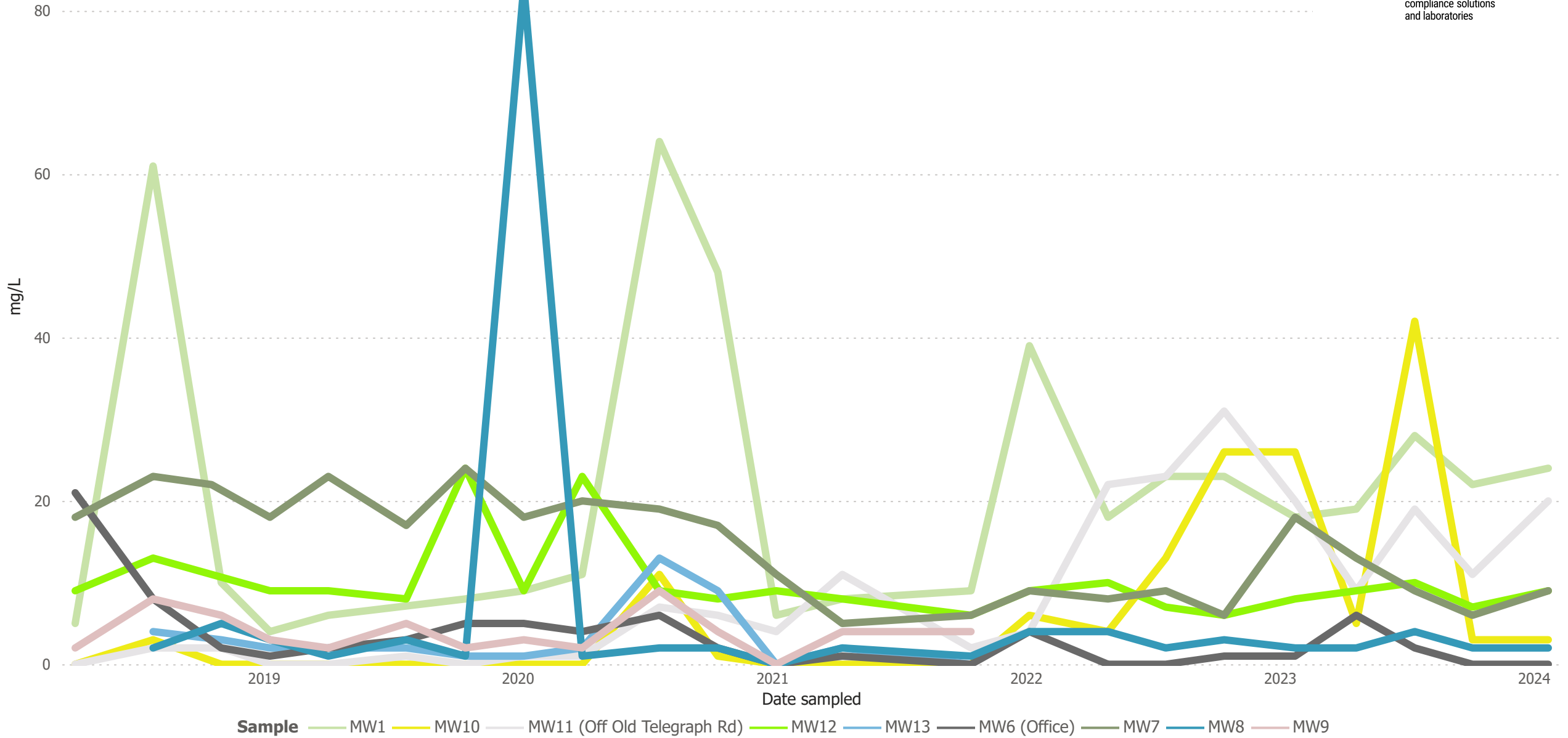
# Sodium



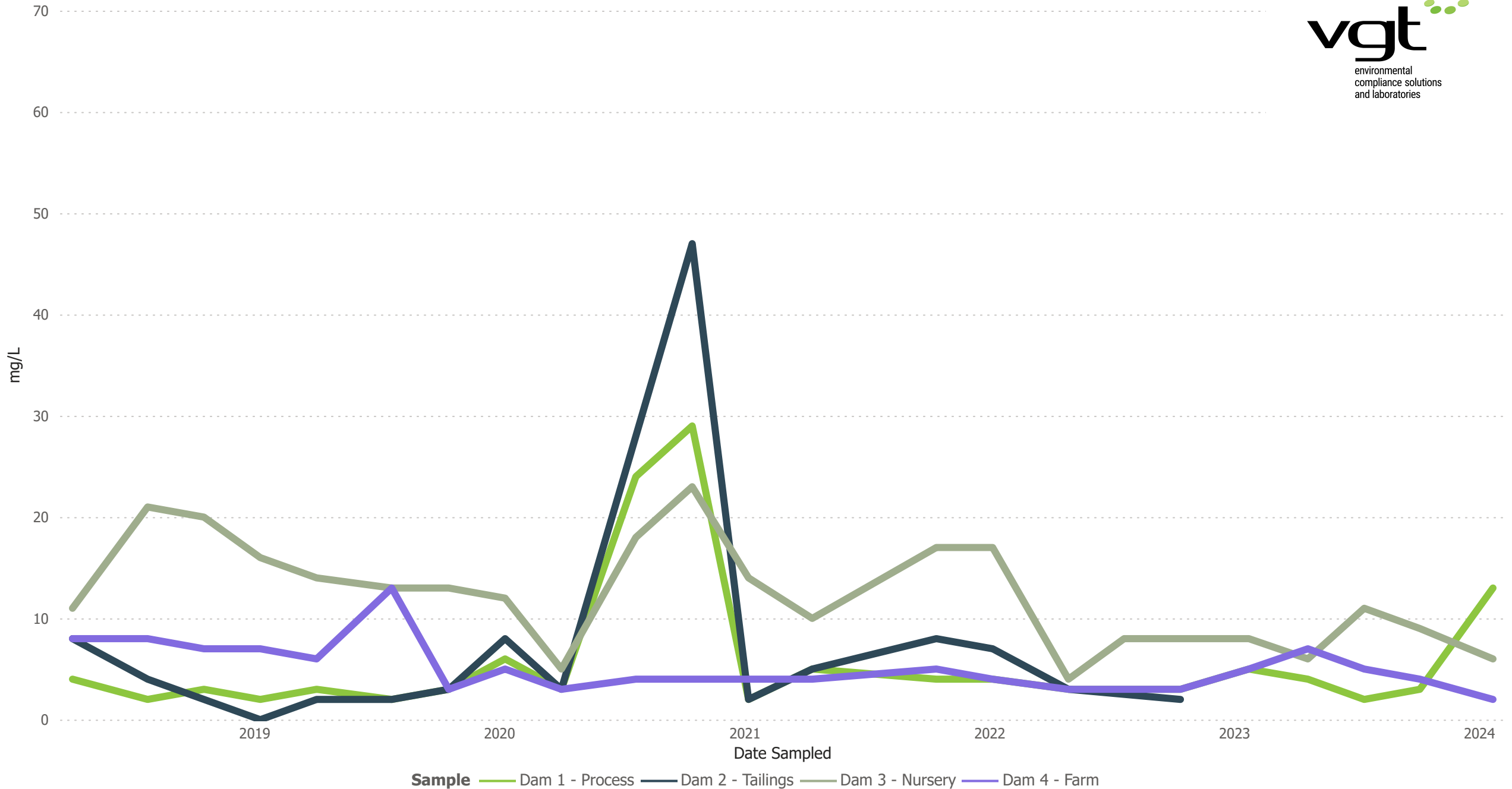
# Sodium



# Sulphate

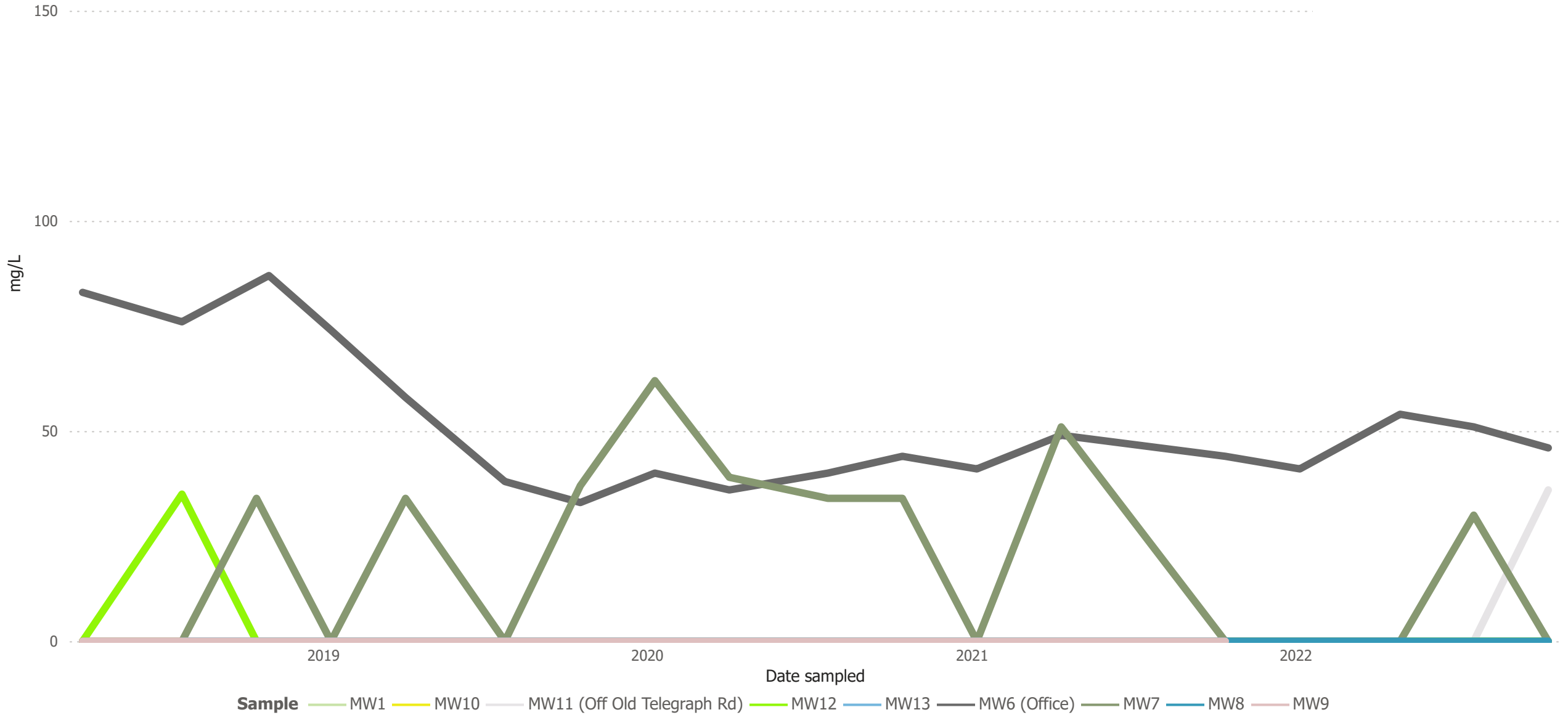


# Sulphate

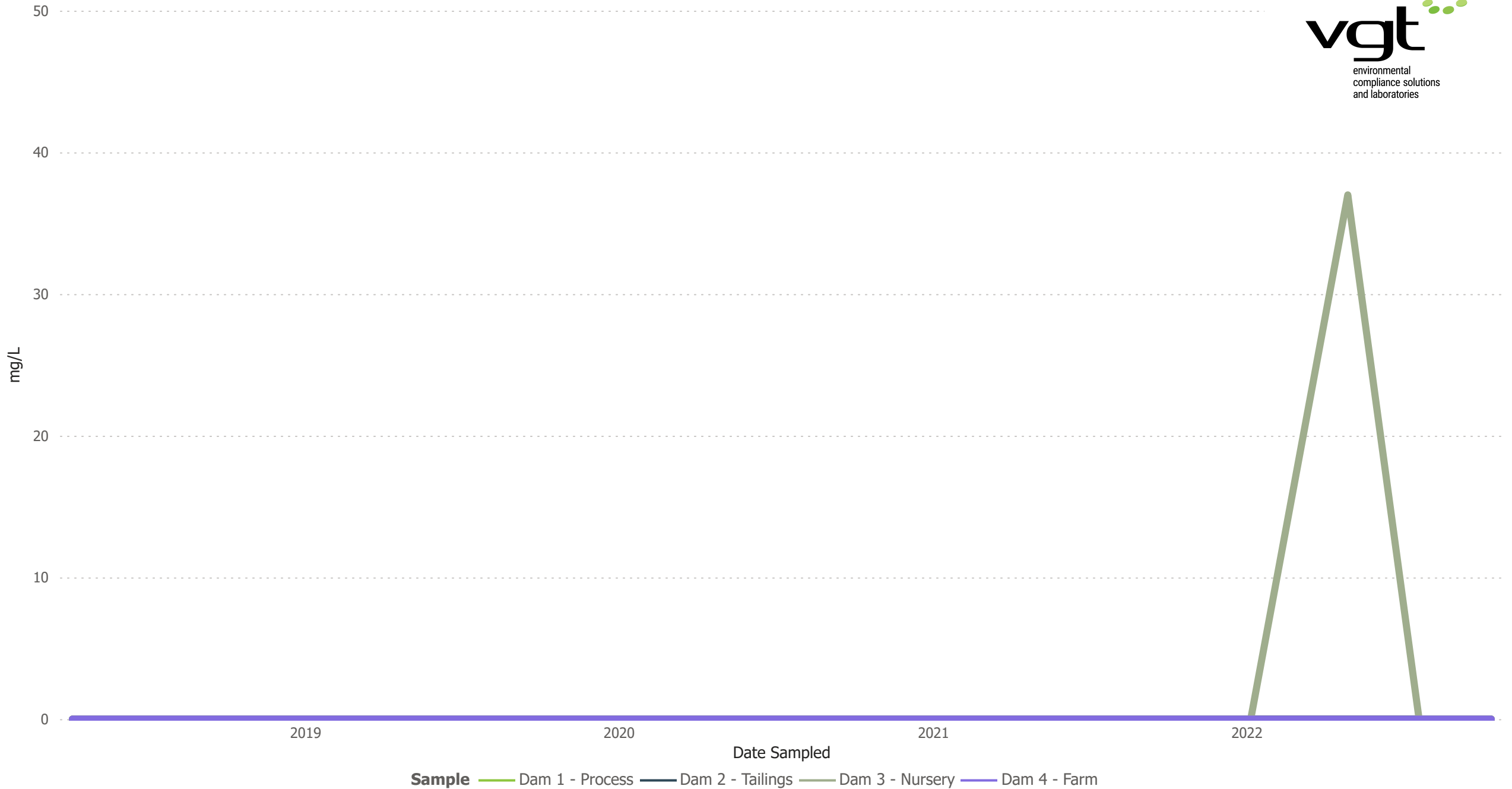




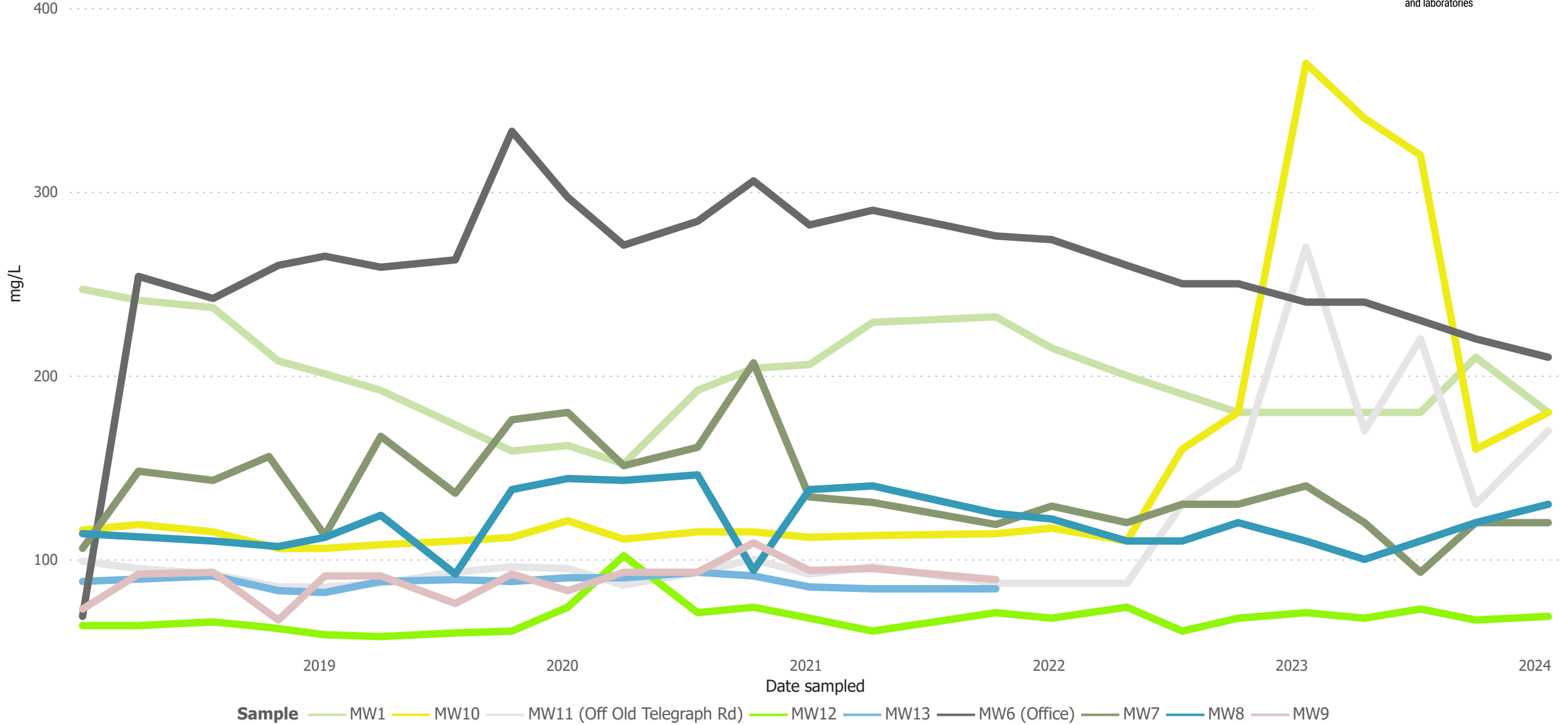
# Total Alkalinity



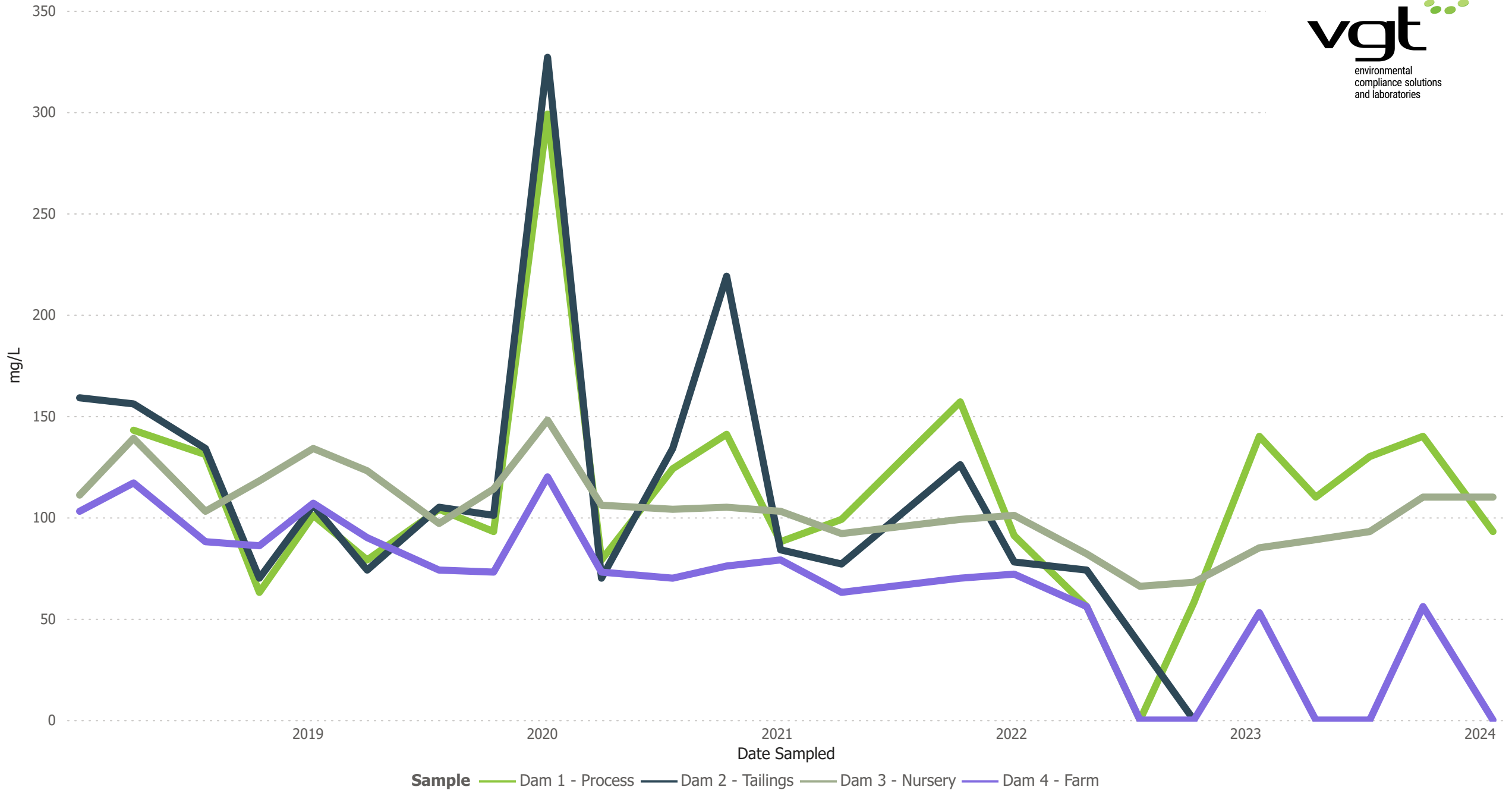
# Total Alkalinity



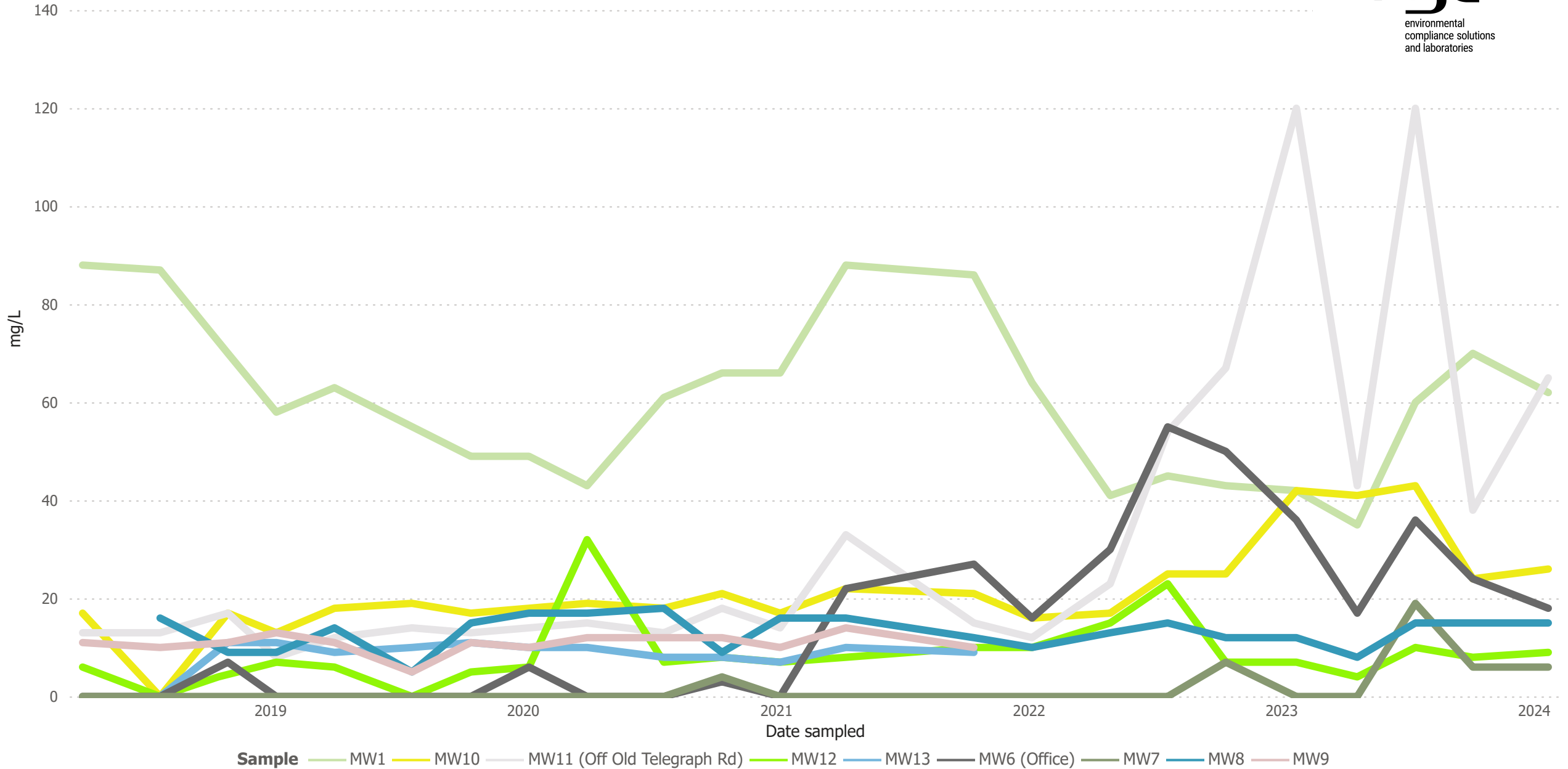
# Total Dissolved Solids



# Total Dissolved Solids



# Total Hardness



# Total Hardnes

