HUNTER VALLEY
OPERATIONS

MONTHLY ENVIRONMENTAL MONITORING REPORT DECEMBER 2023

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REVIEW
[Planned Review Date]

OWNER
Superintendent - Environment and Community

FIGURES

TABLES

1 | INTRODUCTION

This report has been compiled to provide a monthly summary of environmental monitoring results for Hunter Valley Operations (HVO). This report includes all monitoring data collected for the period 1 to 31 December 2023 (the 'Reporting Period').

2 | AIR QUALITY

2.1 | METEOROLOGICAL MONITORING

HVO maintains two meteorological stations: 'HVO Corporate' and 'Cheshunt' (refer to Figure 4).

2.1.1 | RAINFALL

Rainfall for the period is summarised in Table 1. The 2021, 2022 and 2023 trends are shown in Figure 1.

Table 1 – 'HVO Corporate' Rainfall data for the reporting period

2023	Monthly Rainfall (mm)	Cumulative Rainfall (mm)
December	69.6	459.0

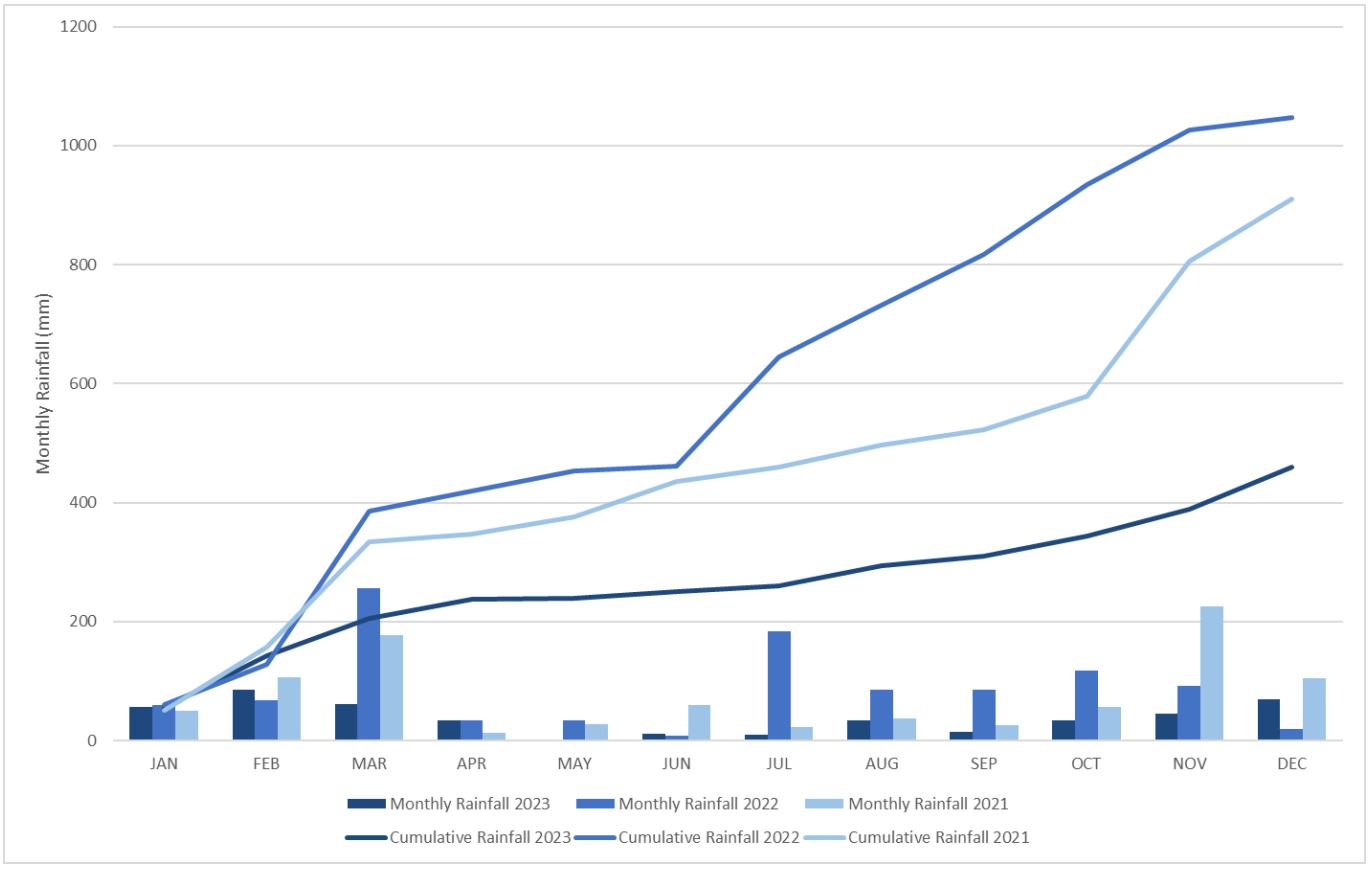

Figure 1 - Rainfall Summary 2023

2.1.2 | WIND SPEED AND DIRECTION

South-easterly winds were prevailing during the reporting period at HVO Corporate AWS as shown in Figure 2, whilst south-easterly and north northwestly winds were prevailing at HVO Cheshunt AWS as shown in Figure 3.

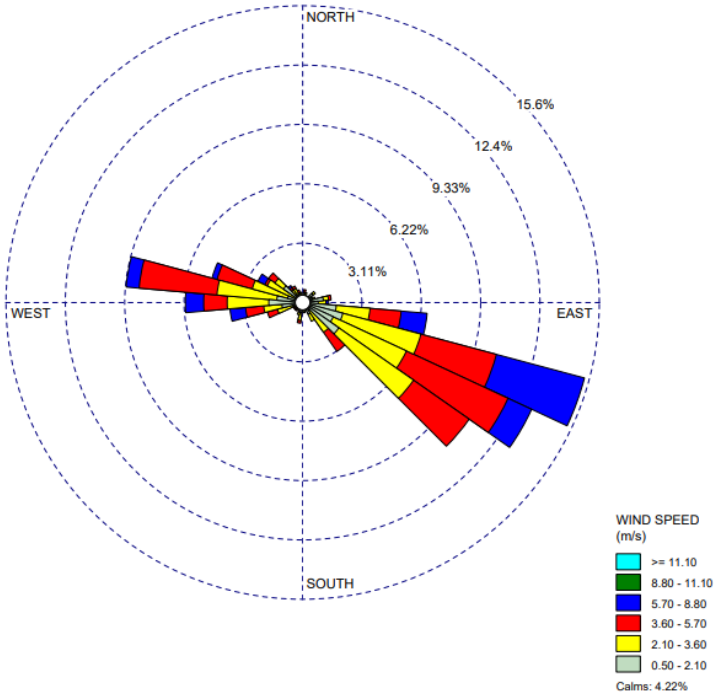

Figure 2 – 'HVO Corporate' Wind Rose for the Reporting Period

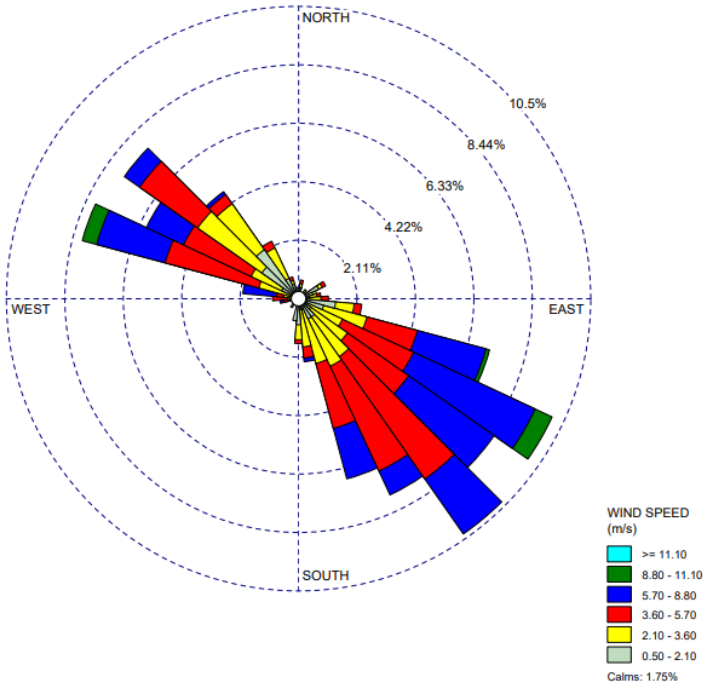

Figure 3 – 'HVO Cheshunt' Wind Rose for the Reporting Period

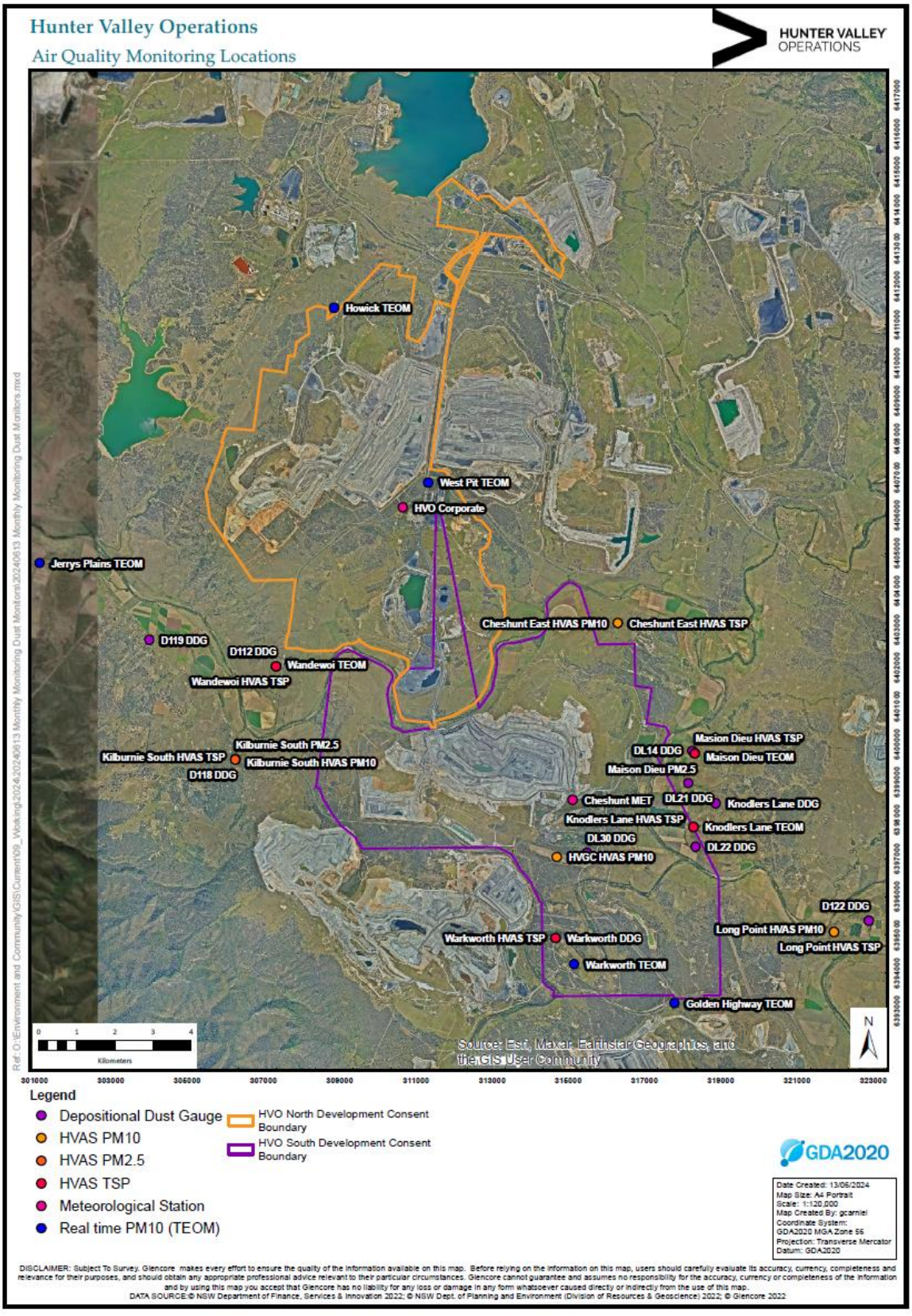

Figure 4 – Air Quality Monitoring Location Plan

2.2 | DEPOSITIONAL DUST

HVO operates and maintains a network of eleven depositional dust gauges situated on private and mine owned land surrounding HVO to monitor regional air quality.

Figure 5 displays insoluble solids results from depositional dust gauges during the reporting period compared against the annual impact assessment criteria. Any monthly results deemed to be contaminated (due to presence of bird droppings, insects, etc.) are not displayed. An assessment of HVO's contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

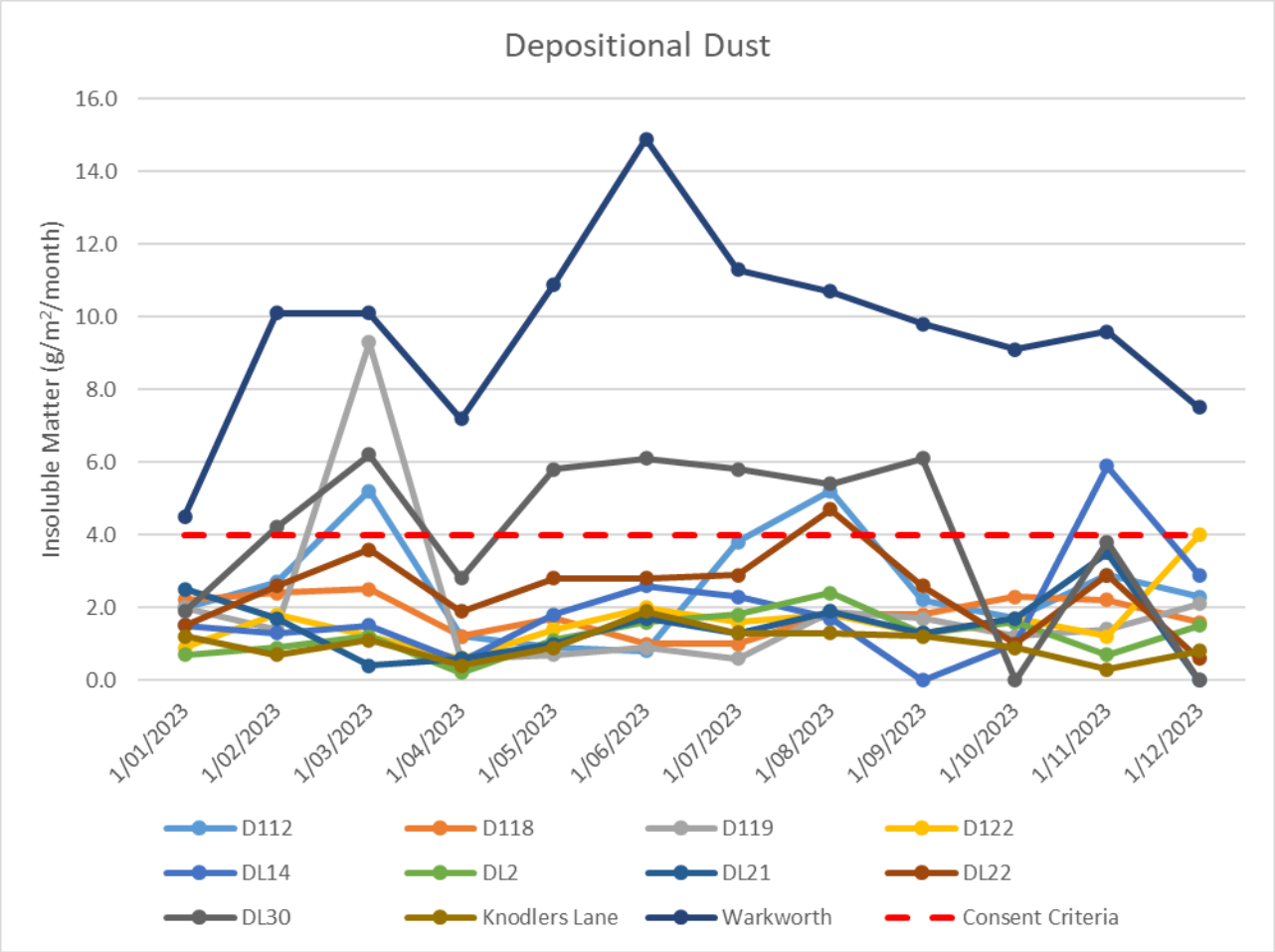

Figure 5 - Depositional Dust Results for the Reporting Period

2.3 | SUSPENDED PARTICLES

Suspended particles are measured by a network of High Volume Air Samplers (HVAS) measuring Total Suspended Particulates (TSP) and Particulate Matter <10µm (PM_{10}). The Kilburnie South and Maison Dieu HVAS also monitor Particulate Matter <2.5µm ($PM_{2.5}$). The location of these monitors is presented in Figure 4. Each HVAS runs for 24-hours on a six-day cycle.

2.3.1 | HVAS PM_{10} RESULTS

2.3.1.1 | PERFORMANCE AGAINST SHORT TERM IMPACT ASSESSMENT CRITERIA

Figure 6 presents individual PM_{10} results at each monitoring station against the short-term (24 hour) impact assessment criteria of 50µg/m^3. All monitors were below the 24-hr criteria during the reporting period, with the exception of 19 December, when the the following exceedances were recorded:

- Gliding Club: 83.9µg/m3;
- Cheshunt East: 63.8µg/m3;
- Long Point: 63.0µg/m3 and
- Kilburnie South: 56.4µg/m3.

Internal HVO investigation into these results deemed HVO's contribution to be below the short-term impact assessment criteria, with the exception of Cheshunt East. This exceedance was investigated by independent third party Todoroski Air Sciences (TAS). TAS deemed HVO's contribution to be less than 50.0µg/m^3 . The investigation noted that poor regional air quality as a result of bushfire smoke may have been the main contributer to this result.

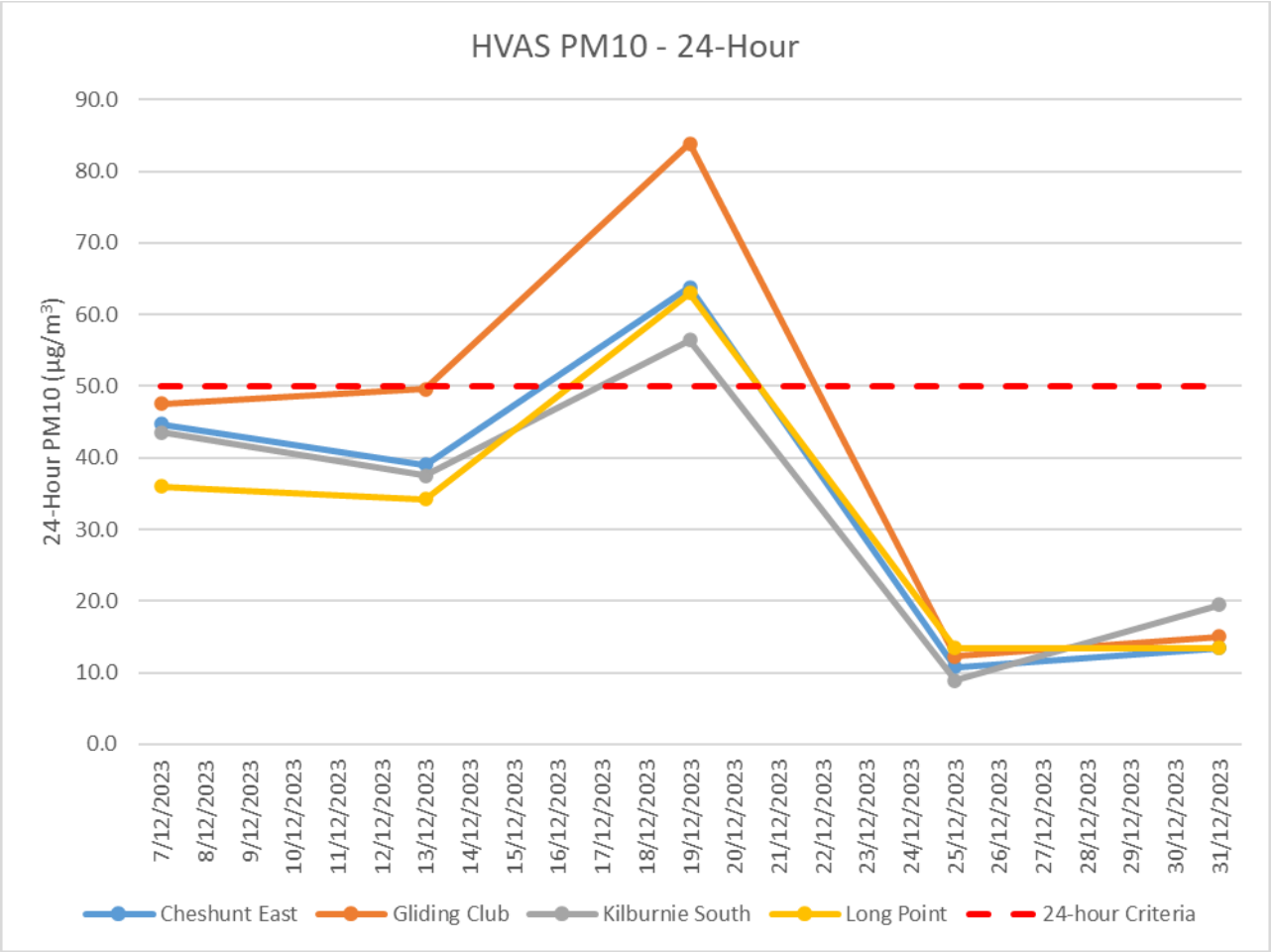

Figure 6 – Individual PM_{10} Results for the Reporting Period

2.3.1.2 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA

Figure 7 presents the year-to-date annual average PM_{10} results. All monitors were below the relevant long term (annual) impact assessment criteria during the reporting period, with the exception of the Gliding Club monitor. An assessment of HVO's contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

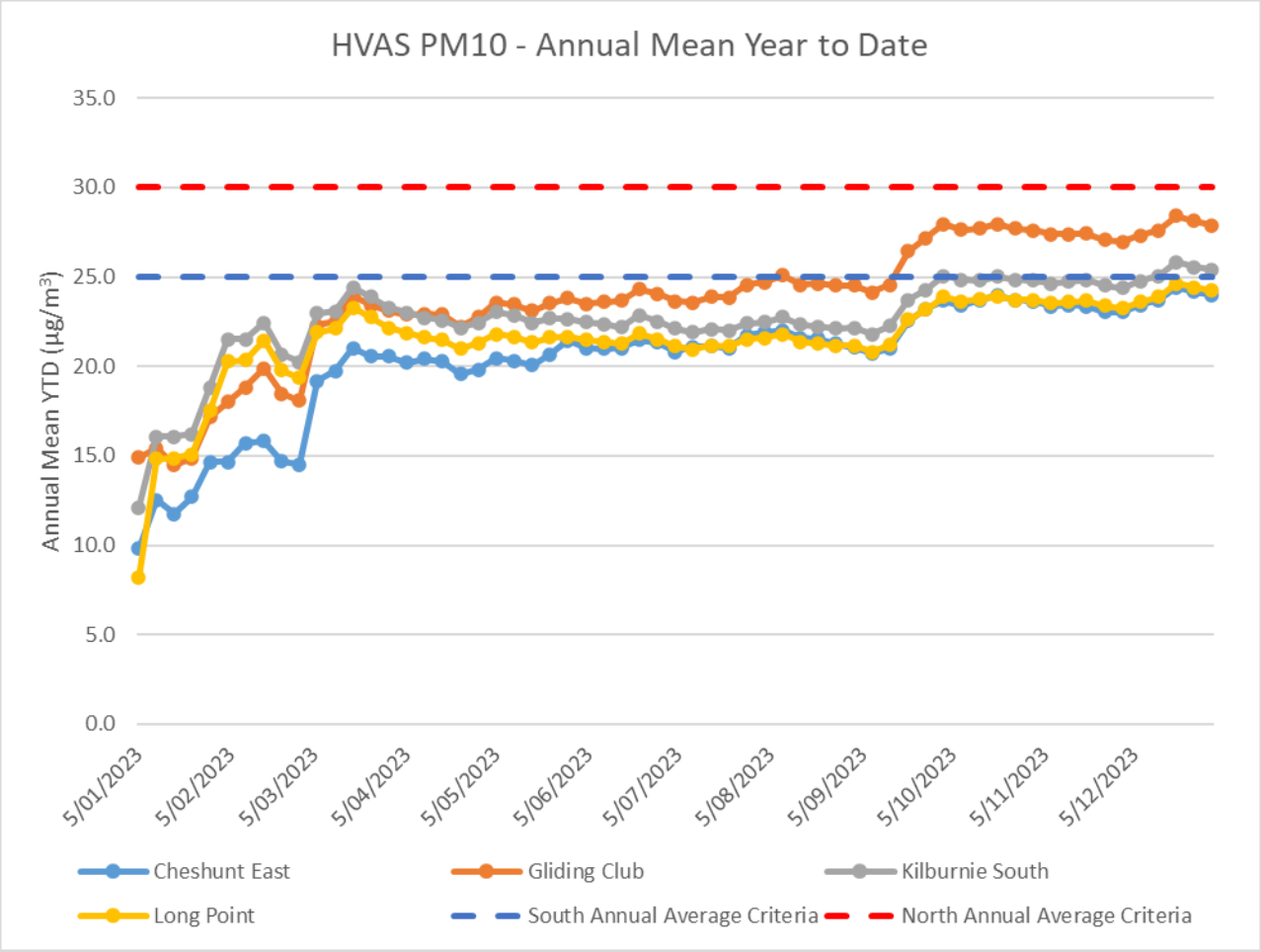

Figure 7 – Year to Date Average PM_{10} as at end of the Reporting Period

2.3.2 | HVAS $PM_{2.5}$ RESULTS

HVO monitors $PM_{2.5}$ at two HVAS locations, Kilburnie South and Maison Dieu.

2.3.2.1 | HVAS $PM_{2.5}$ RESULTS

Figure 8 presents individual $PM_{2.5}$ results at each monitoring station against the HVO South short-term (24 hour) impact assessment criteria of 25µg/m^3.

Monitors reported concentrations below the relevant short-term impact assessment criteria during the reporting period, with the exception of:

- Kilburnie South on 7 (43.1µg/m^3), 13 (27.1µg/m^3) and 19 (45.6µg/m^3) December; and
- Maison Dieu on 13 (28.7 µg/m^3) and 19 (46.0 µg/m^3) December.

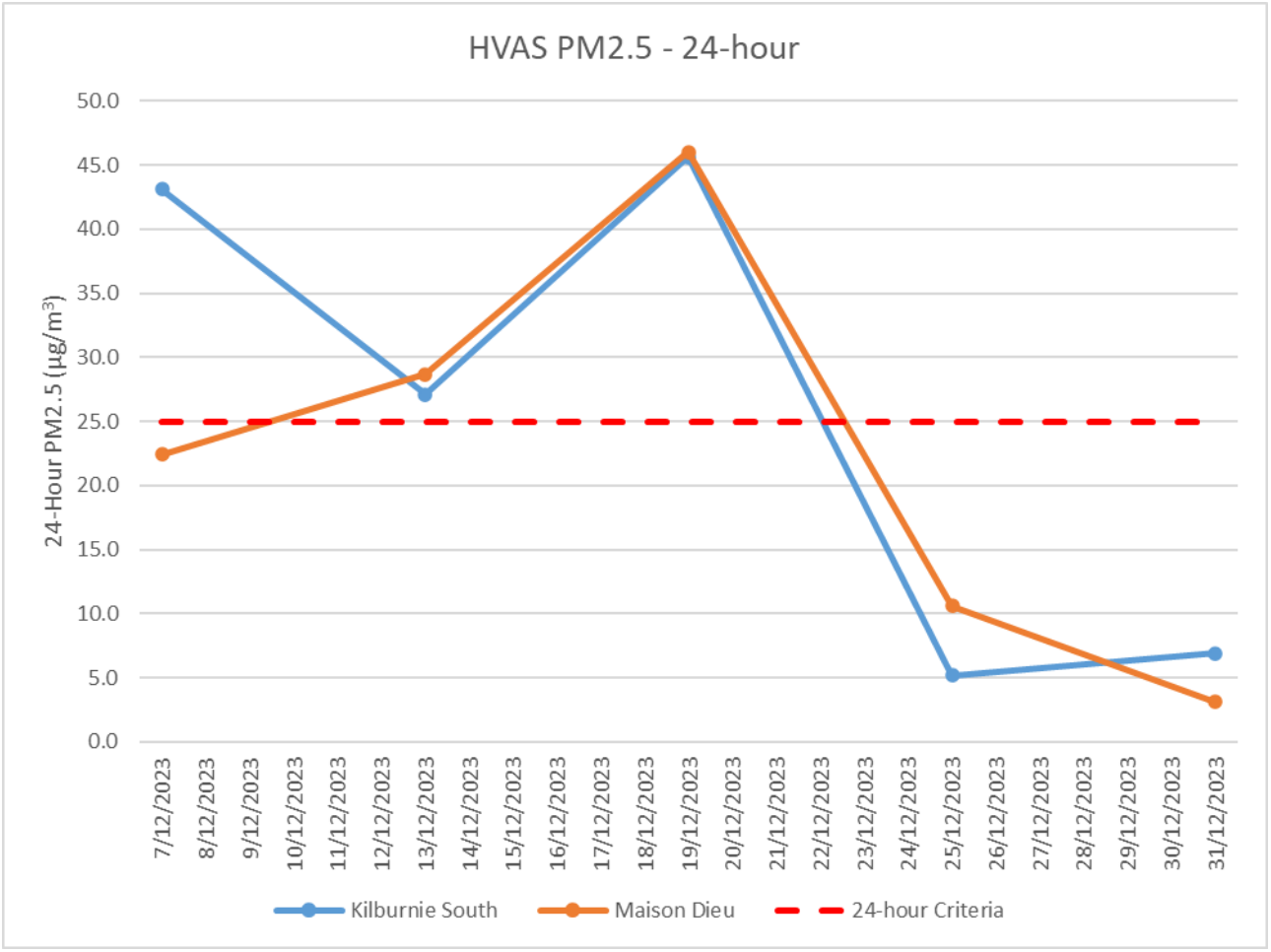

Figure 8 - Results for the Reporting Period

2.3.2.2 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA

Figure 9 presents the year-to-date annual average $PM_{2.5}$ results. During the reporting period, both the Maison Dieu monitor and Kilburnie South monitors annual average year to date results were above the $PM_{2.5}$ Annual Rolling Mean criteria of 8µg/m3.

An assessment of HVO's contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

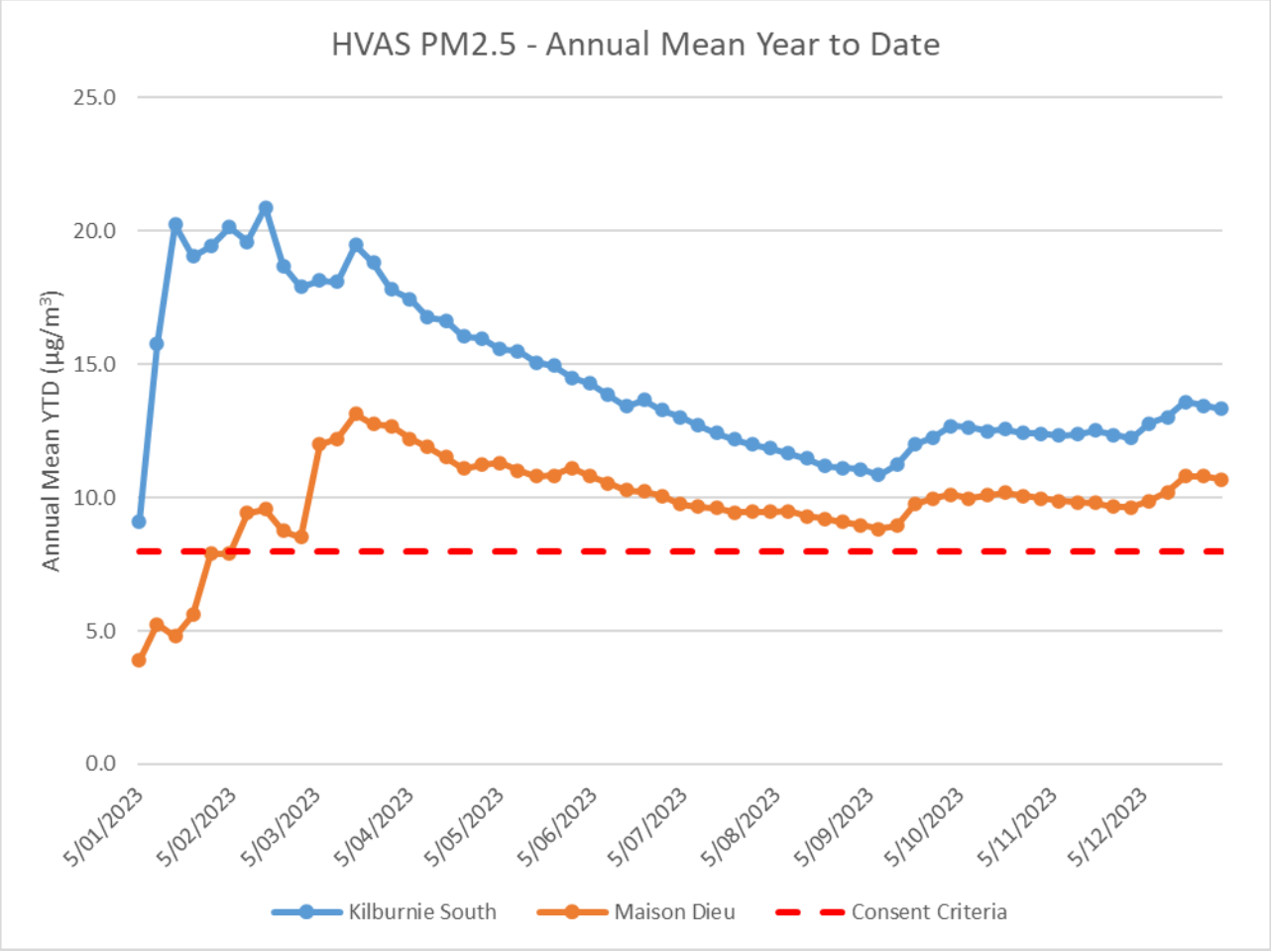

Figure 9 - Year to Date Average $PM_{2.5}$ as at end of the Reporting Period

2.3.3 | TSP RESULTS

2.3.3.1 | PERFORMANCE AGAINST LONG TERM IMPACT ASSESSMENT CRITERIA

Figure 10 presents the annual average TSP results compared against the long-term impact assessment criteria of 90µg/m3.

All monitors were below the relevant long-term impact assessment criteria during the reporting period, with the exception of the Warkworth monitor.

An assessment of HVO's contribution against the long-term impact assessment criteria will be provided in the 2023 Annual Review.

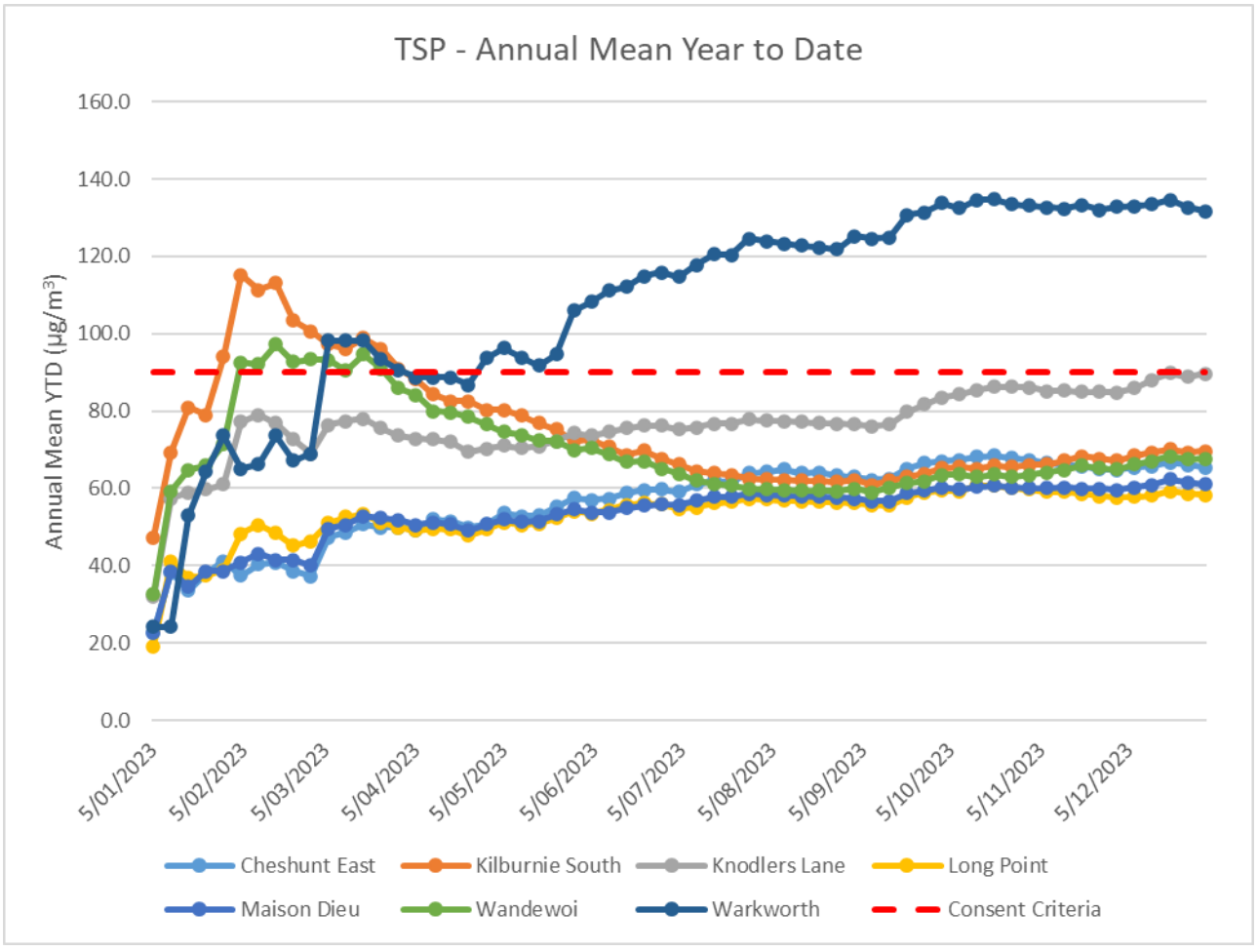

Figure 10 - Year to Date Average Total Suspended Particulates as at end of the Reporting Period

2.3.4 | REAL TIME PM_{10} RESULTS

HVO maintains a network of real time PM_{10} monitors. The real time air quality monitoring stations continuously record information and transmit data to a central database, generating alarms when particulate matter levels exceed internal trigger levels. Results from real time PM_{10} monitoring are used as a reactive measure to guide mining operations to help achieve compliance with the relevant conditions of the project approval.

Figure 11 presents the daily 24-hour average PM_{10} result from the real time monitoring sites. The year to date annual averages for each monitoring site are shown in Figure 12.

Figure 11 shows the daily 24-hour average PM_{10} result from the real time monitoring sites. Exceedances to the PM_{10} 24 hour average included:

- Warkworth TEOM on 6, 10, 11, 14 – 19 December;
- Knodlers Lane TEOM on 6, 11, 15 – 19 December; and
- Maison Dieu TEOM on 19 December.

These exceedances were investigated by HVO and it was found that the maximum calculated HVO contribution was below the compliance limit in each circumstance.

The year to date annual averages for each monitoring site are shown in Figure 12. Warkworth TEOM is currently reporting an annual average in excess of the relevant criteria.

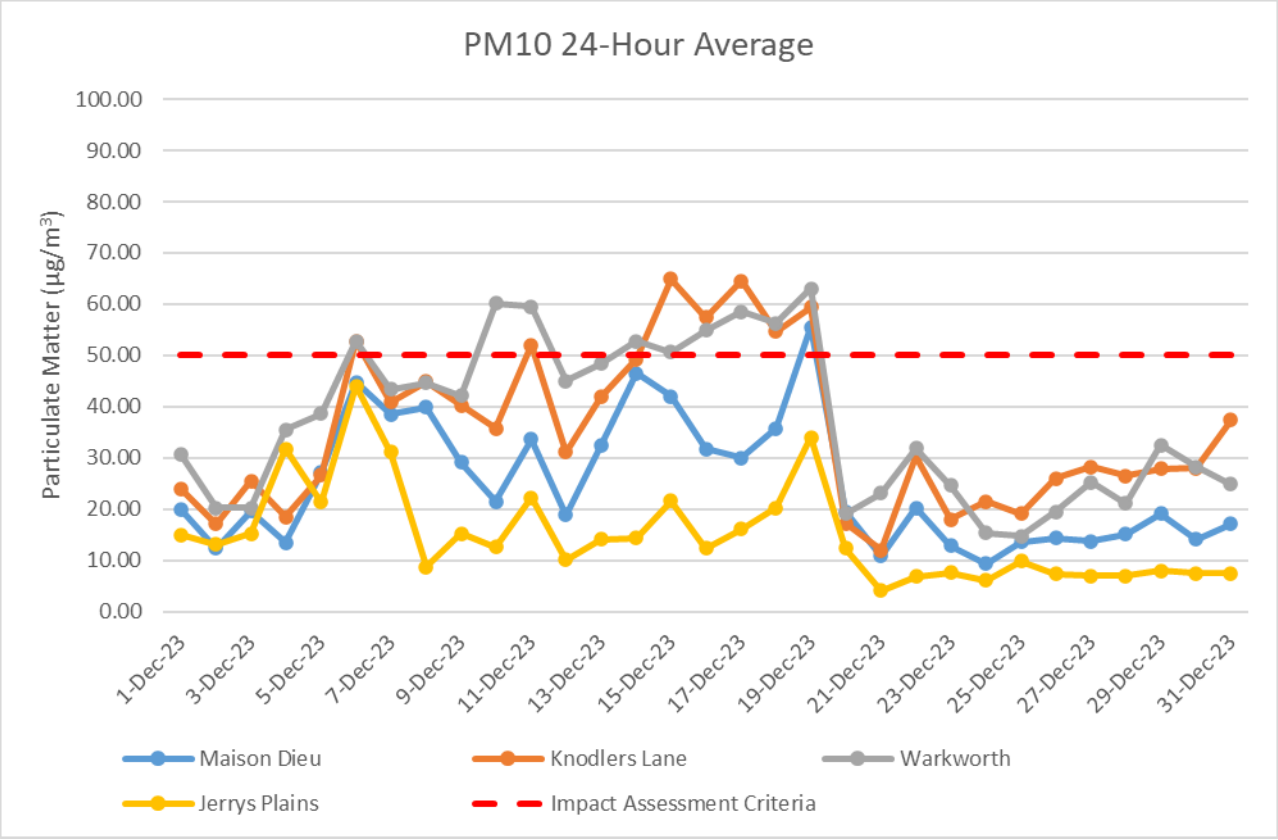

Figure 11 – Real Time PM_{10} 24hr for the Reporting Period

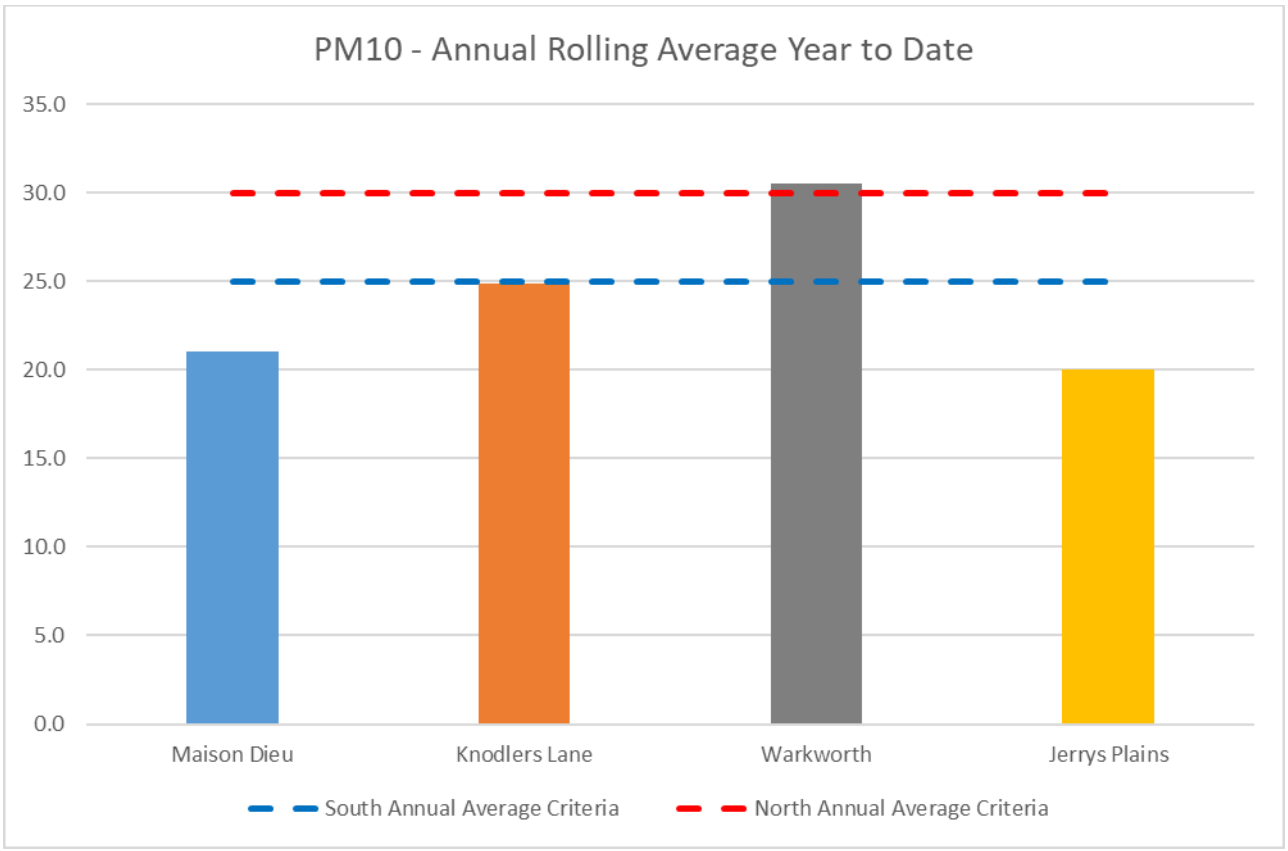

Figure 12 – Real Time PM_{10} Annual Average for the Reporting Period

2.3.5 | REAL TIME ALARMS FOR AIR QUALITY

The real time monitoring system generated one hundred and ninety three (193) automated air quality related alarms during the reporting period. Of the total, forty seven (47) alarms related to adverse weather conditions and one hundred and forty six (146) alarms related to dust conditions.

3 | WATER QUALITY

HVO maintains a network of surface water and groundwater monitoring sites.

3.1 | SURFACE WATER

Surface watercourses are sampled on a quarterly sampling regime. Water quality is assessed through the parameters of pH, electrical conductivity (EC) and Total Suspended Solids (TSS). The location of surface water monitoring points across HVO is shown in Figure 13.

Results from monitoring on site dams, the Hunter River and other natural tributaries are provided in Figure 14 to Figure 25.

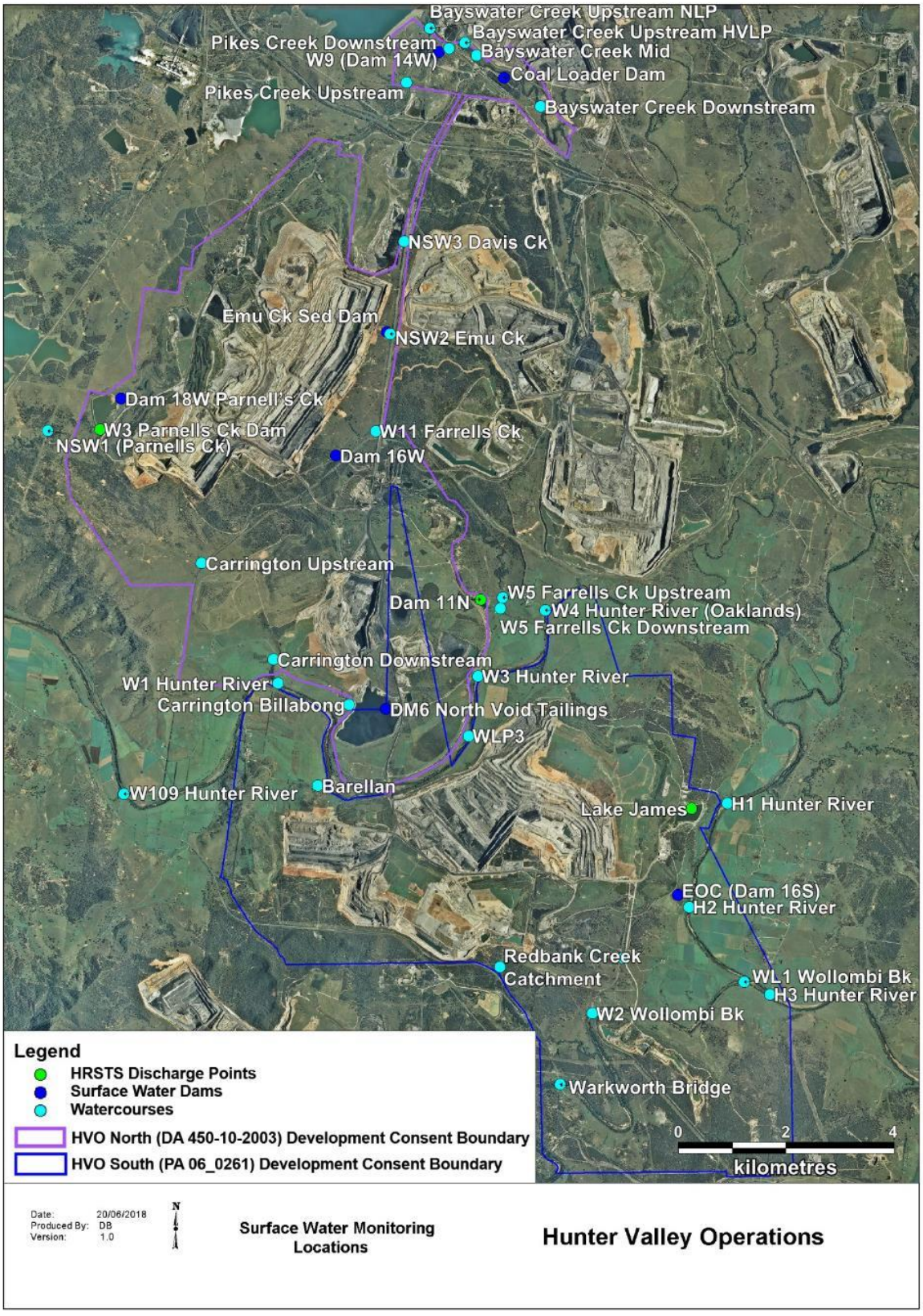

Figure 13 – HVO Surface Water Monitoring Locations

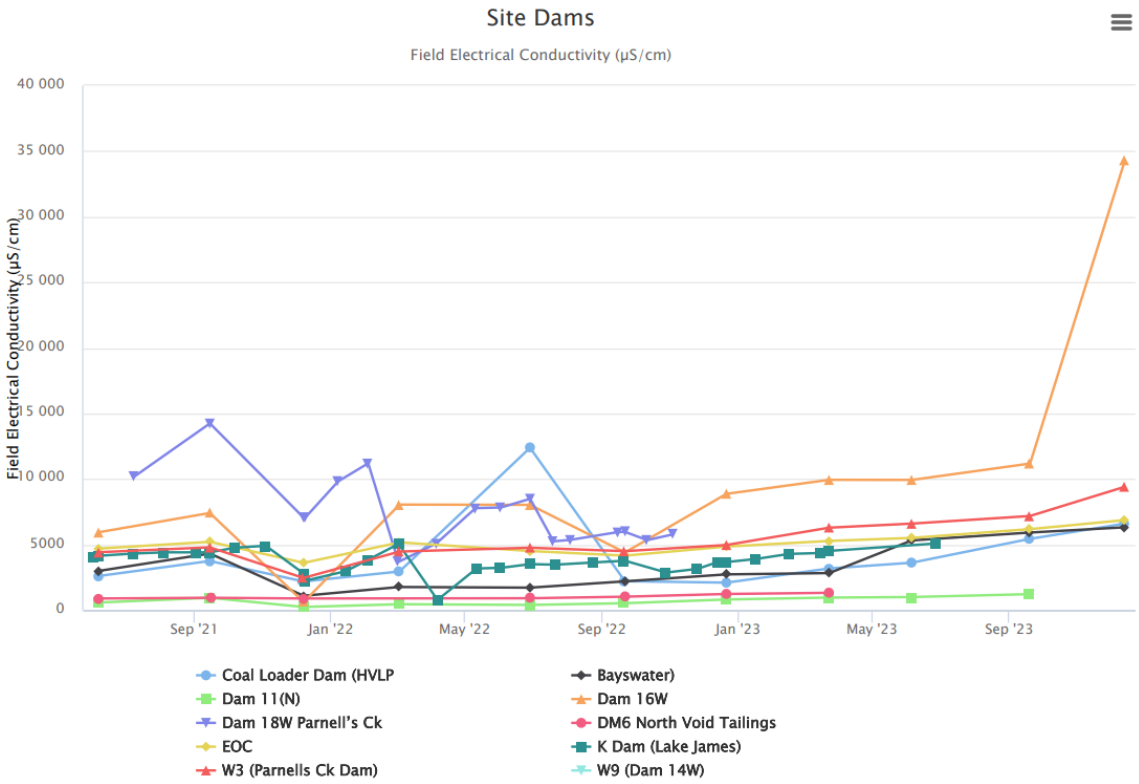

Figure 14 Site Dams Electrical Conductivity – December 2023

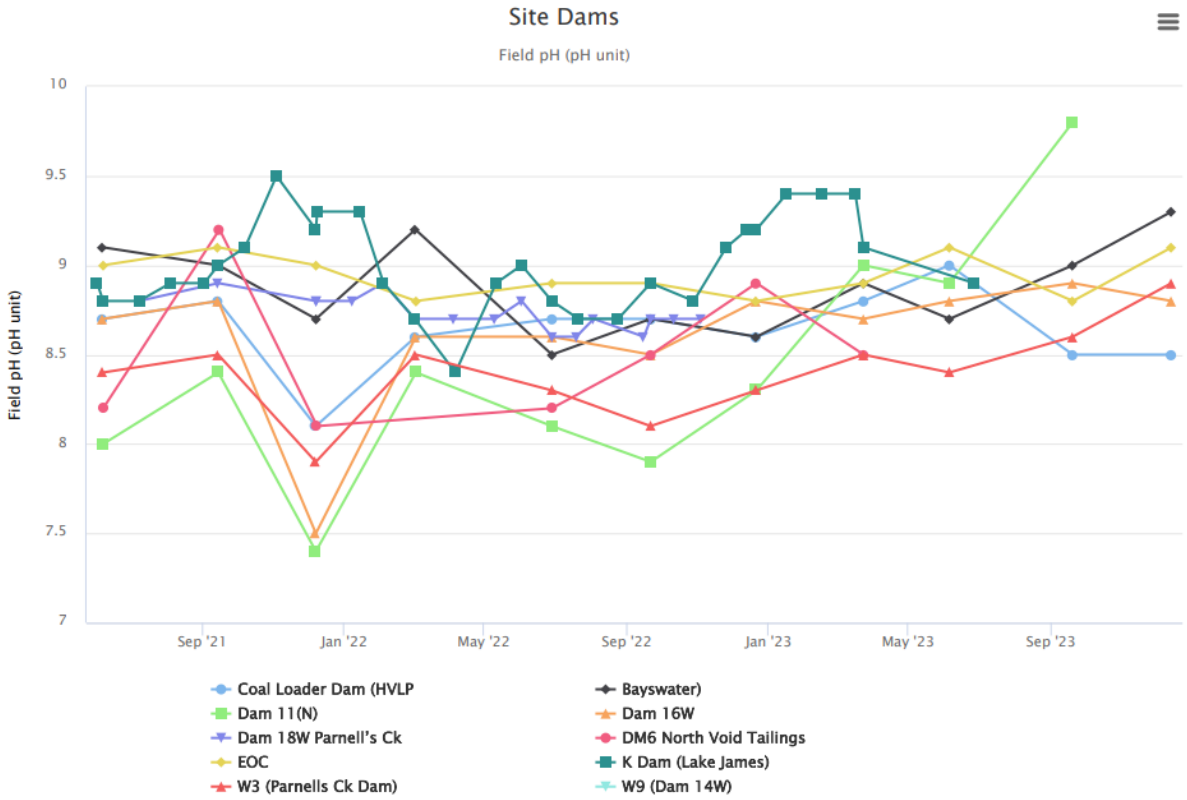

Figure 15 Site Dams Field pH – December 2023

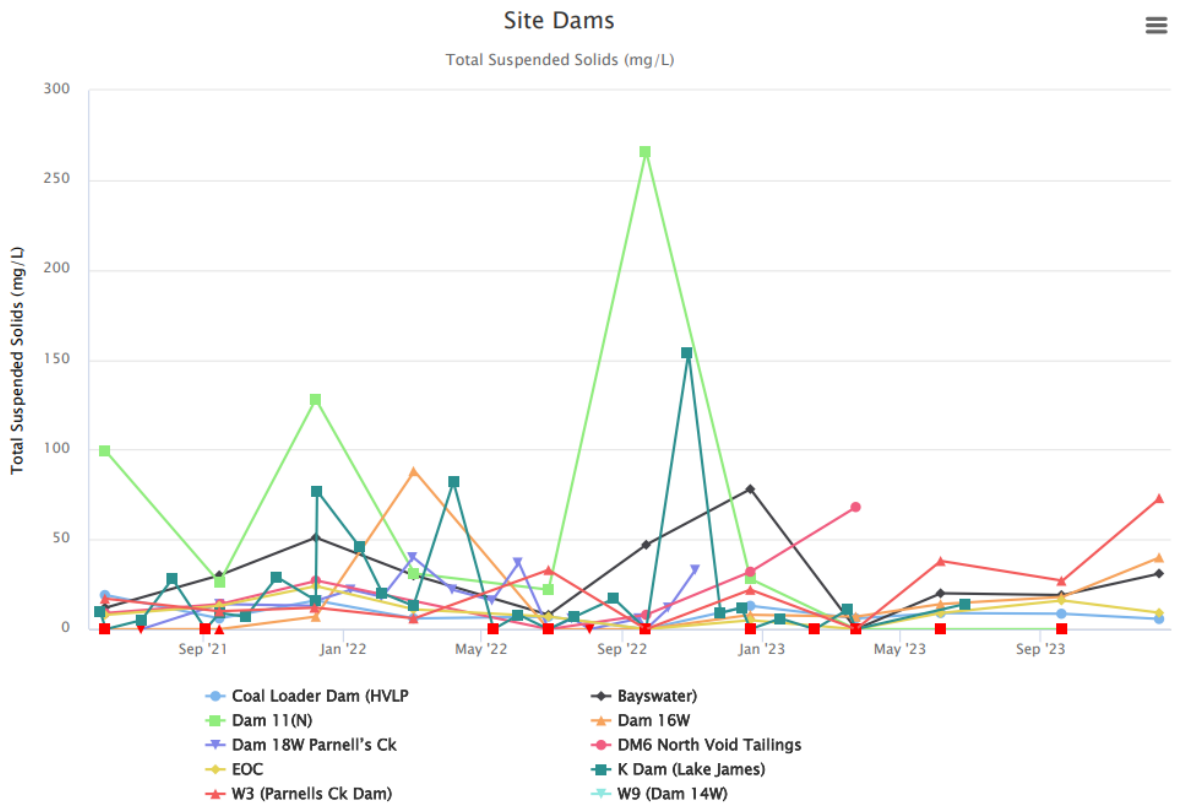

Figure 16 Site Dams Total Suspended Solids – December 2023

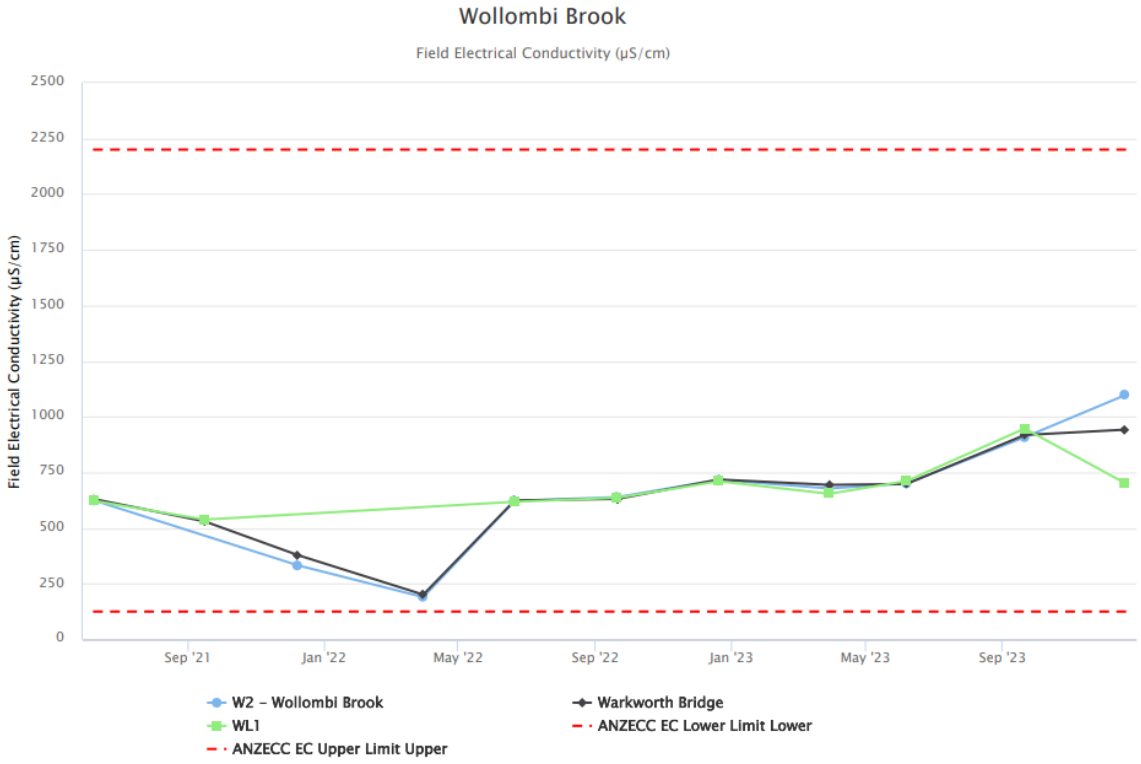

Figure 17 Wollombi Brook Electrical Conductivity – December 2023

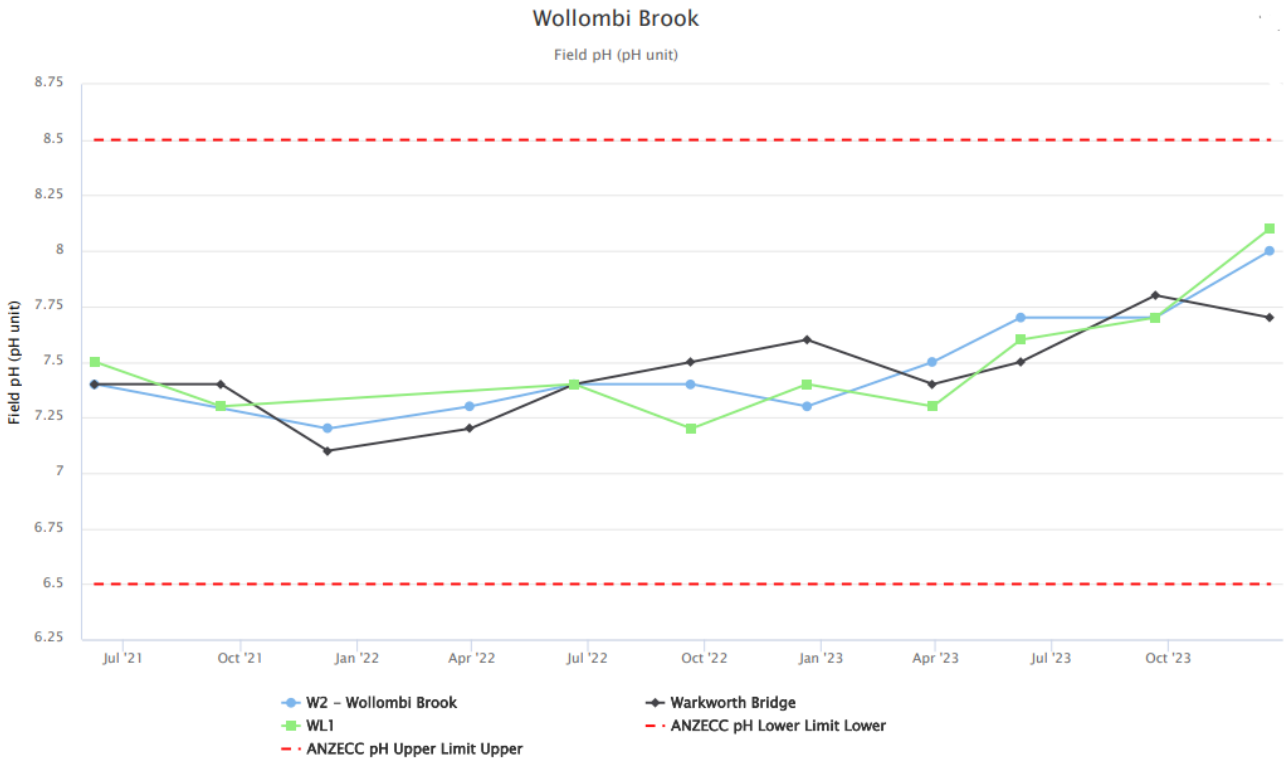

Figure 18 Wollombi Brook Field pH – December 2023

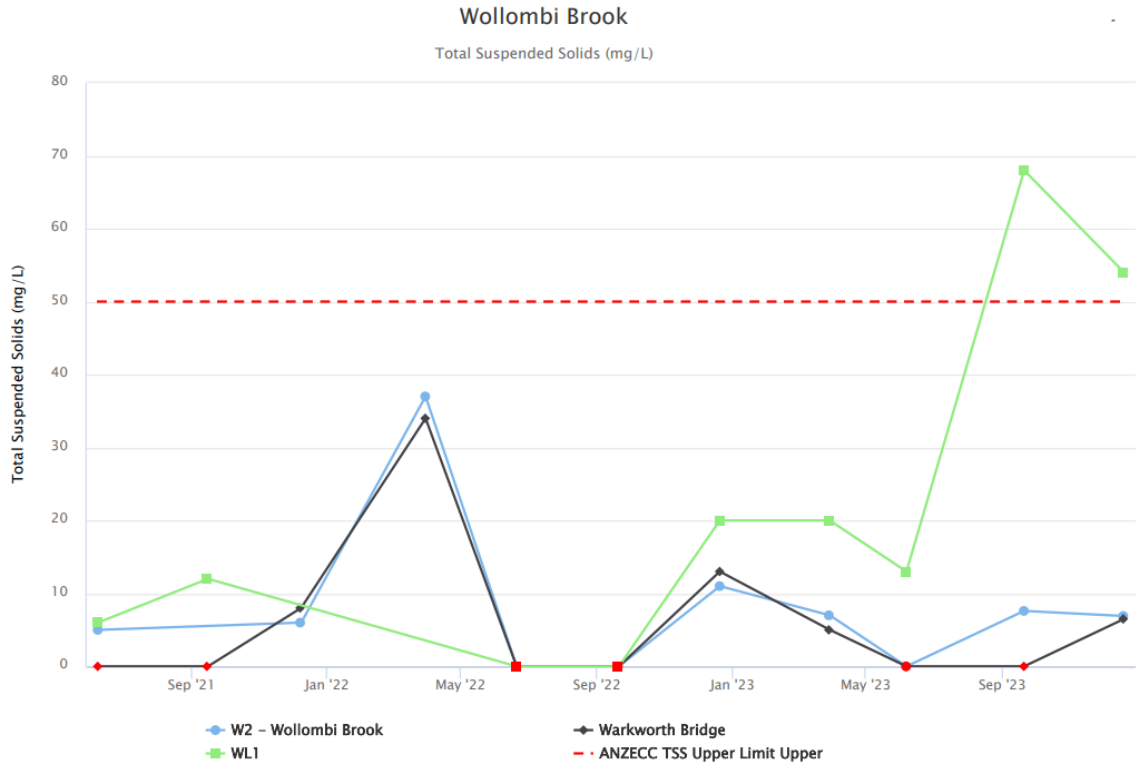

Figure 19 Wollombi Brook Total Suspended Solids – December 2023

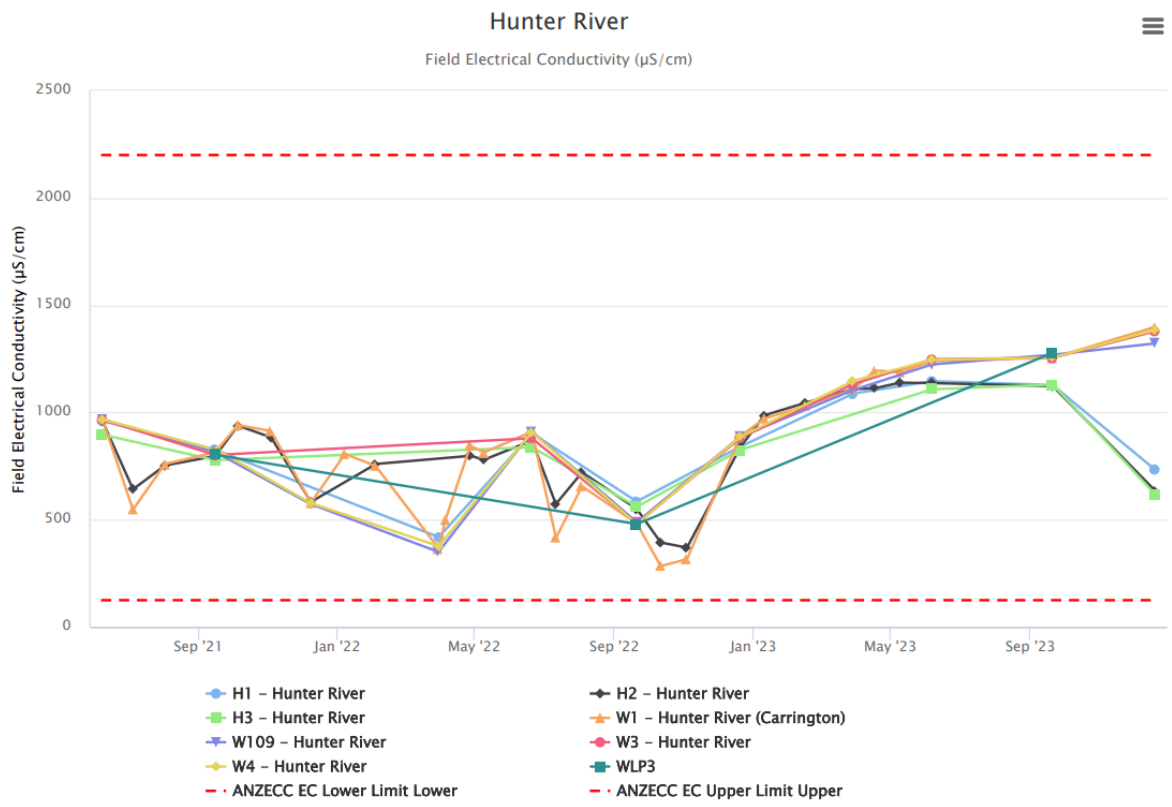

Figure 20 Hunter River Electrical Conductivity – December 2023

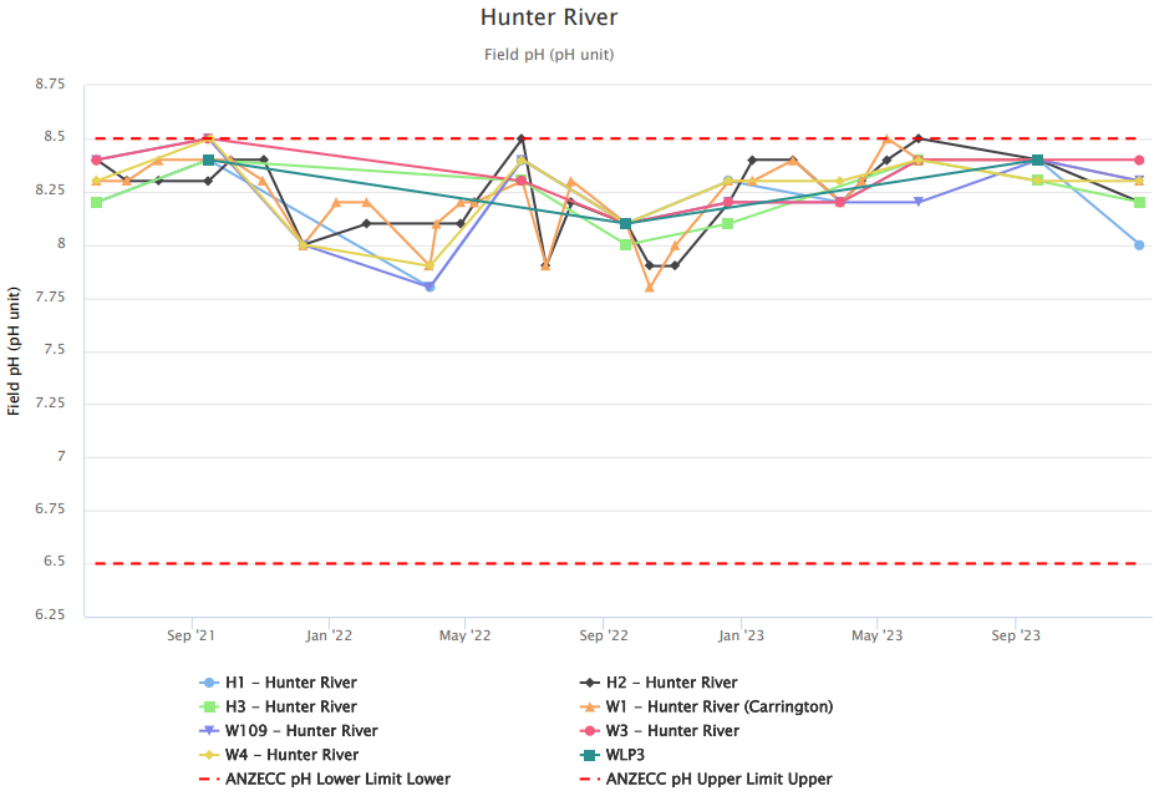

Figure 21 Hunter River Field pH – December 2023

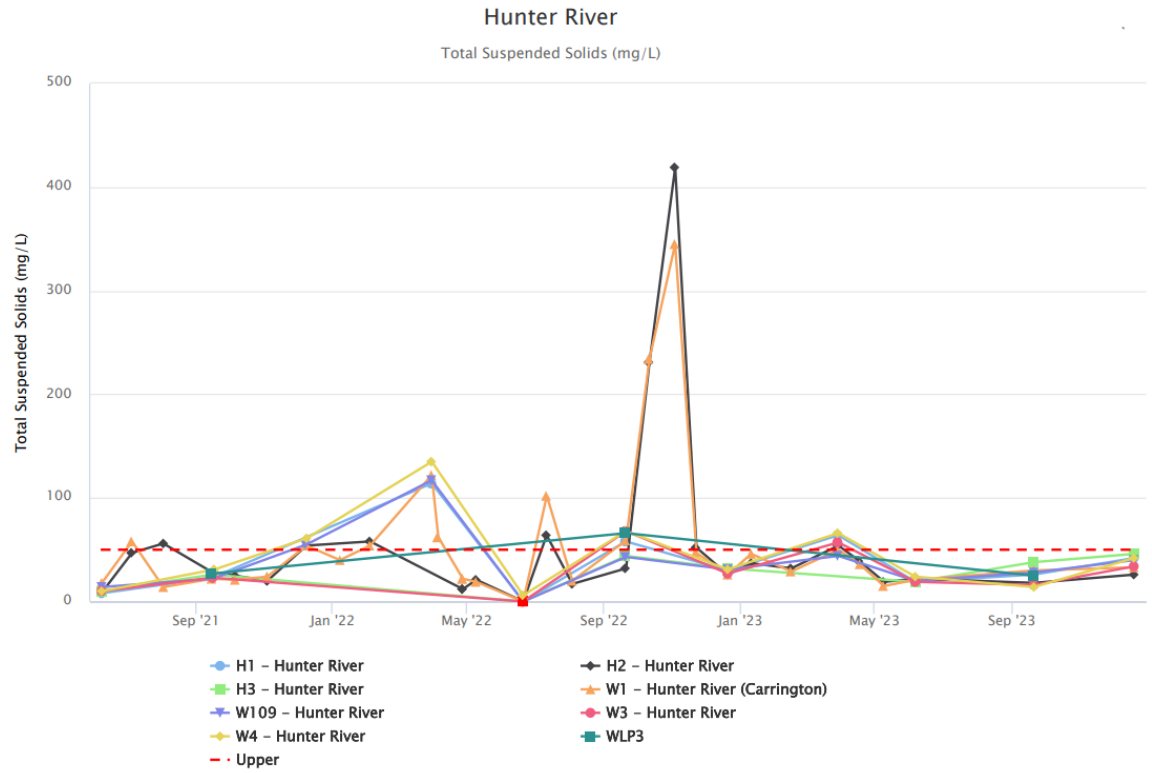

Figure 22 Hunter River Total Suspended Solids – December 2023

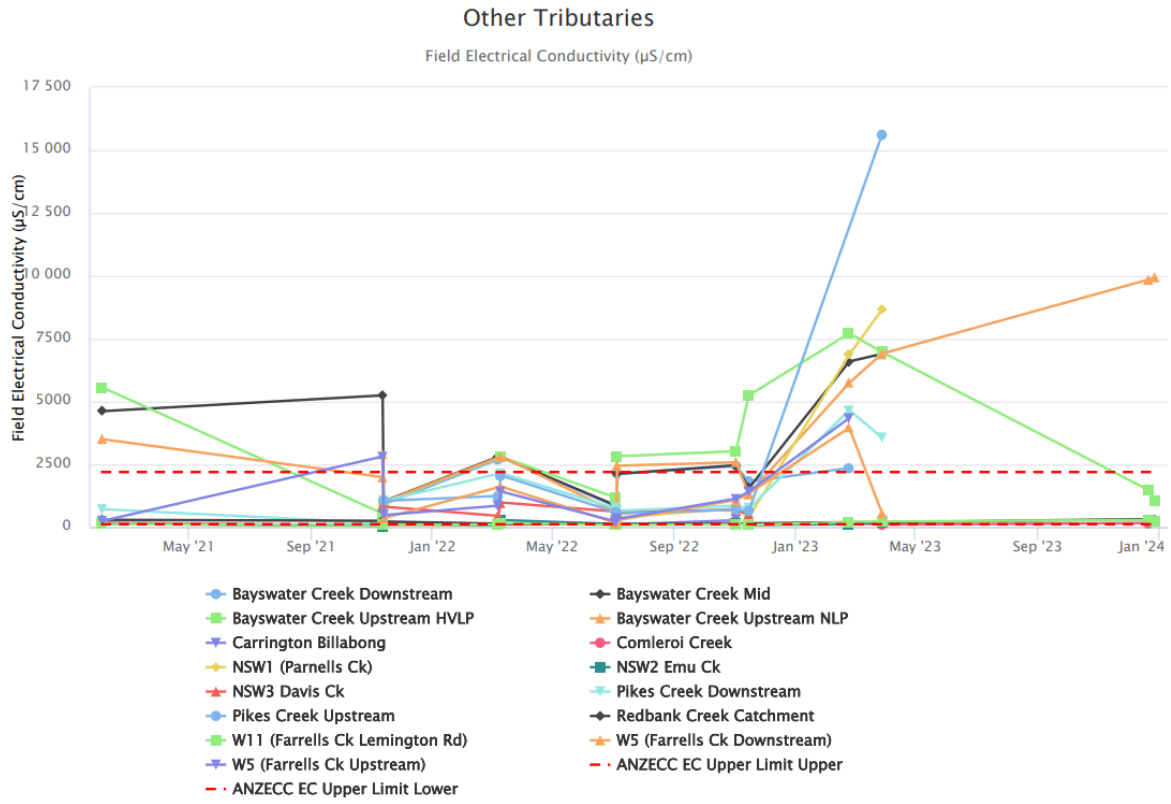

Figure 23 Other Tributaries Electrical Conductivity – December 2023

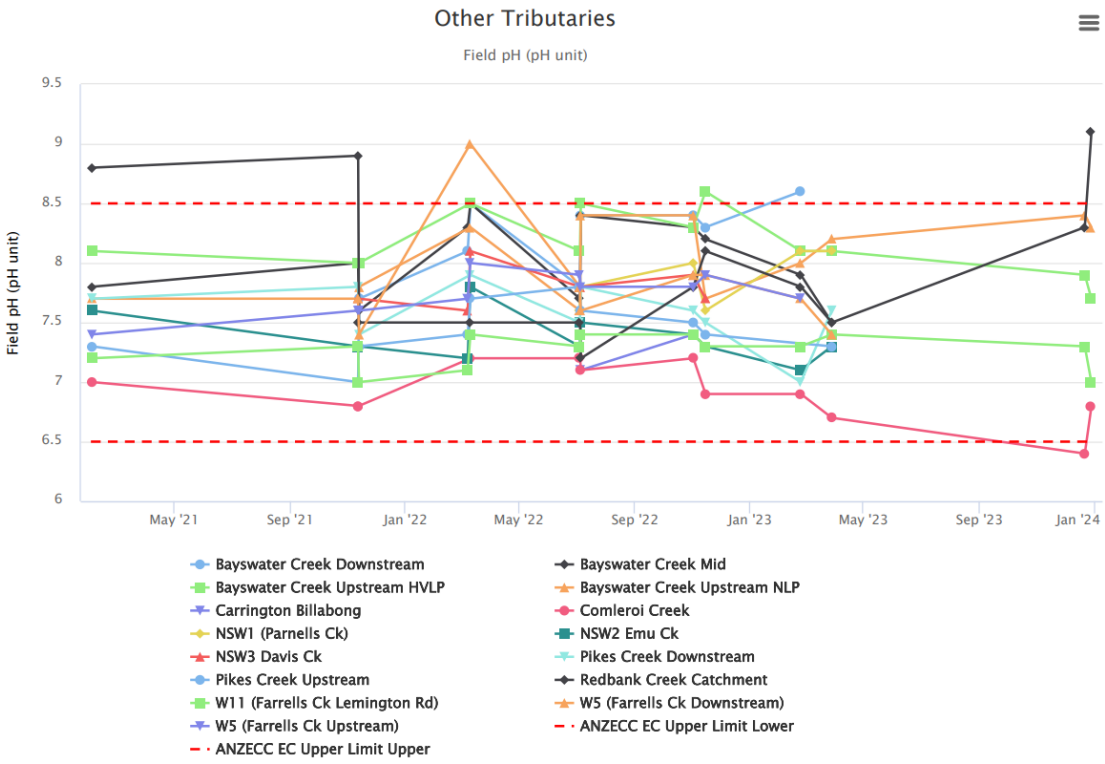

Figure 24 Other Tributaries Field pH – December 2023

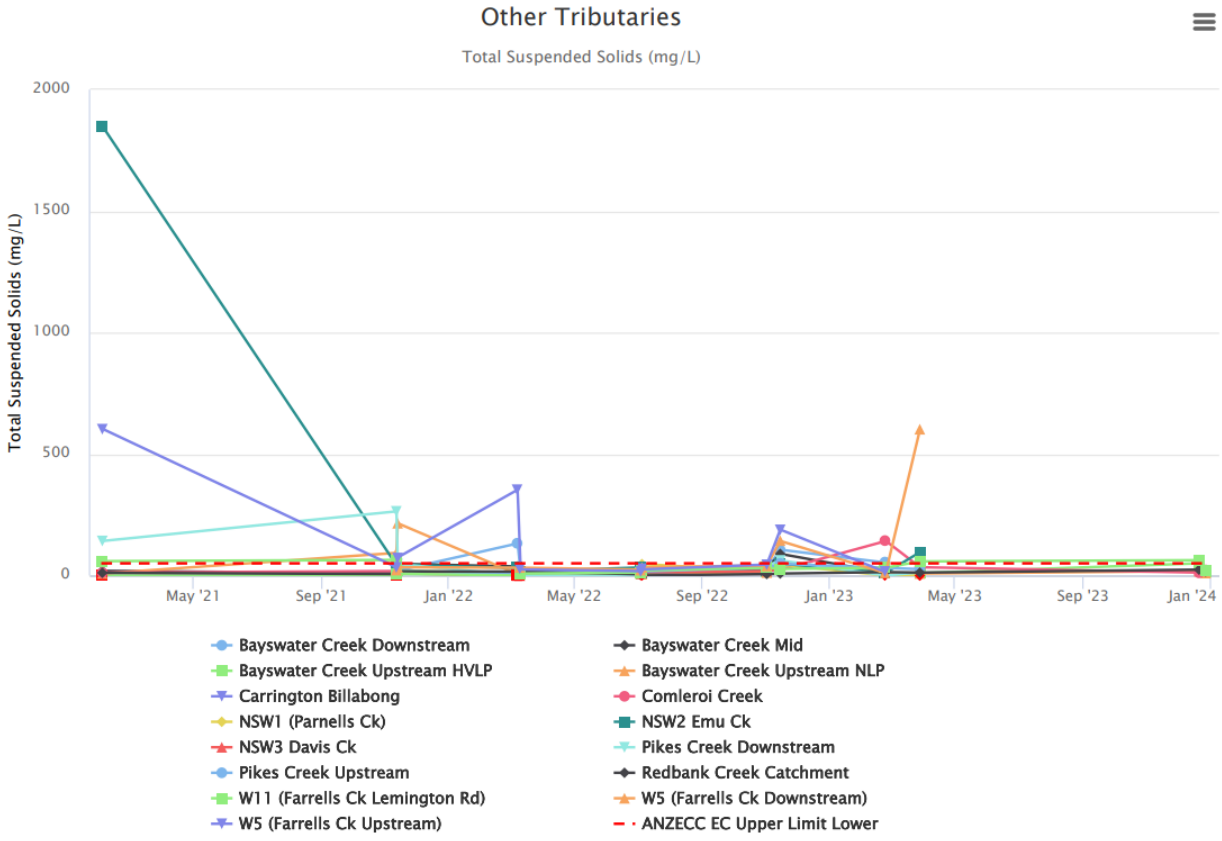

Figure 25 Other Tributaries Total Suspended Solids – December 2023

3.1.1 | SURFACE WATER TRIGGER TRACKING

Internal trigger limits have been developed to assess monitoring data on an on-going basis and to highlight potentially adverse surface water impacts. The process for evaluating monitoring results against the internal triggers and subsequent responses are outlined in the HVO Water Management Plan.

Surface water trigger tracking results are summarised in

Table 2.

Table 2 - Surface Water Trigger Tracking – Q4 2023

Site	Date	Trigger Limit Breached	Response Action
WL1	19/12/2023	TSS (mg/L)	Second Consecutive Exceedance of TSS - Field Observations indicate that the sample was light brown in colour and slightly turbid. A slow flow rate and low water level was recorded at WL1. - 0mm of rainfall in the seven days prior to sampling. - No HRSTS discharges upstream of WL1 on or prior to the 19/12/23. - On 19/12/23 TSS at W109 Hunter River and H2 (upstream of WL1) indicated TSS results of 40 mg/L and 26 mg/L. The TSS result at WL1 (54 mg/L) was greater than that recorded at W109 and H2. Investigation: Given the lack of rainfall preceding the sampling it is unlikely that the TSS exceedance was associated with a HVO mining impact. Drone footage captured in Q4 2023 of Wollombi Brook between sites W2 and WL1 indicates large areas of wash-out in parts of the bank. Field observations also indicate that site WL1 has changed dramatically since the flood events in early 2023 as overflow from the Hunter River flowed through the Brook during the 2023 flood events. Based on WL1 field observations and drone footage, it is likely the TSS exceedance is a result of low water level and natural mixing of the Hunter River with watercourse bed sediment at WL1. Action: Continue to monitor bank stability at the location upstream of WL1 as per the current Annual Bank Stability Monitoring Program. This will allow HVO to monitor any further changes to bank stability upstream of and at WL1, and implement additional mitigation actions if required. Continue monitoring this location for further trigger exceedances.
W109 - Hunter River	19/12/2023	EC (µS/cm)	Third Consecutive Exceedance of EC. -Field observations indicated that the sample was light brown in colour and slightly turbid - 0mm of rainfall in the seven days prior to sampling - pH and TSS results are generally consistent with historical range of results at W109 presented in WMP. **Investigation outcome:** Because W109 is an upstream reference monitoring location it cannot be impacted by HVO mining activities. The trigger exceedance appears to be a result of high EC within the broader catchment. **Action:** Continue monitoring this location for further trigger exceedances.
W1 - Hunter River (Carrington)	19/12/2023	EC (µS/cm)	No investigation required - second trigger exceedance

W4 - Hunter River	19/12/2023	EC (µS/cm)	Third consecutive exceedance of EC. - Field Observations indicate that the sample was light brown in colour and slightly turbid. - 0mm of rainfall in the seven days prior to sampling. - No HRSTS discharges upstream of W4 on or prior to the 19/12/23. - On 19/12/23 EC at W109 Hunter River (upstream of W4) indicated a slightly elevated EC result of 1322 µS/cm and W1 (1399 µS/cm) and W3 (1379 µS/cm) recorded trigger value exceedances (both upstream of W4). Investigation: There were no onsite events identified to indicate that the EC exceedance was associated with a HVO mining impact. The EC exceedance appears to be a result of high EC within the broader catchment. Action: HVO to identify and inspect (as required) any areas of ground distrubance upstream of W4 where: - erosion and sediment controls may not be performing effectively. - there is potential for dirty water release from site. Continue monitoring this location for further trigger exceedances.
W3 - Hunter River	19/12/2023	EC (µS/cm)	Third consecutive exceedance of EC. - Field Observations indicate that the sample was light brown in colour and slightly turbid. - 0mm of rainfall in the seven days prior to sampling. - No HRSTS discharges upstream of W3 on or prior to the 19/12/23. - On 19/12/23 sites W109 Hunter River (1322 µS/cm), W1 (1399 µS/cm) and W4 (1385 µS/cm) recorded EC trigger value exceedances (all upstream of W3). Investigation: There were no onsite events identified to indicate that the EC exceedance was associated with a HVO mining impact. The EC exceedance appears to be a result of high EC within the broader catchment. Action: HVO to identify and inspect (as required) any areas of ground distrubance upstream of W3 where: - erosion and sediment controls may not be performing effectively. - there is potential for dirty water release from site. Continue monitoring this location for further trigger exceedances.
W2 - Wollombi Brook	19/12/2023	EC (µS/cm)	No investigation required - first trigger exceedance

Bayswater Creek Upstream HVLP	19/12/2023	TSS (mg/L)	Rain event sampling. First Exceedance of TSS. -Field observations indicated that the sample was light brown in colour and turbid with no flow(pool). - Approximately 28.2mm of rainfall in day prior to sampling. - No HRSTS discharges upstream of Bayswater Creek Upstream on or prior to the 21/12/23. - No sediment basins overtopped during rain event Investigation: There is no evidence to indicate that the TSS exceedance is associated with a HVO mining impact. The TSS exceedance appears to be a result of rainfall prior to sampling leading to elevated suspended solids concentrations in broader catchment runoff. Action: Continue monitoring this location for further trigger exceedances.
W11 - Farrells Ck Lemington Rd	19/12/2023	TSS (mg/L)	Rain event sampling. First Exceedance of TSS. -Field observations indicated that the sample was brown in colour and turbid with no flow(pool). - Approximately 28.2mm of rainfall in day prior to sampling. - No HRSTS discharges upstream of W11 on or prior to the 21/12/23. - No sediment basins overtopped during rain event Investigation: There is no evidence to indicate that the TSS exceedance is associated with a HVO mining impact. The TSS exceedance appears to be a result of rainfall prior to sampling leading to elevated suspended solids concentrations in broader catchment runoff. Action: Continue monitoring this location for further trigger exceedances.

3.2 | SITE WATER USE

HVO is permitted to extract water from the Hunter River under water allocation licenses issued by Water NSW.

HVO did not extract water from the Hunter River during the reporting period.

3.3 | HRSTS DISCHARGE

HVO participates in the Hunter River Salinity Trading Scheme (HRSTS), allowing discharge from licensed discharge points Dam 11N (to Farrell's Creek), Lake James (to the Hunter River) and Parnell's Dam (to Parnell's Creek). Discharges can only take place subject to HRSTS regulations.

HVO did not undertake any HRSTS discharges during the reporting period.

3.4 | GROUNDWATER MONITORING RESULTS

Groundwater monitoring is undertaken on a quarterly basis in accordance with the HVO Water Management Plan and Groundwater Monitoring Program. The location of groundwater monitoring points across HVO are show in Figure 26.

Groundwater monitoring results are provided in Figure 27 to Figure 77.

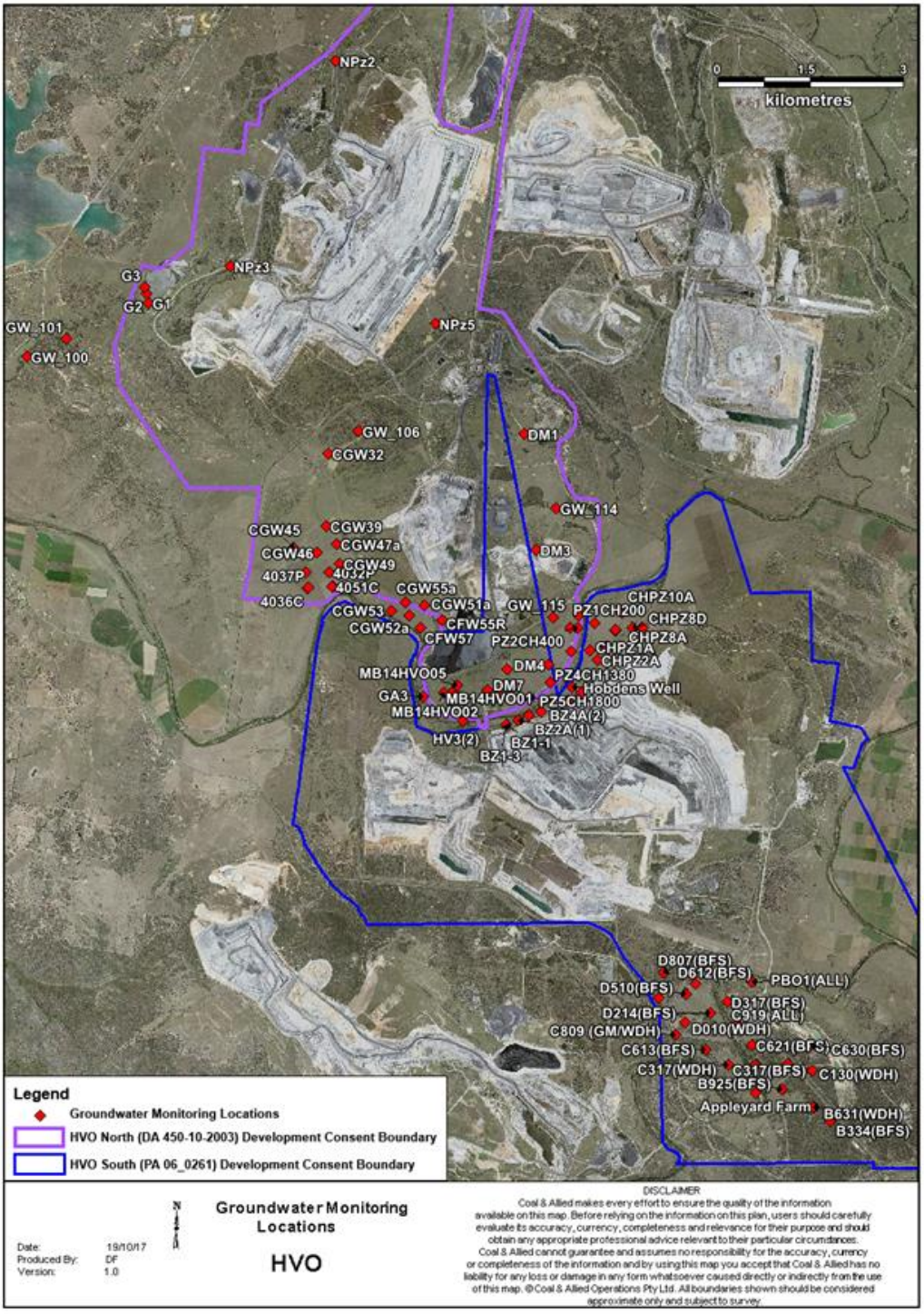

Figure 26 - Groundwater Monitoring Locations at HVO

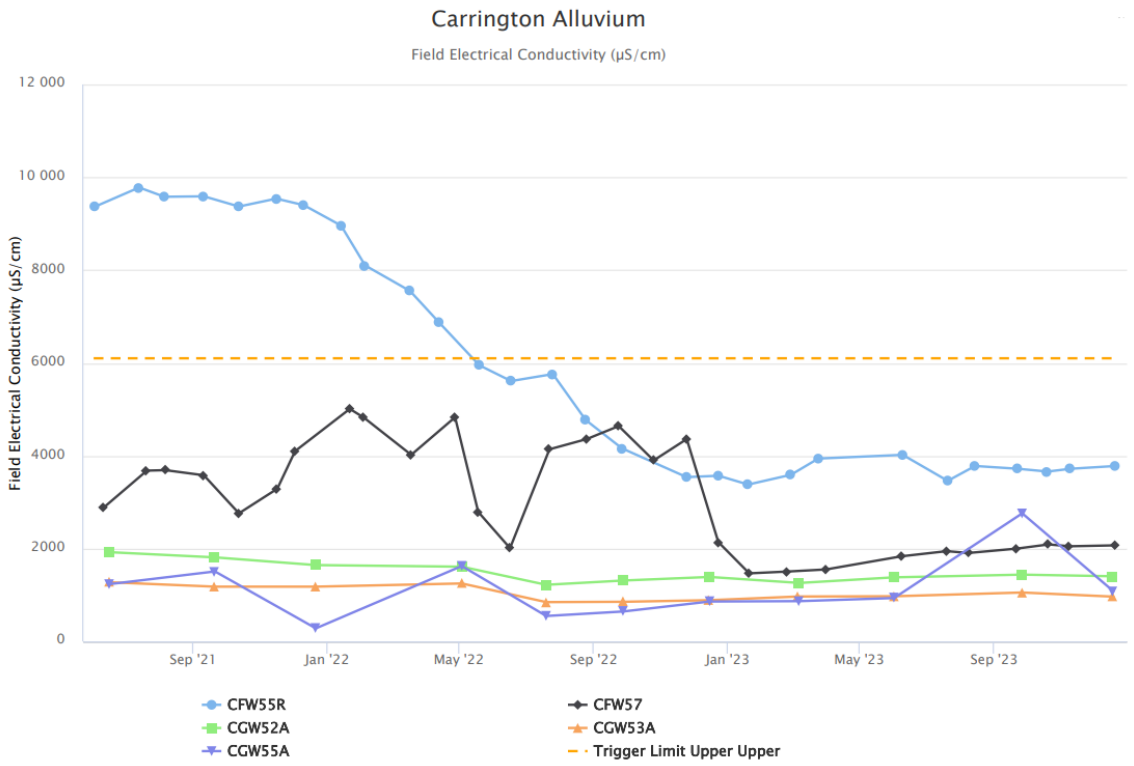

Figure 27 - Carrington Alluvium Electrical Conductivity Trend – Q4 2023

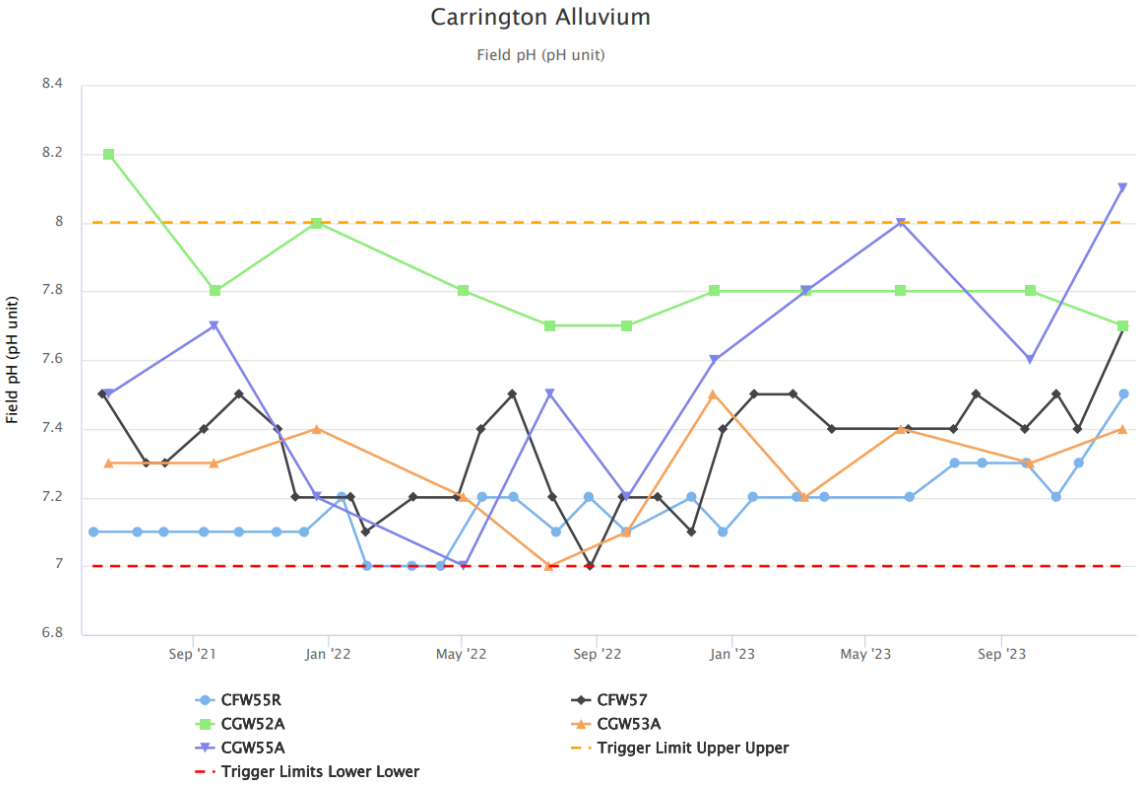

Figure - 28 Carrington Alluvium Field pH Trend – Q4 2023

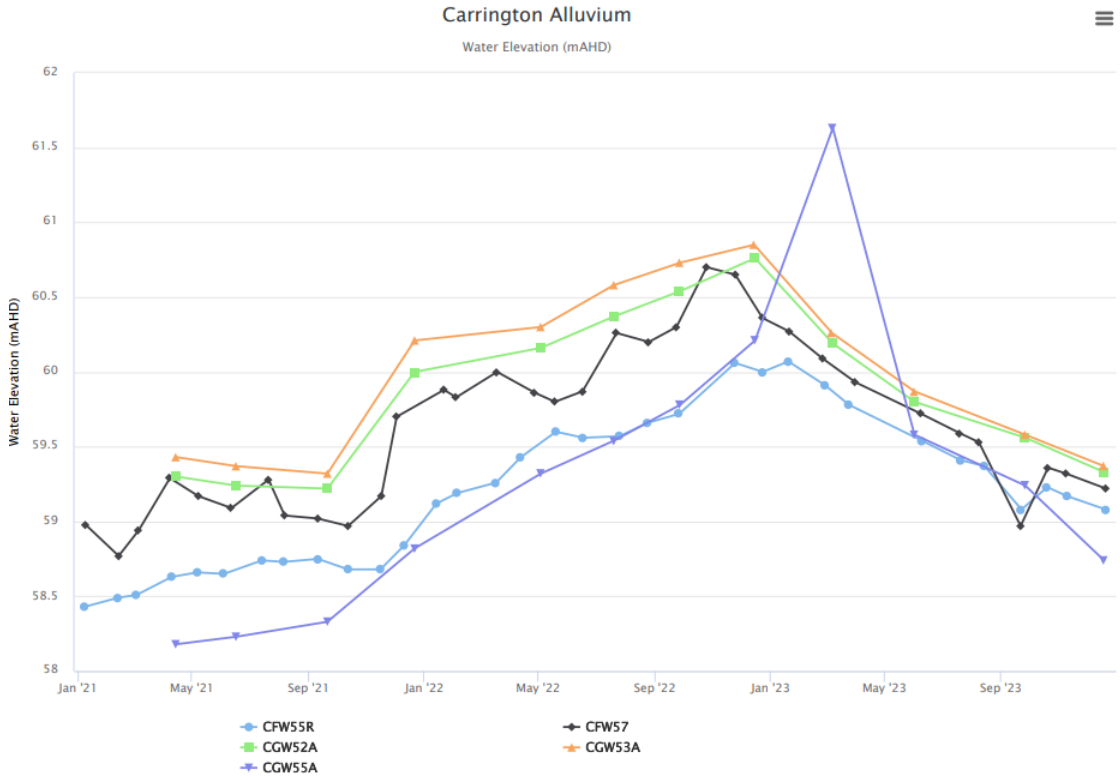

Figure 29 - Carrington Alluvium Water Elevation Trend – Q4 2023

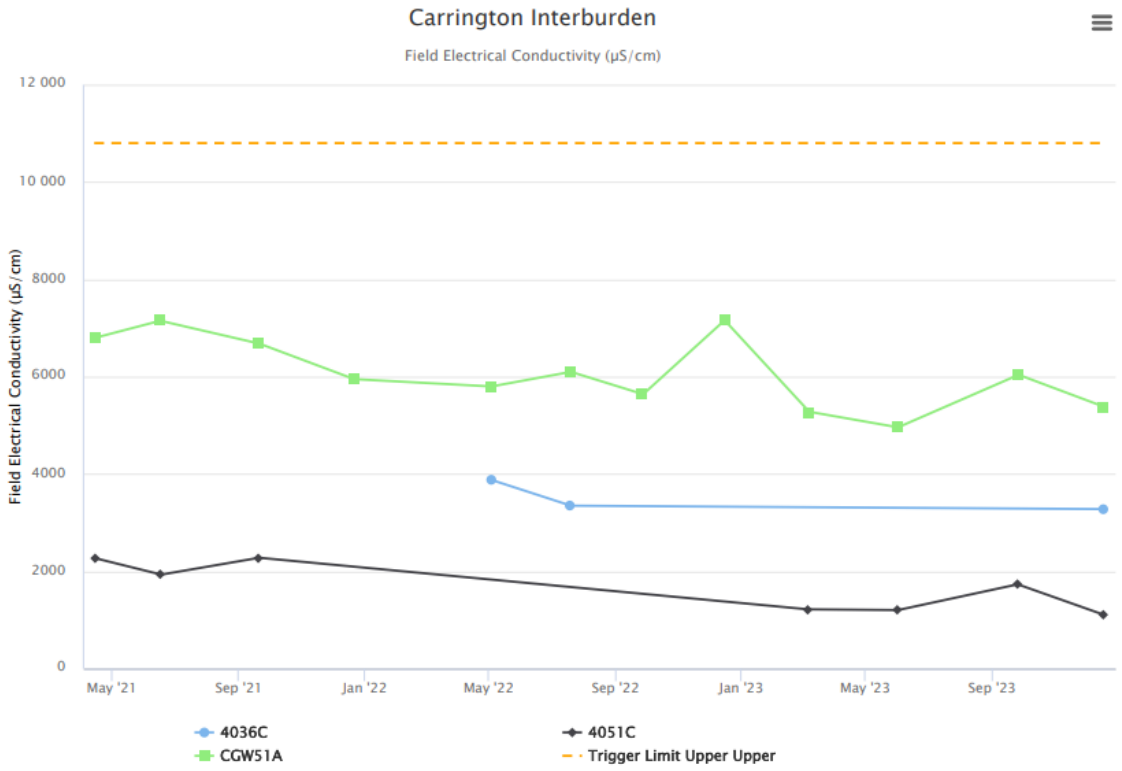

Figure 30 - Carrington Interburden Electrical Conductivity Trend – Q4 2023

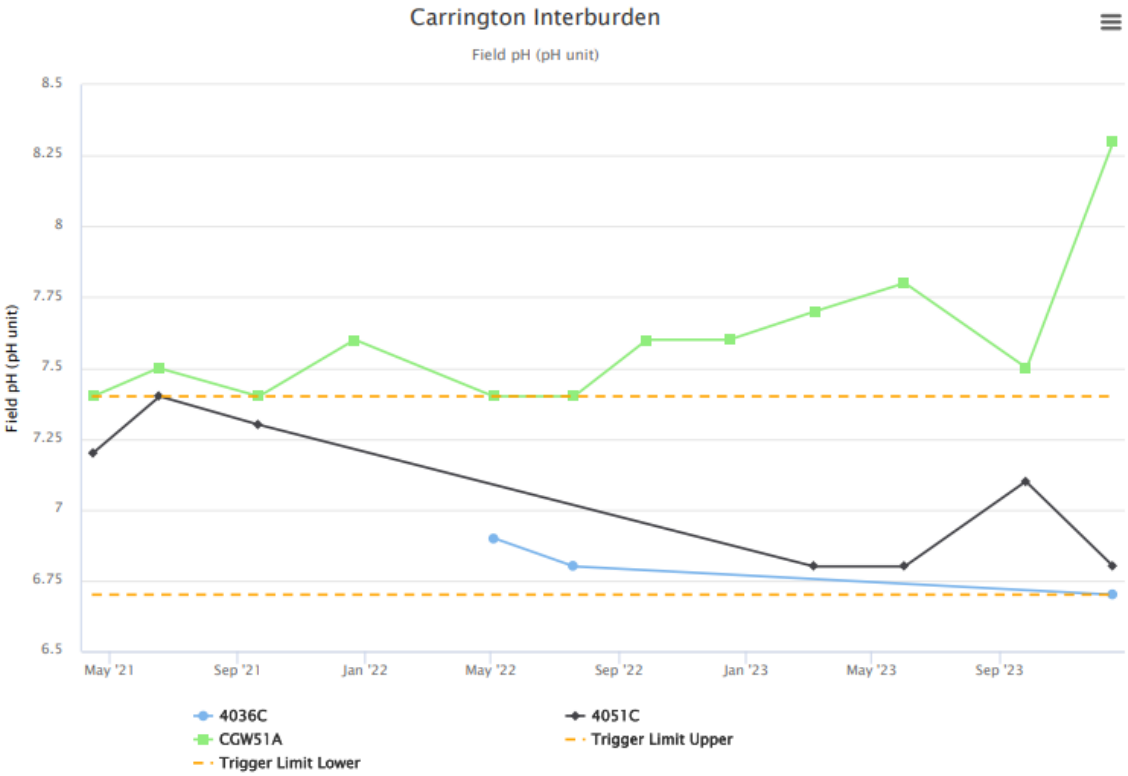

Figure 31 - Carrington Interburden Field pH Trend – Q4 2023

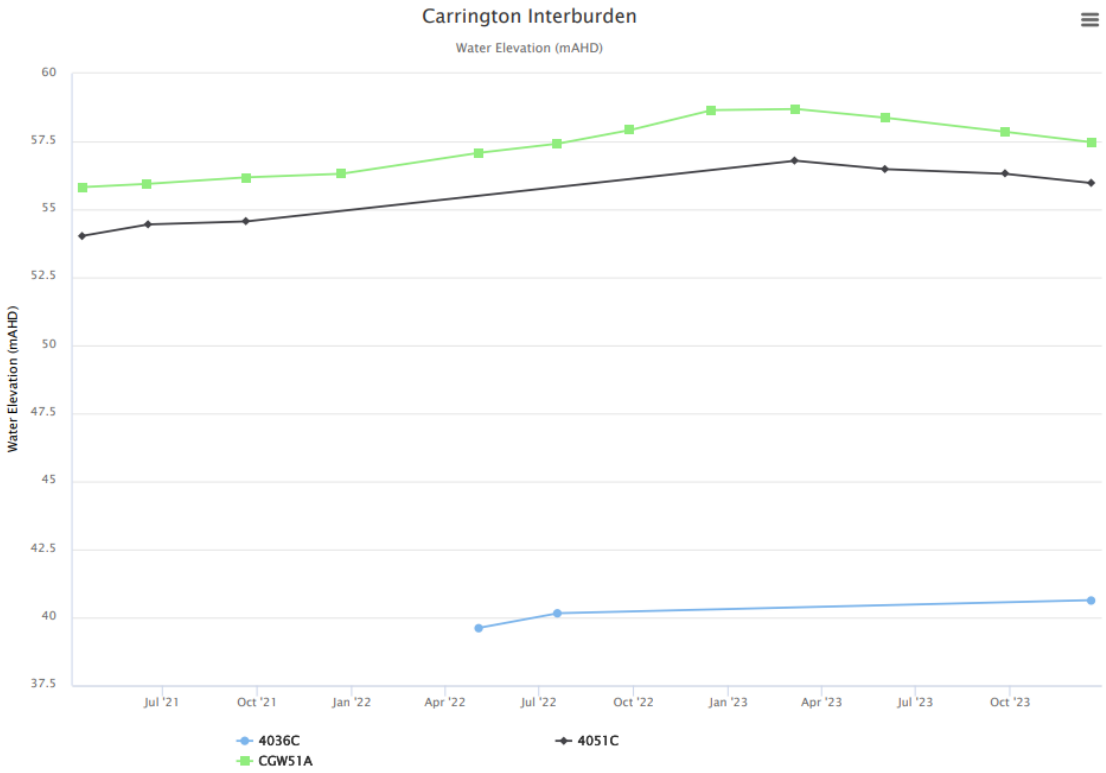

Figure 32 - Carrington Interburden Water Elevation Trend – Q4 2023

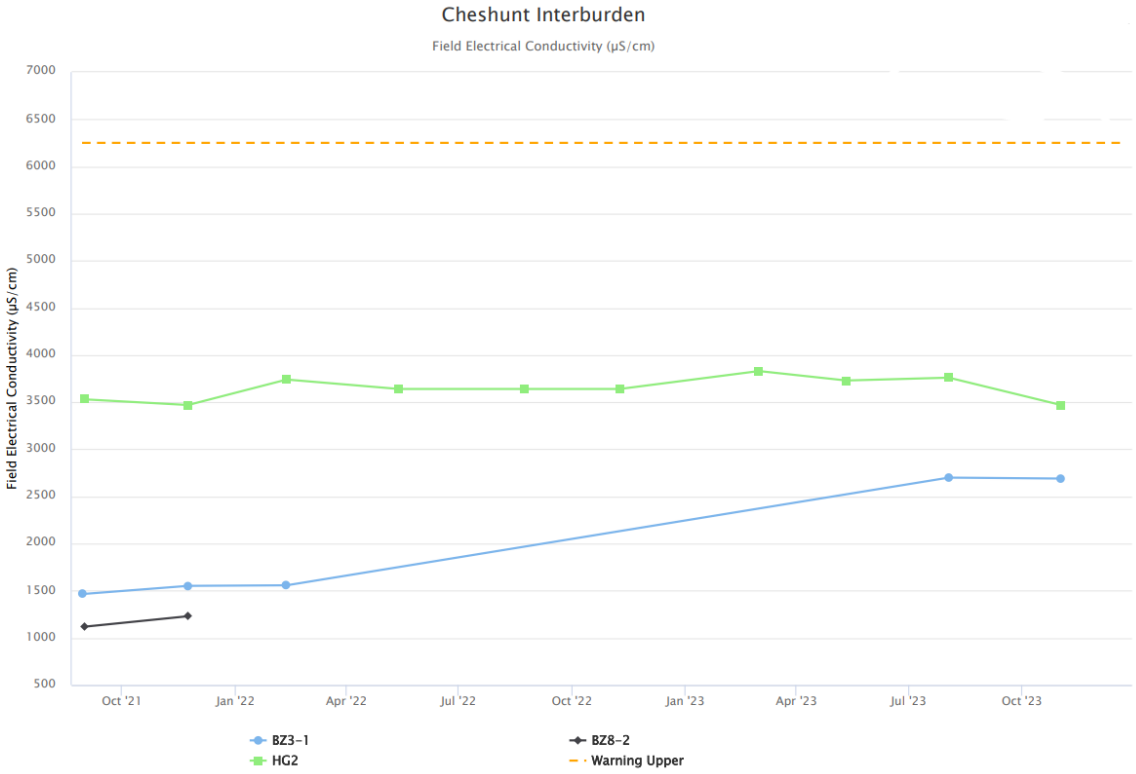

Figure 33 - Cheshunt Interburden Electrical Conductivity Trend – Q4 2023

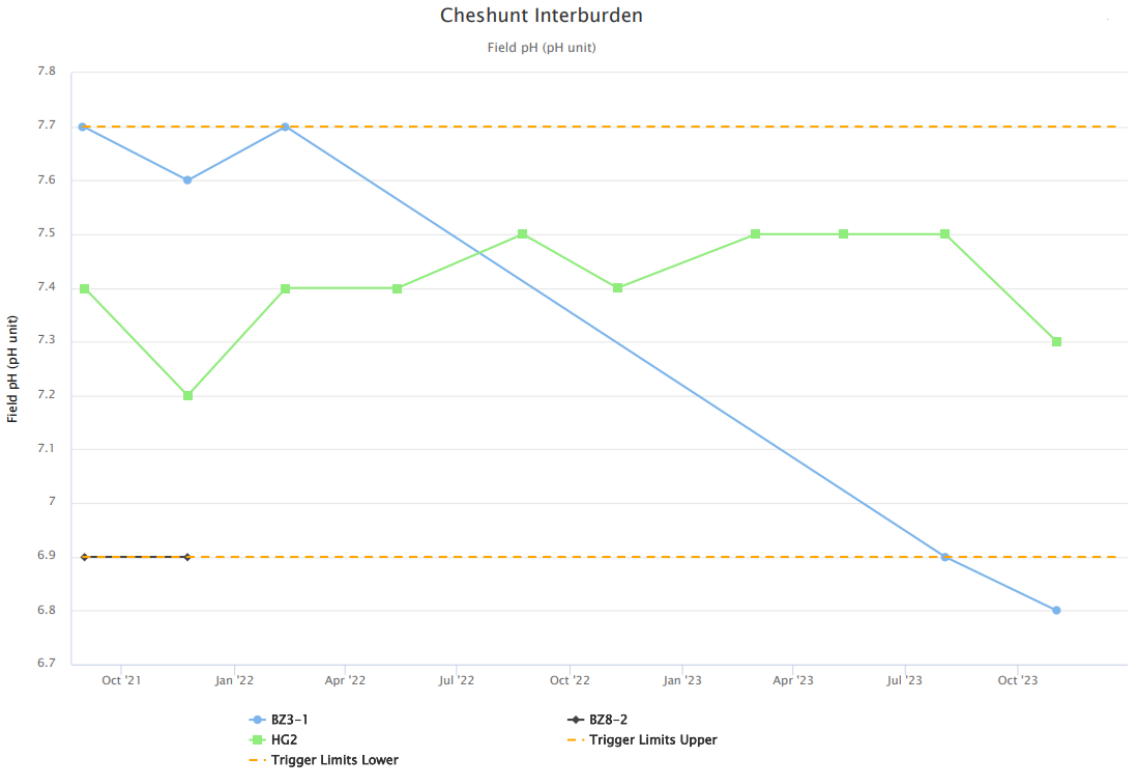

Figure 34 - Cheshunt Interburden Field pH Trend – Q4 2023

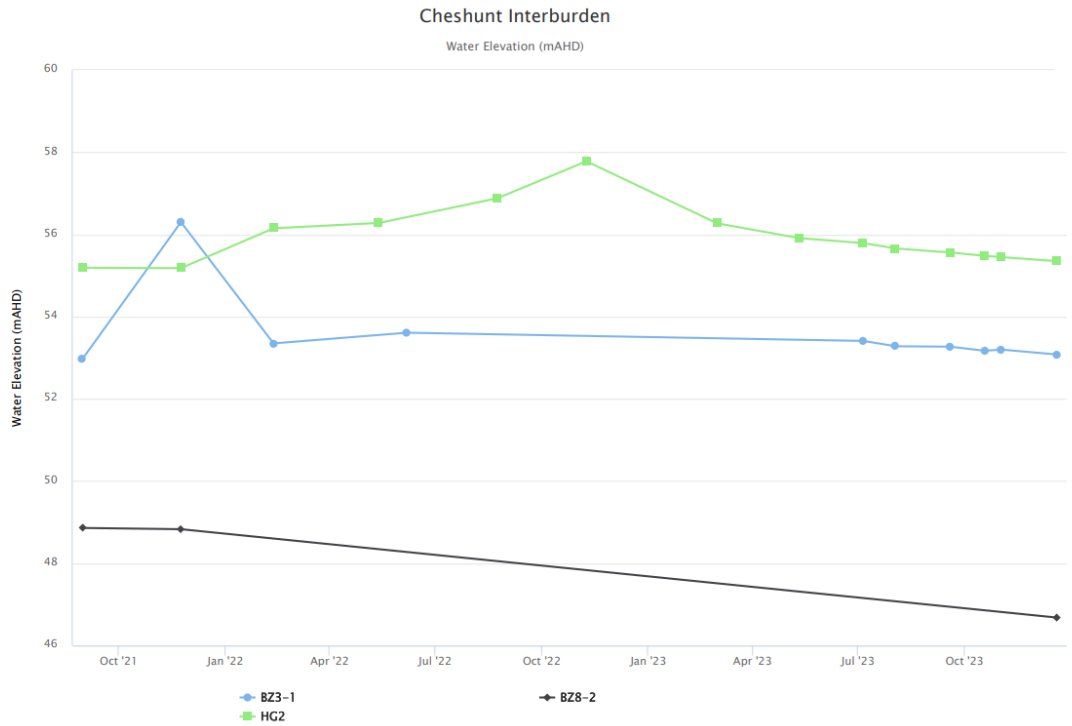

Figure 35 - Cheshunt Interburden Water Elevation Trend – Q4 2023

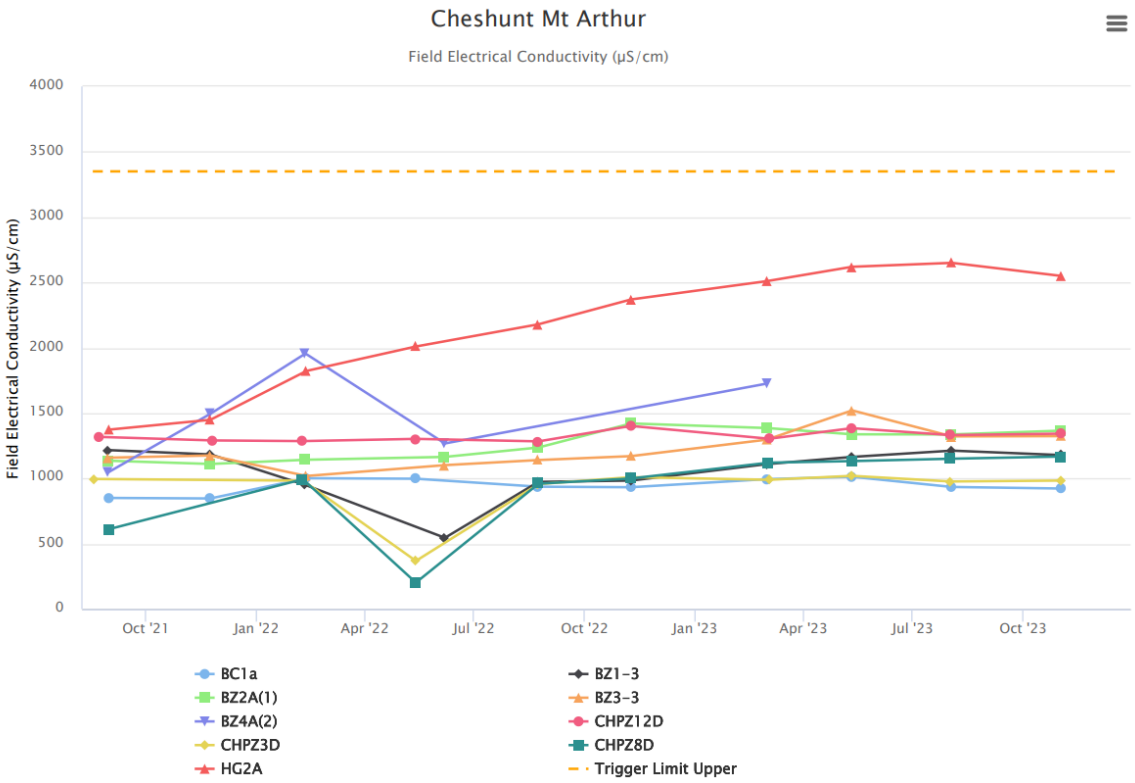

Figure 36 – Cheshunt Mt Arthur Electrical Conductivity Trend – Q4 2023

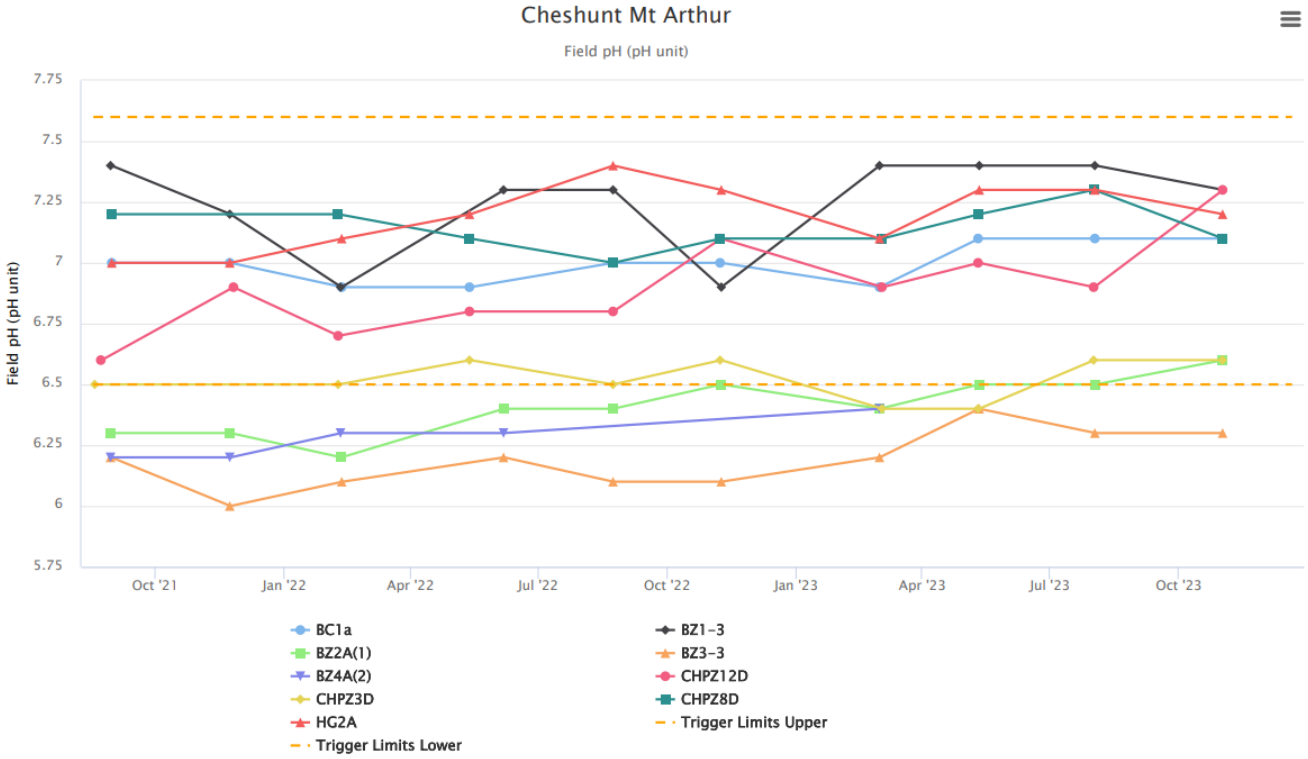

Figure - 37 Cheshunt Mt Arthur Field pH Trend – Q4 2023

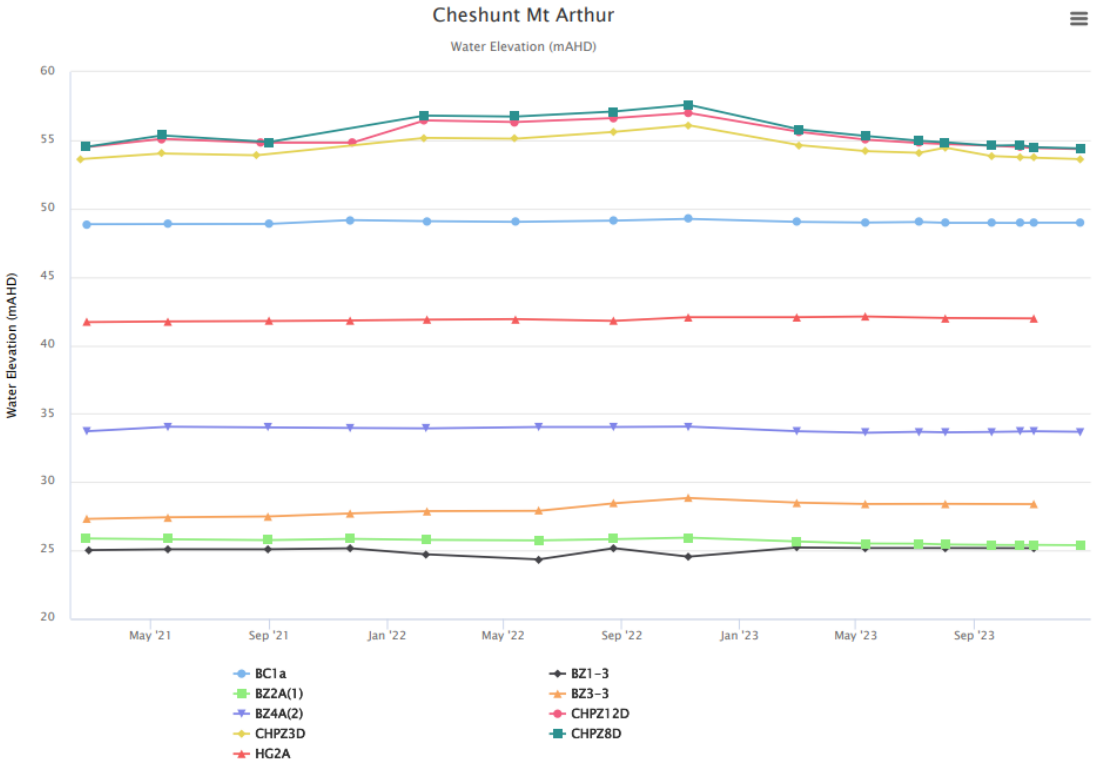

Figure 38 - Cheshunt Mt Arthur Water Elevation Trend – Q4 2023

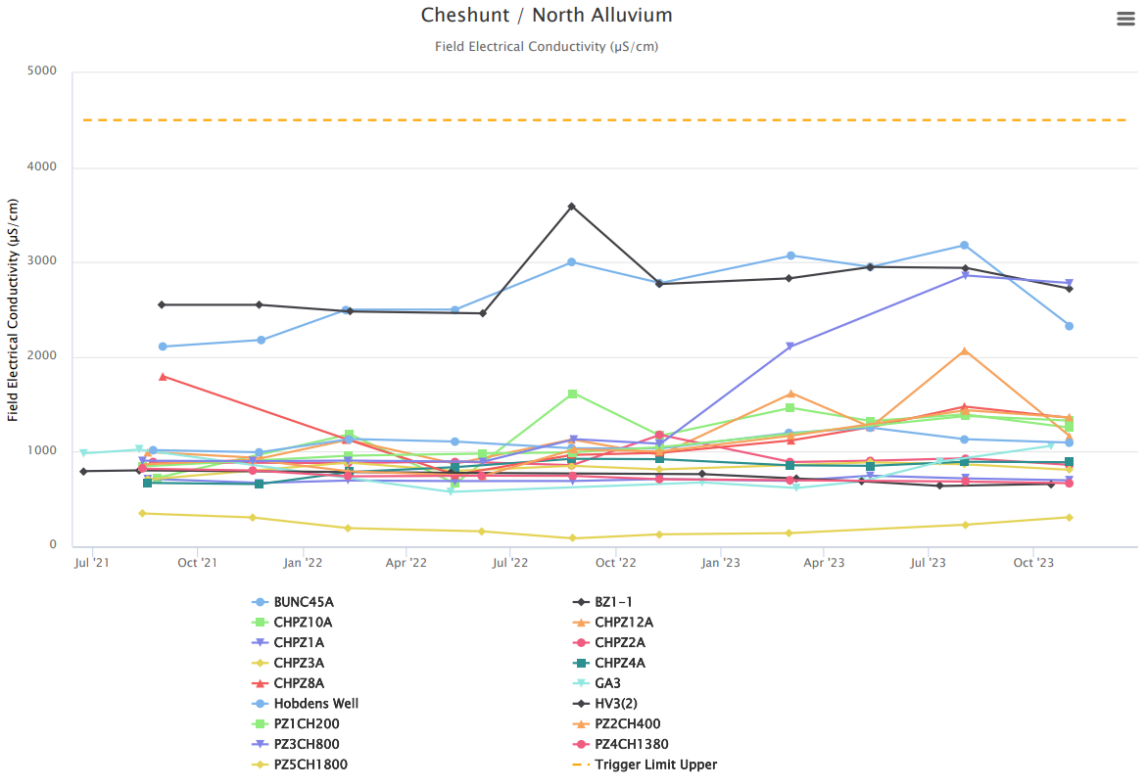

Figure 39 - Cheshunt North Pit Alluvium Electrical Conductivity Trend – Q4 2023

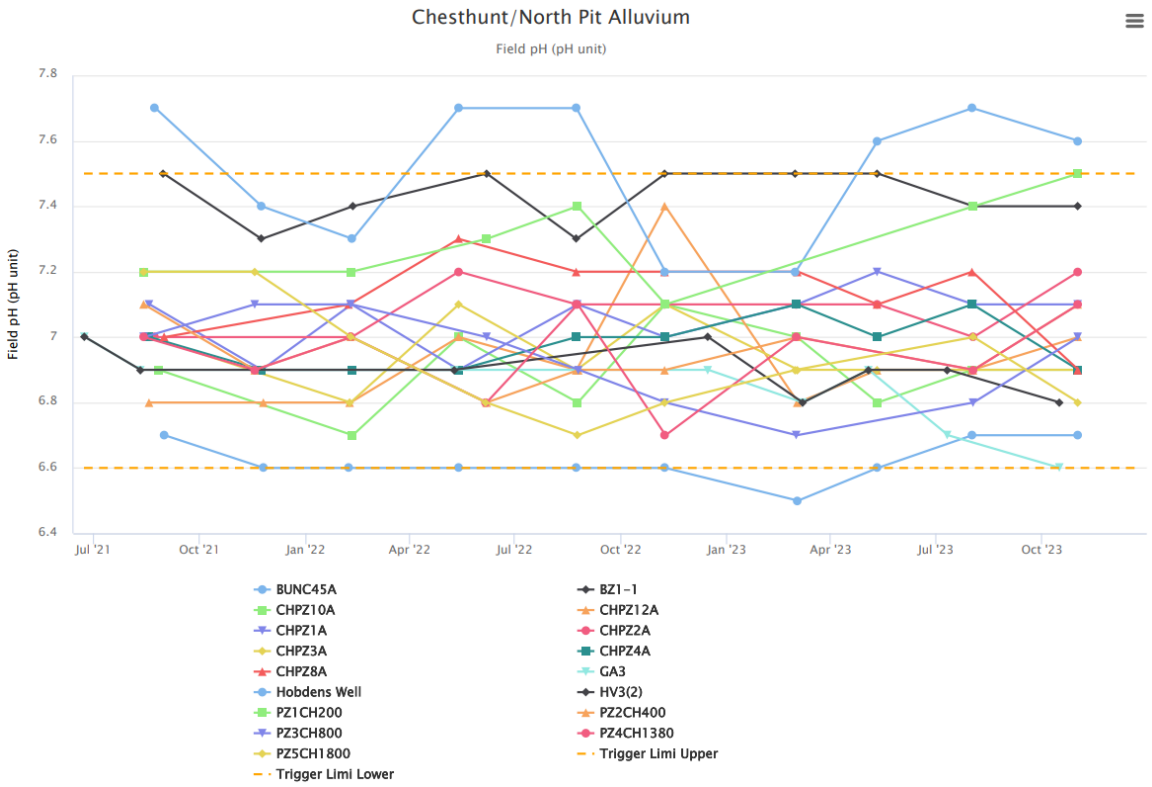

Figure 40 - Cheshunt North Alluvium Field pH Trend – Q4 2023

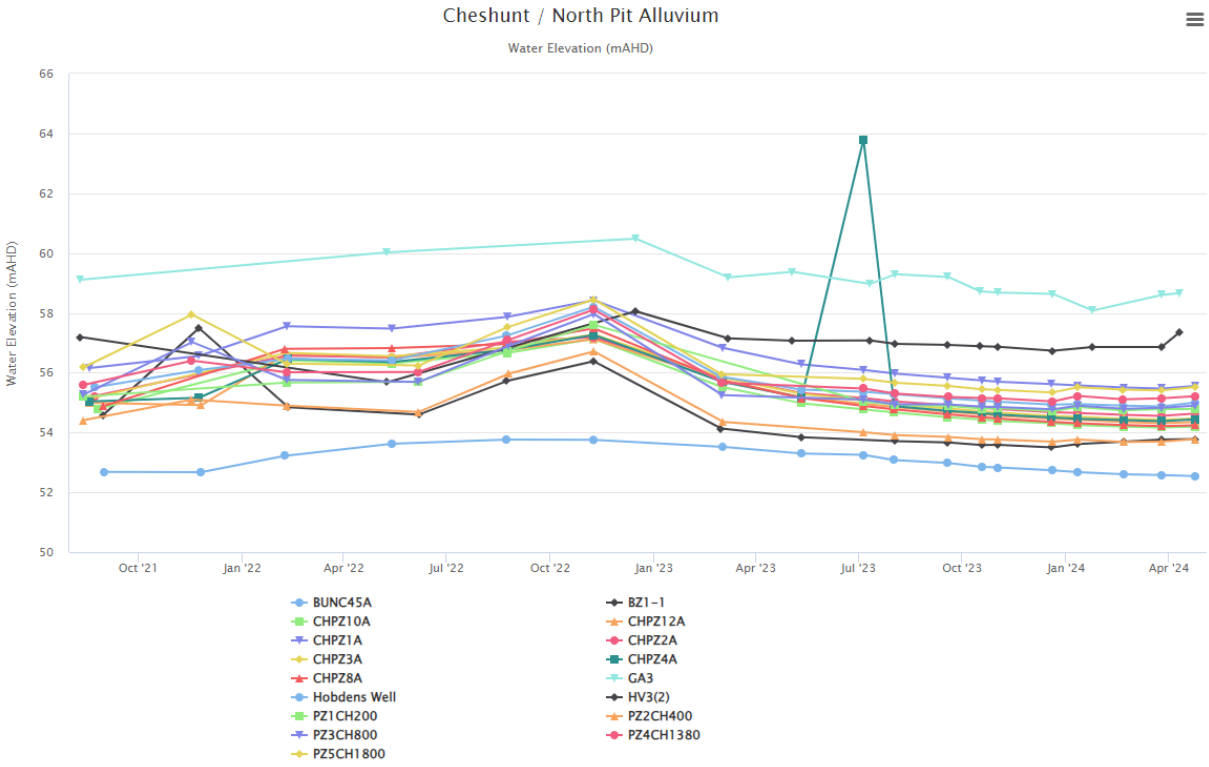

Figure 41 - Cheshunt North Pit Alluvium Water Elevation Trend – Q4 2023

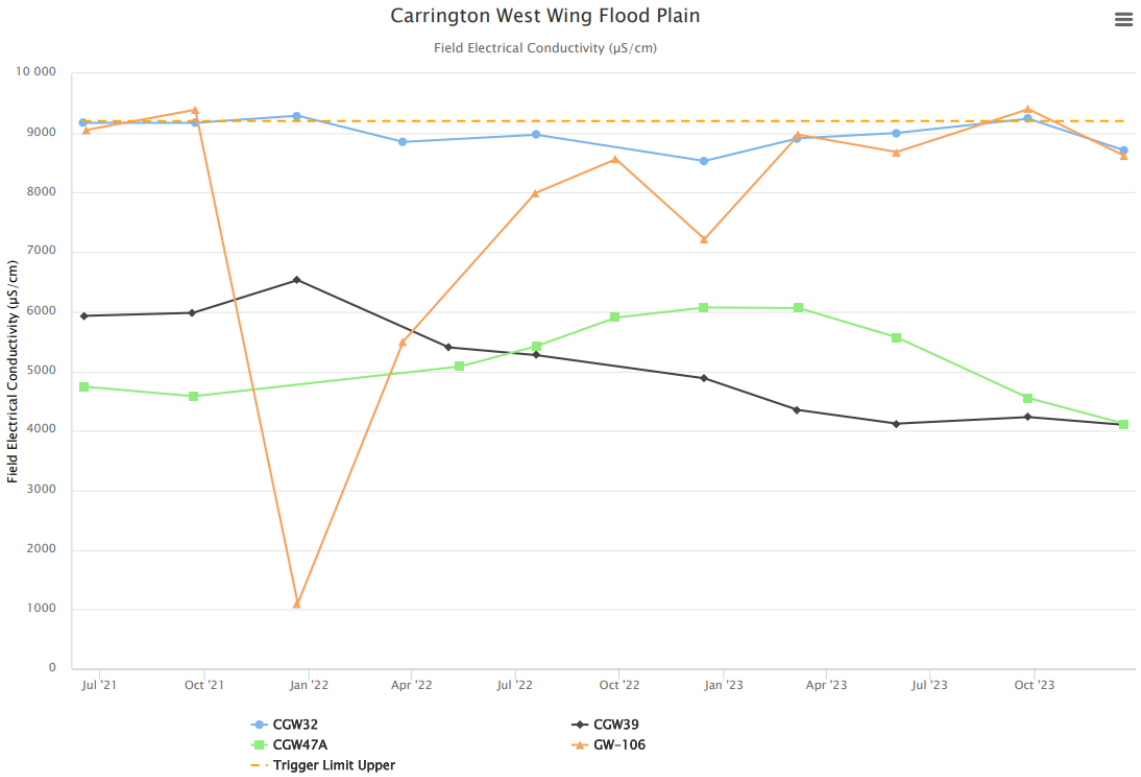

Figure 42 - Carrington West Wing Flood Plain Electrical Conductivity Trend – Q4 2023

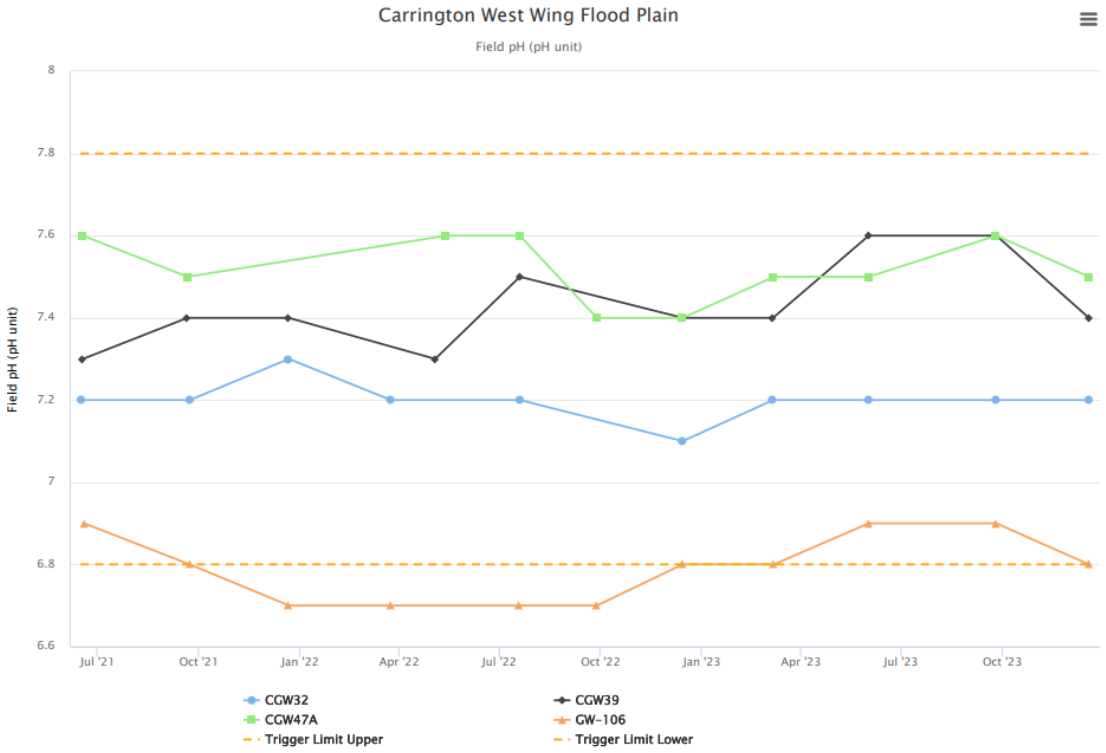

Figure 43 - Carrington West Wing Flood Plain pH Trend – Q4 2023

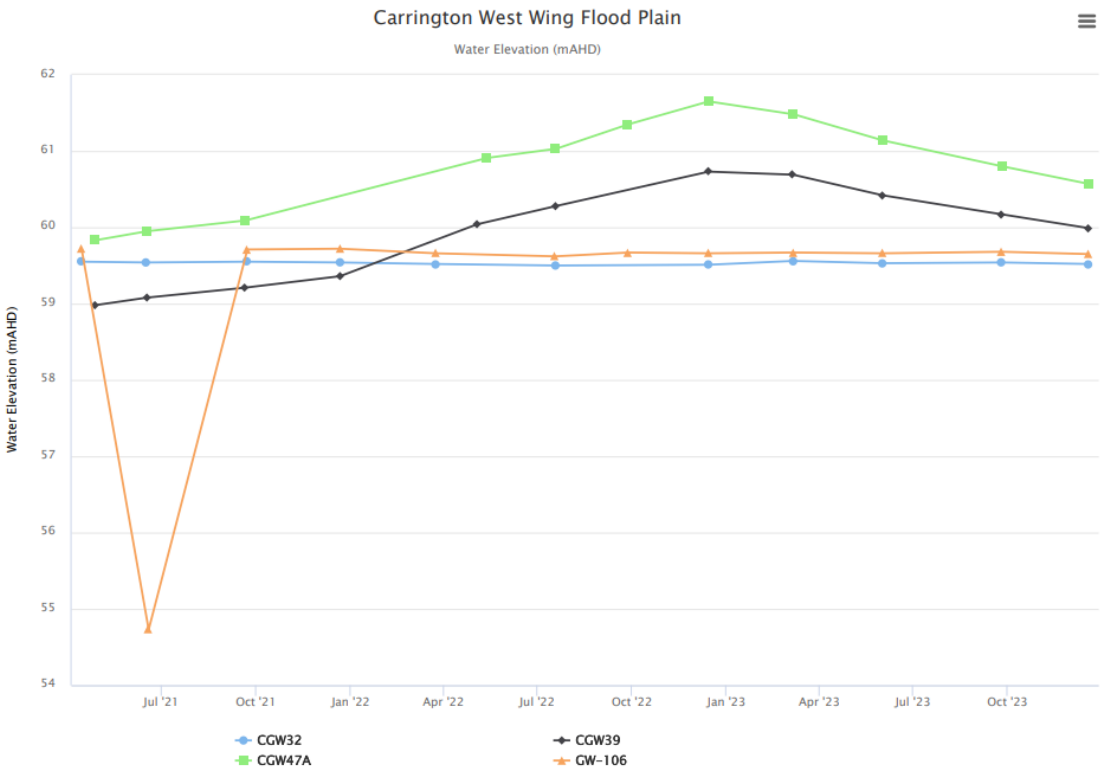

Figure 44 - Carrington West Wing Flood Plain Water Elevation Trend – Q4 2023

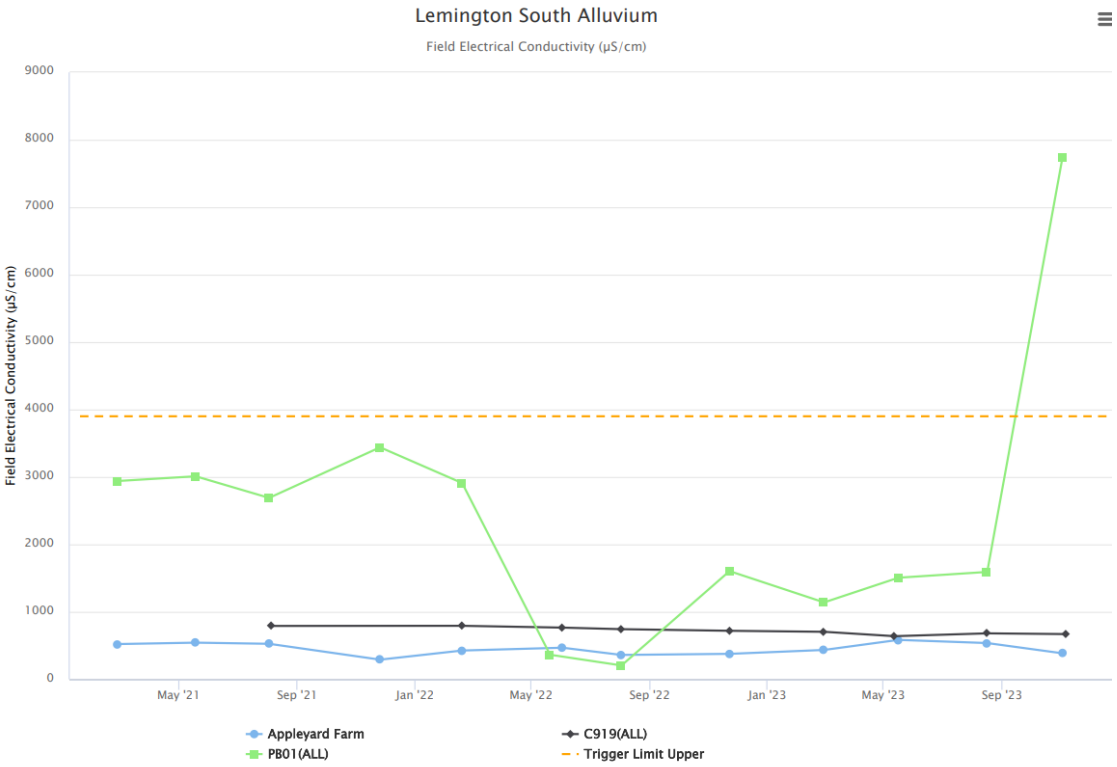

Figure 45 - Lemington South Alluvium Electrical Conductivity Trend – Q4 2023

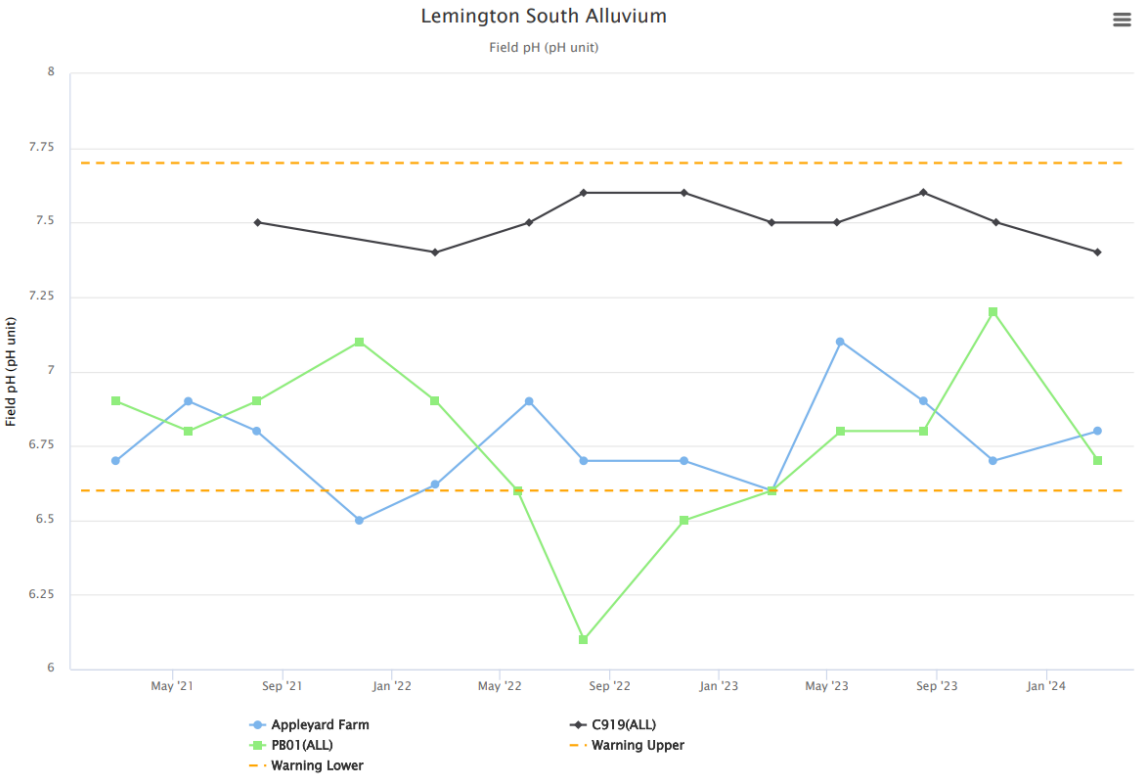

Figure 46 - Lemington South Alluvium Field pH Trend – Q4 2023

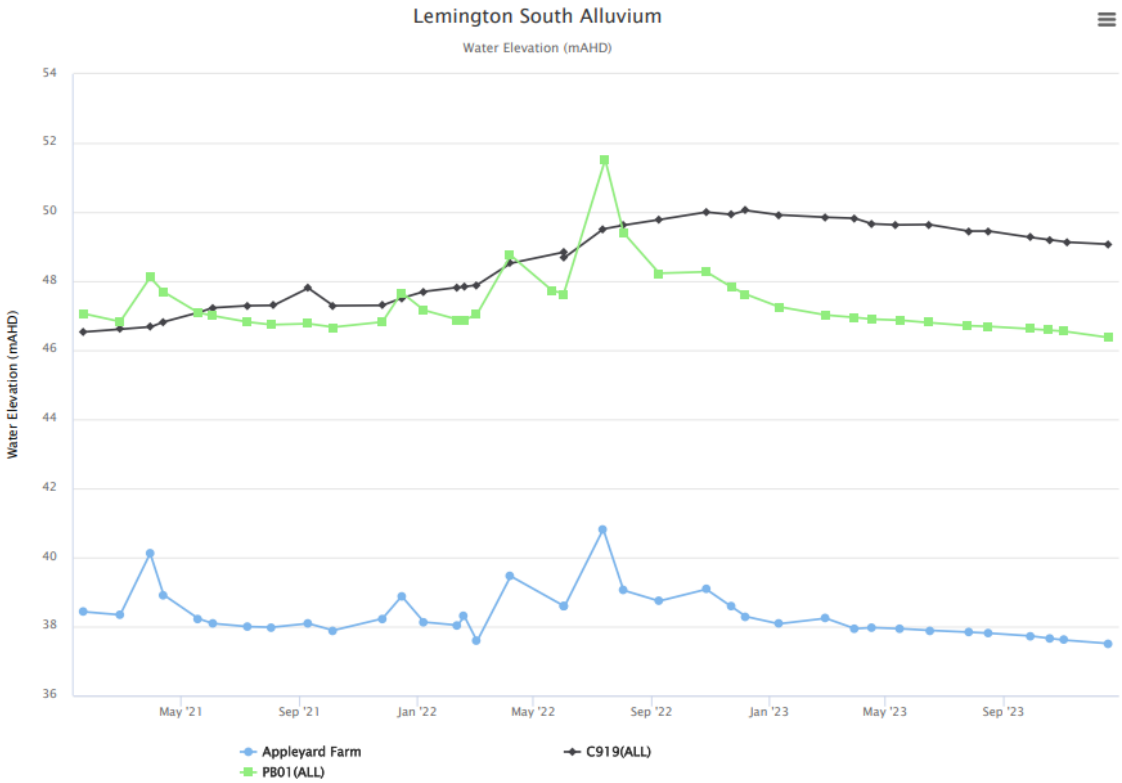

Figure 47 - Lemington South Alluvium Water Elevation Trend – Q4 2023

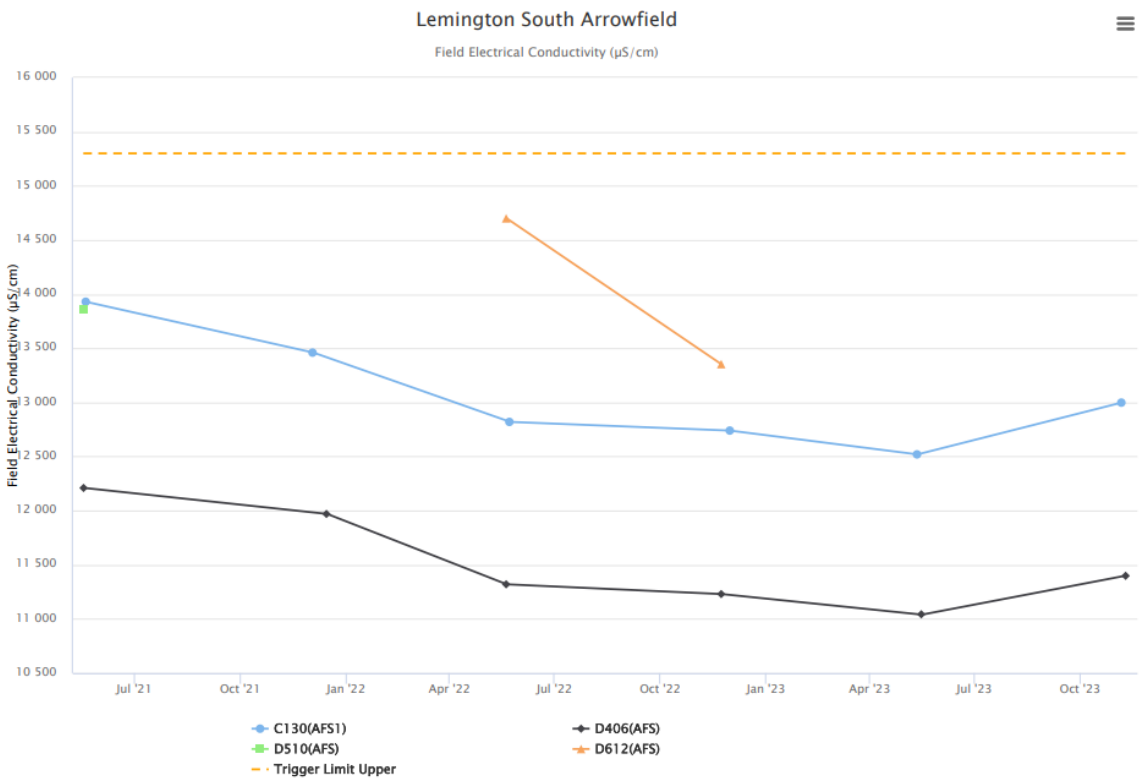

Figure 48 - Lemington South Arrowfield Electrical Conductivity Trend – Q4 2023

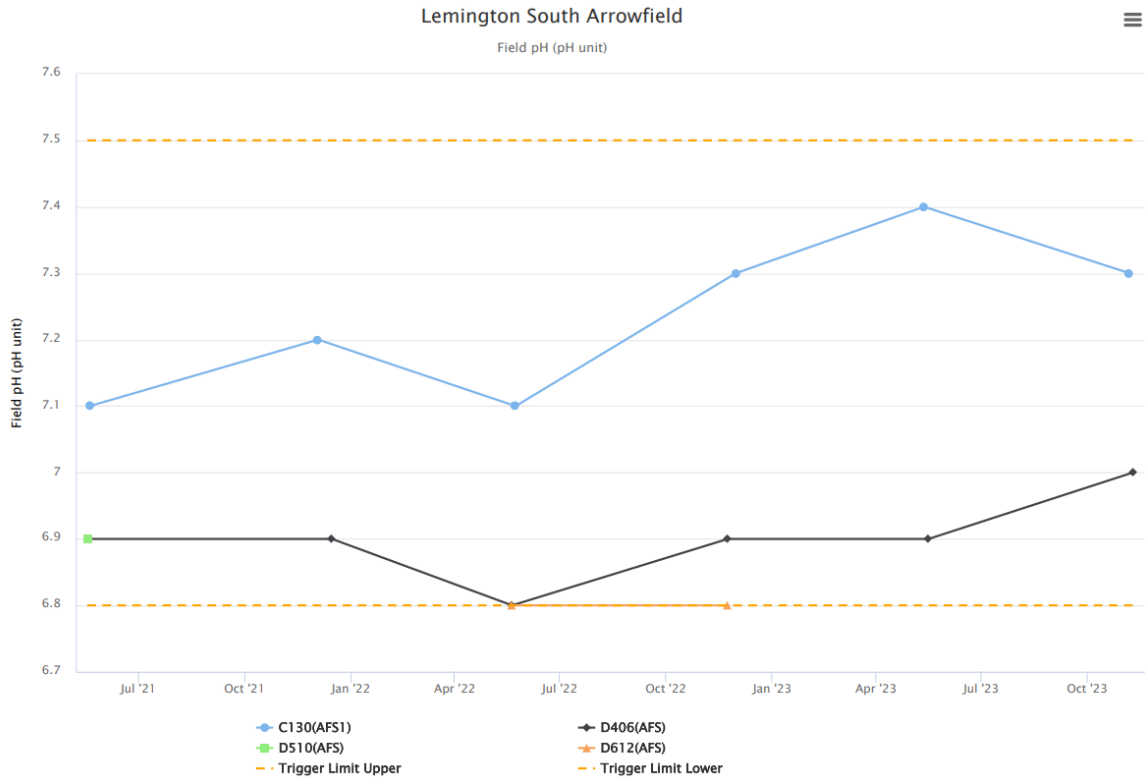

Figure 49 - Lemington South Arrowfield Field pH Trend – Q4 2023

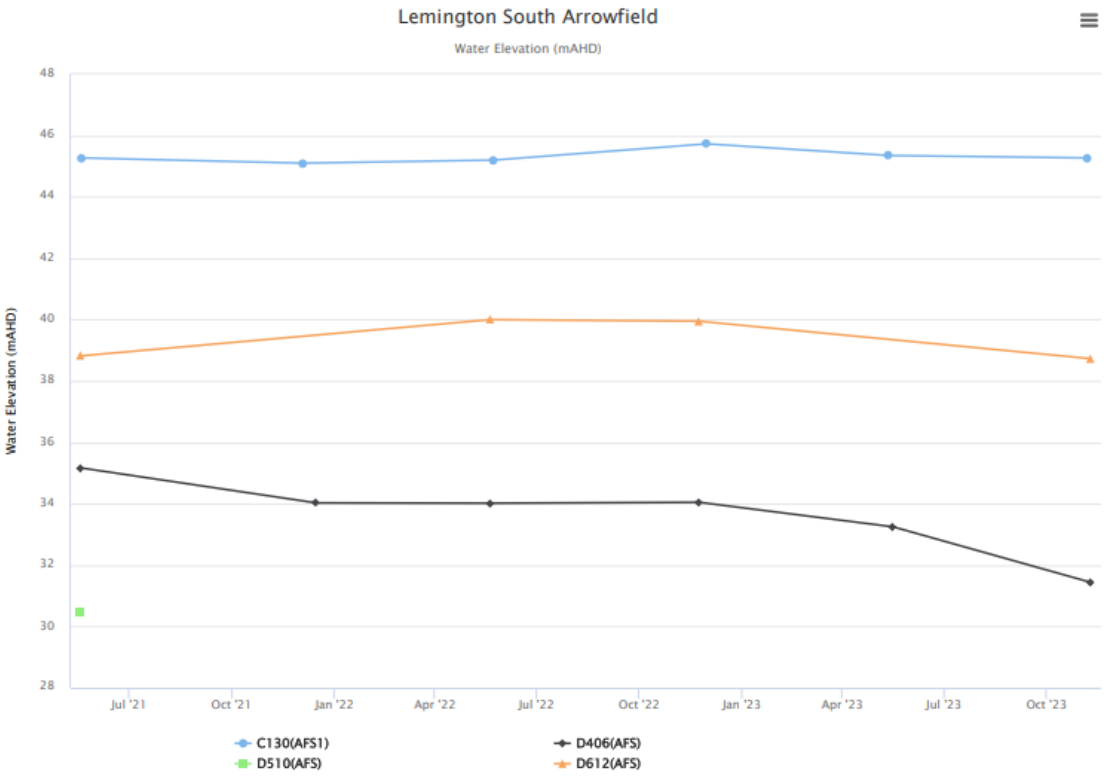

Figure 50 – Lemington South Arrowfield Water Elevation Trend – Q4 2023

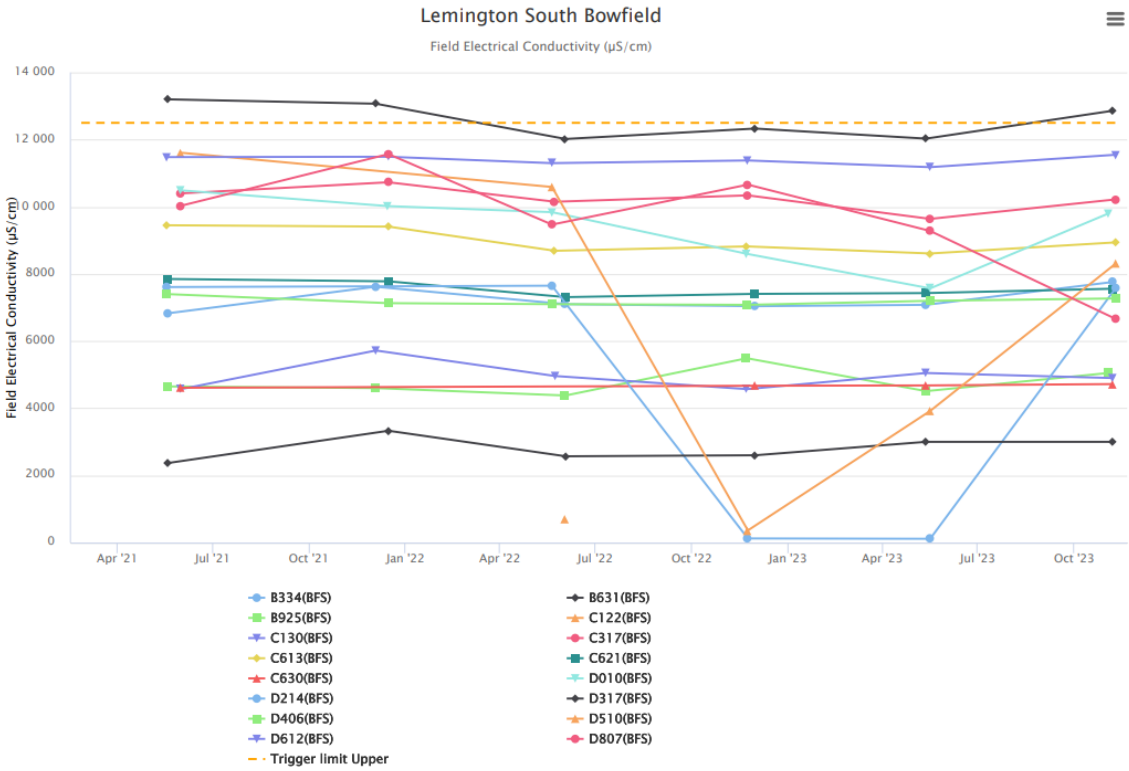

Figure 51 - Lemington South Bowfield Electrical Conductivity Trend – Q4 2023

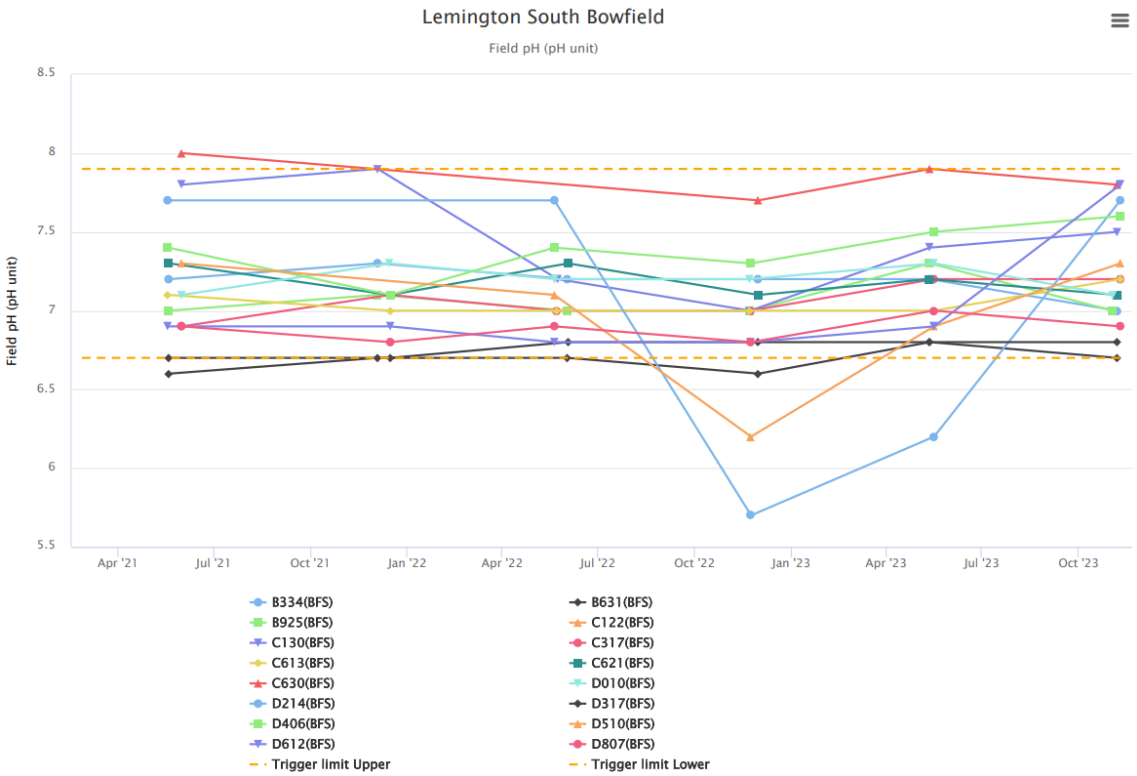

Figure 52 - Lemington South Bowfield pH Trend – Q4 2023

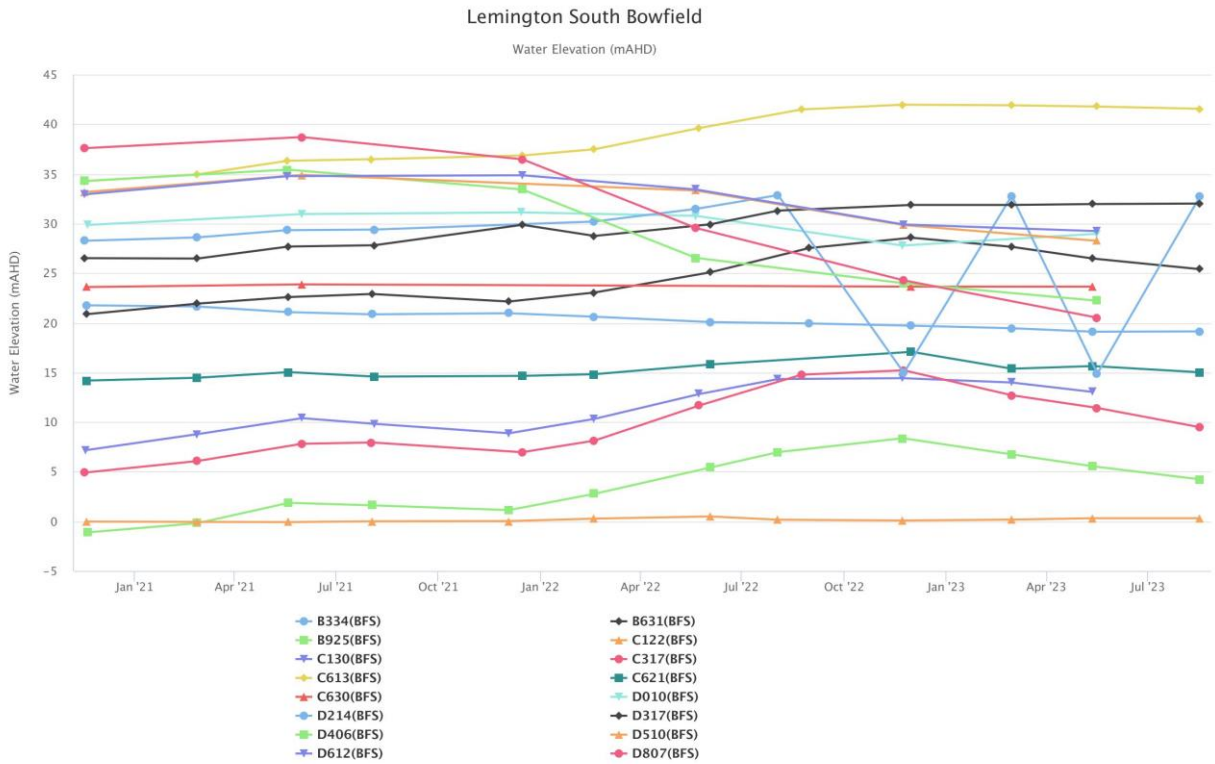

Figure 53 - Lemington South Bowfield Water Elevation Trend – Q4 2023

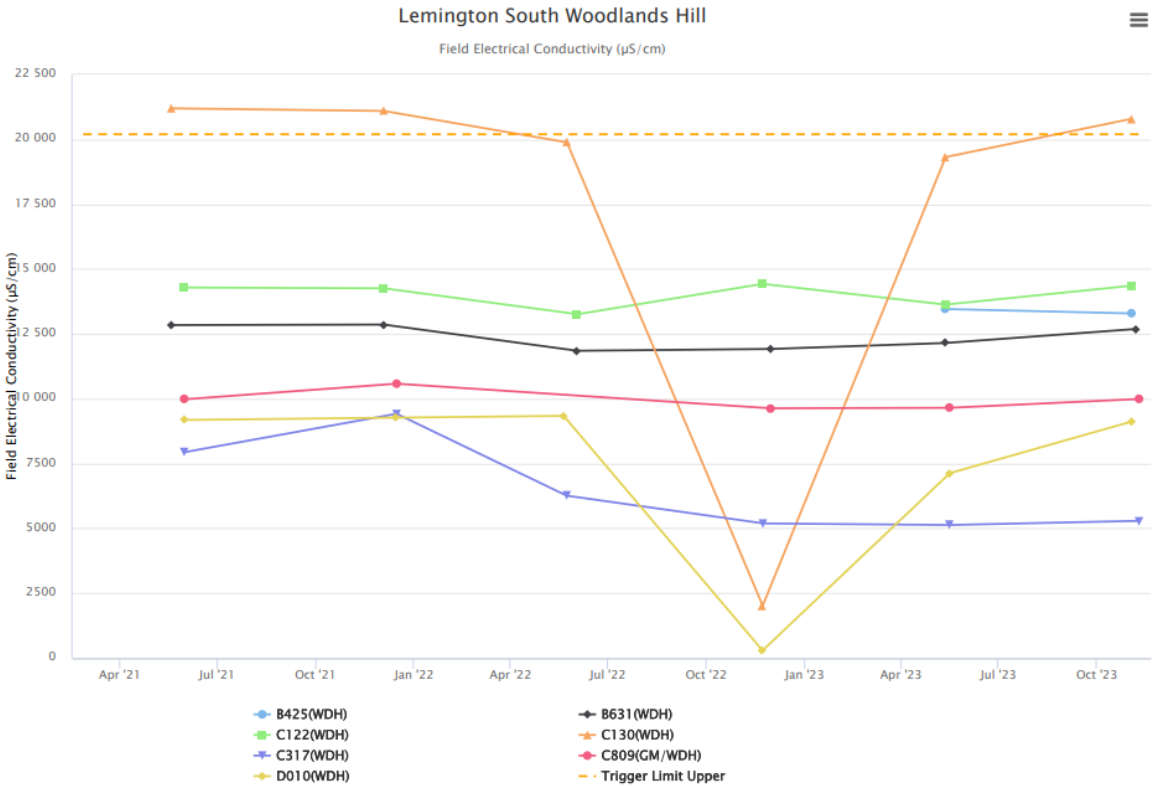

Figure 54 - Lemington South Woodlands Hill Electrical Conductivity Trend – Q4 2023

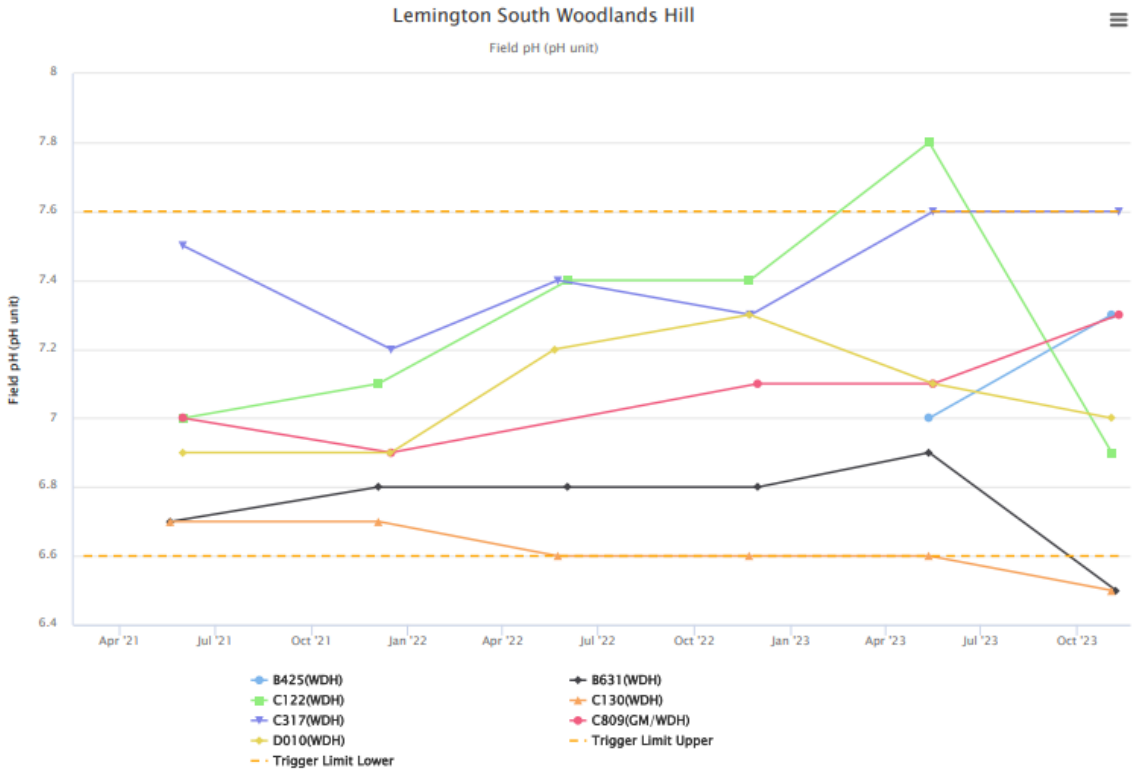

Figure 55 - Lemington South Woodlands Hill Field pH Trend – Q4 2023

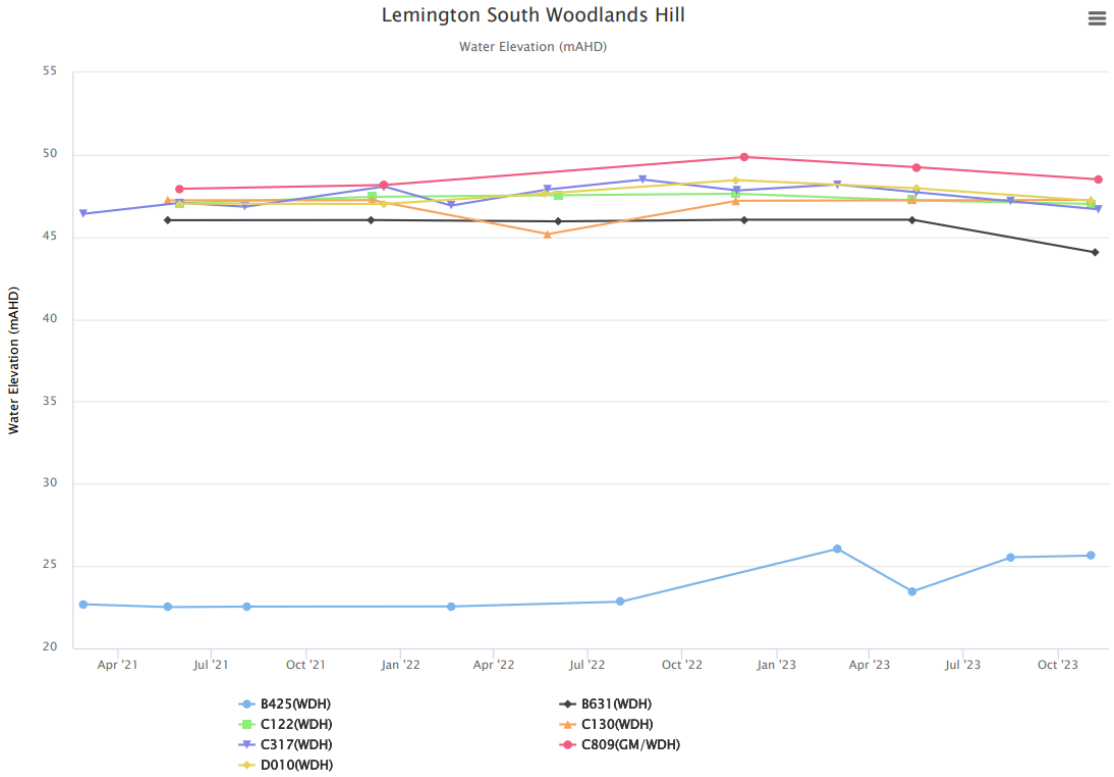

Figure 56 - Lemington South Woodlands Hill Water Elevation Trend – Q4 2023

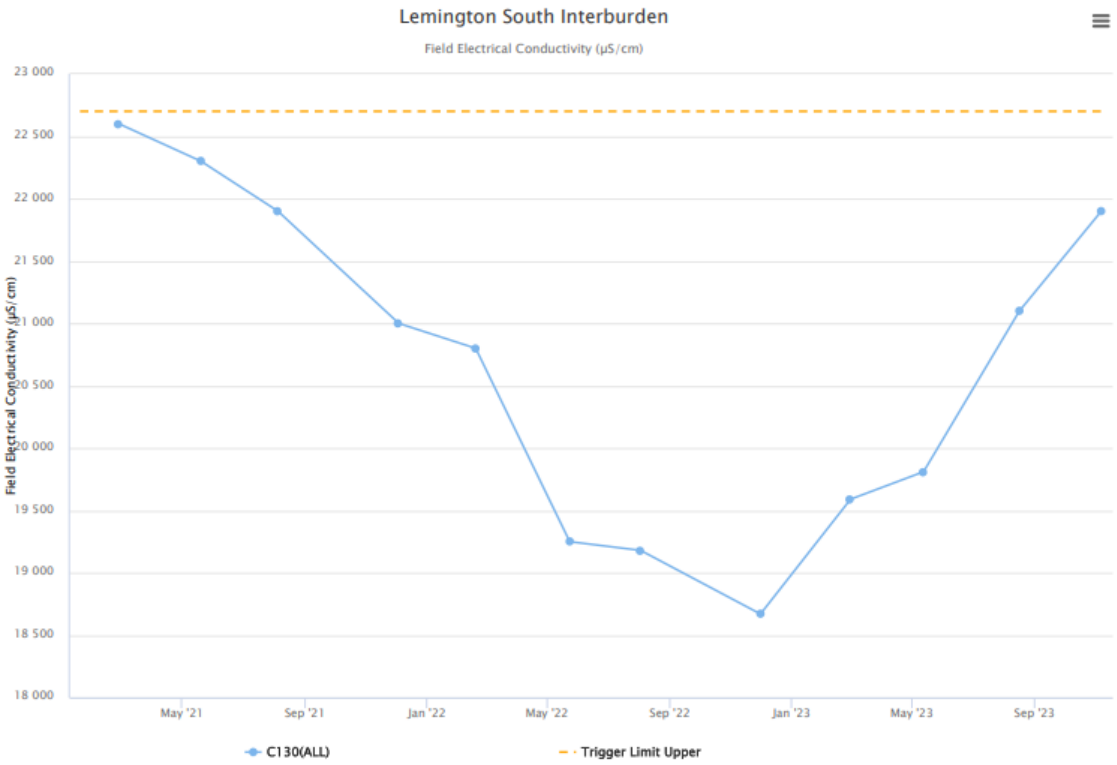

Figure 57 - Lemington South Interburden Electrical Conductivity Trend – Q4 2023

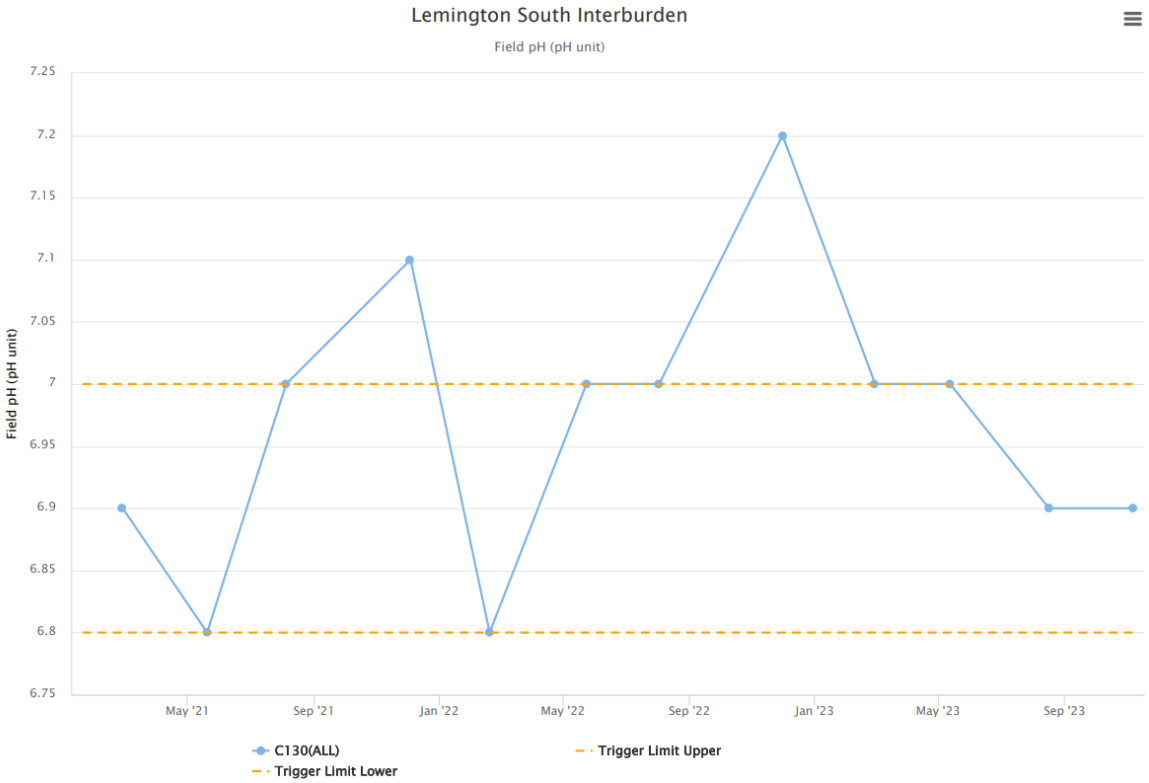

Figure 58 - Lemington South Interburden Field pH Trend – Q4 2023

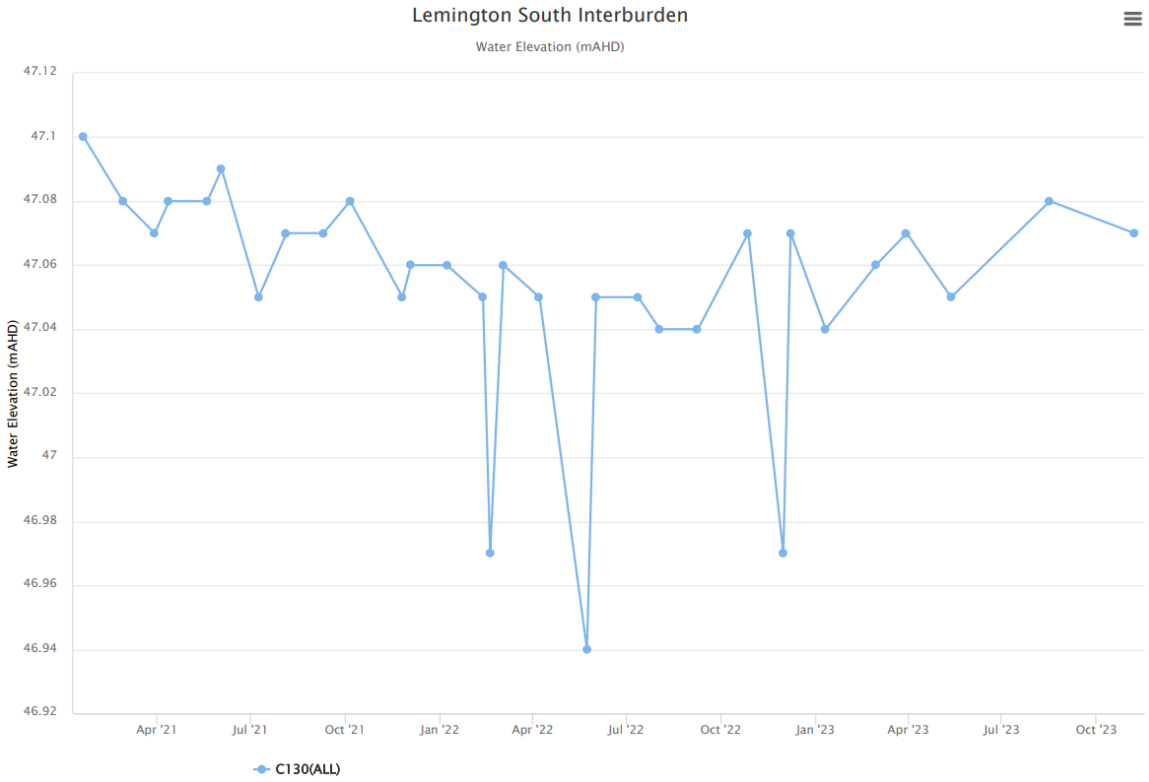

Figure 59 - Lemington South Interburden Water Elevation Trend – Q4 2023

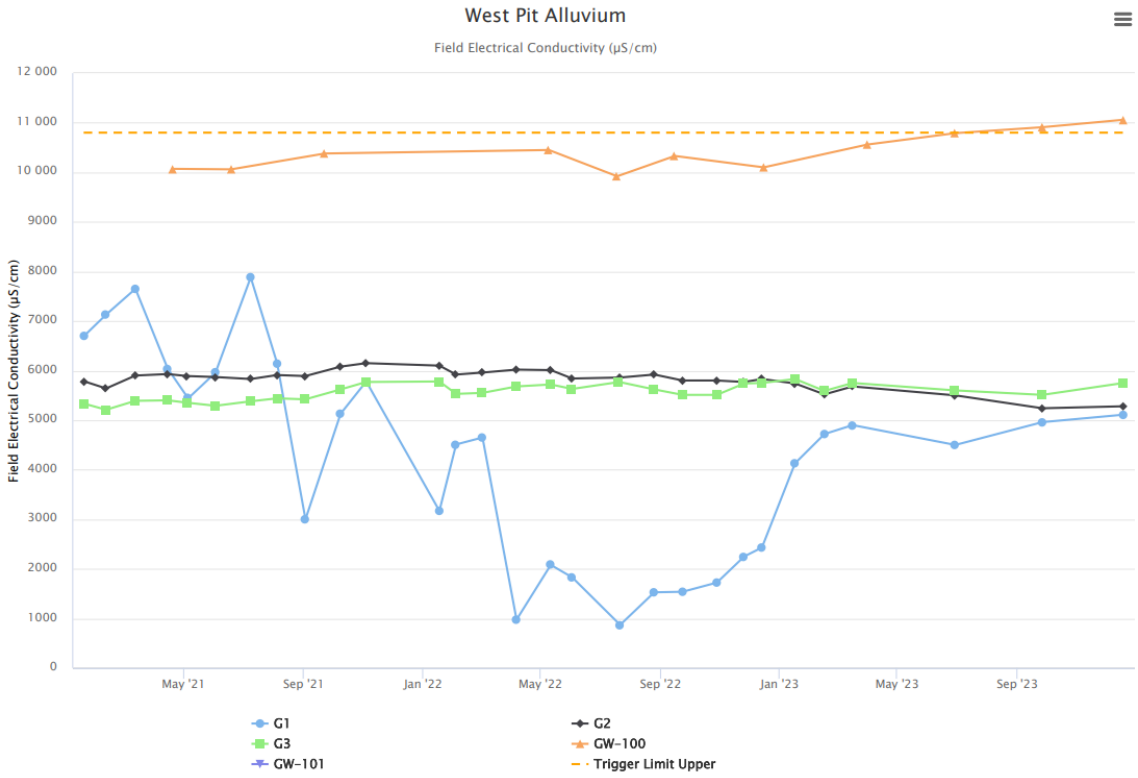

Figure 60 - West Pit Alluvium Electrical Conductivity Trend – Q4 2023

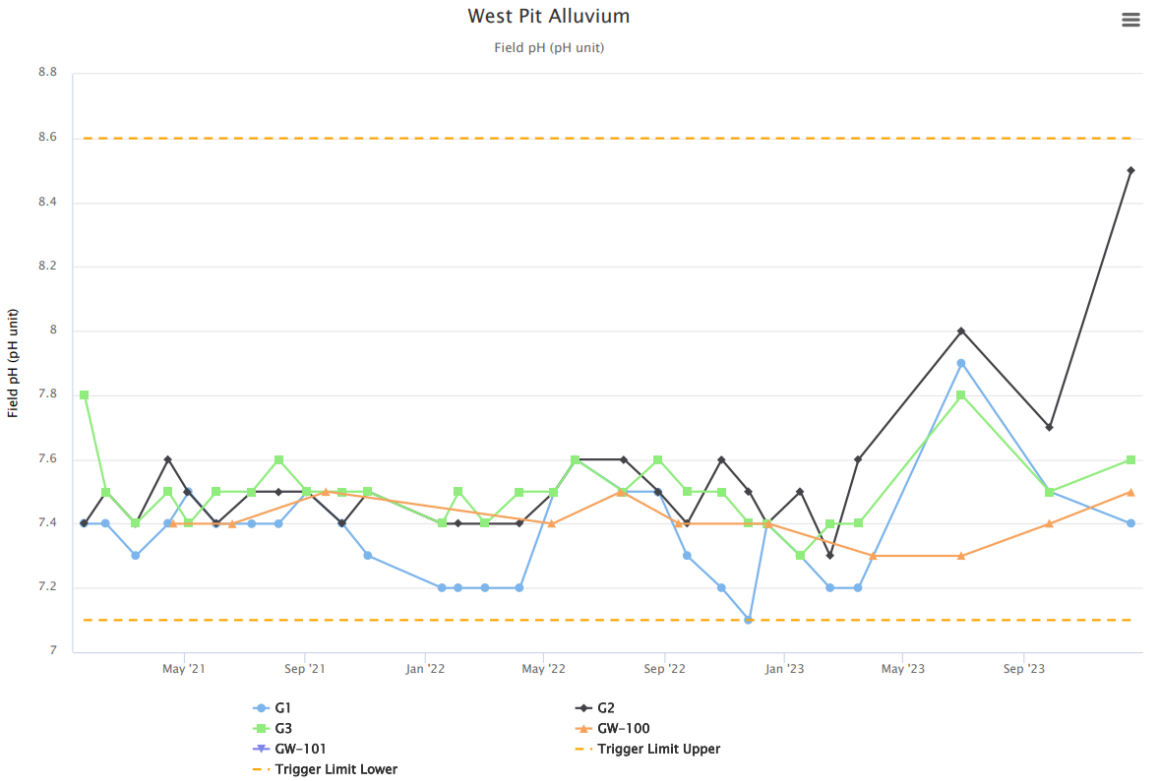

Figure 61 - West Pit Alluvium pH Trend – Q4 2023

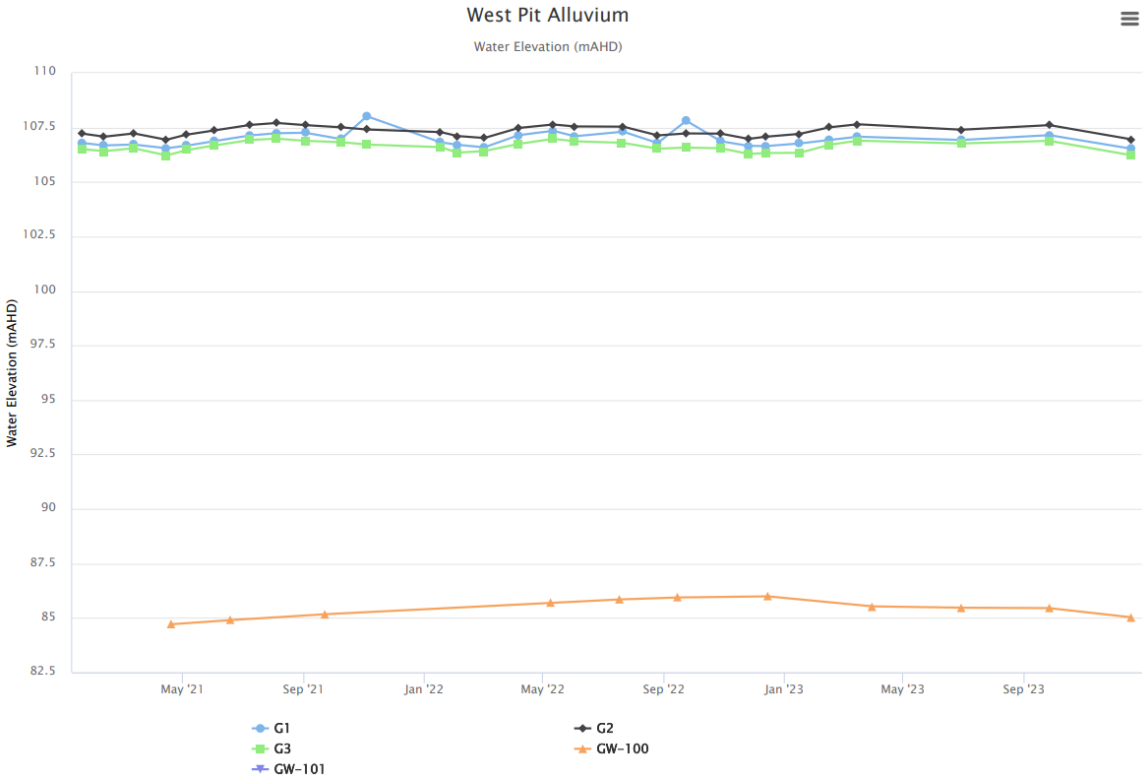

Figure 62 - West Pit Alluvium Water Elevation Trend – Q4 2023

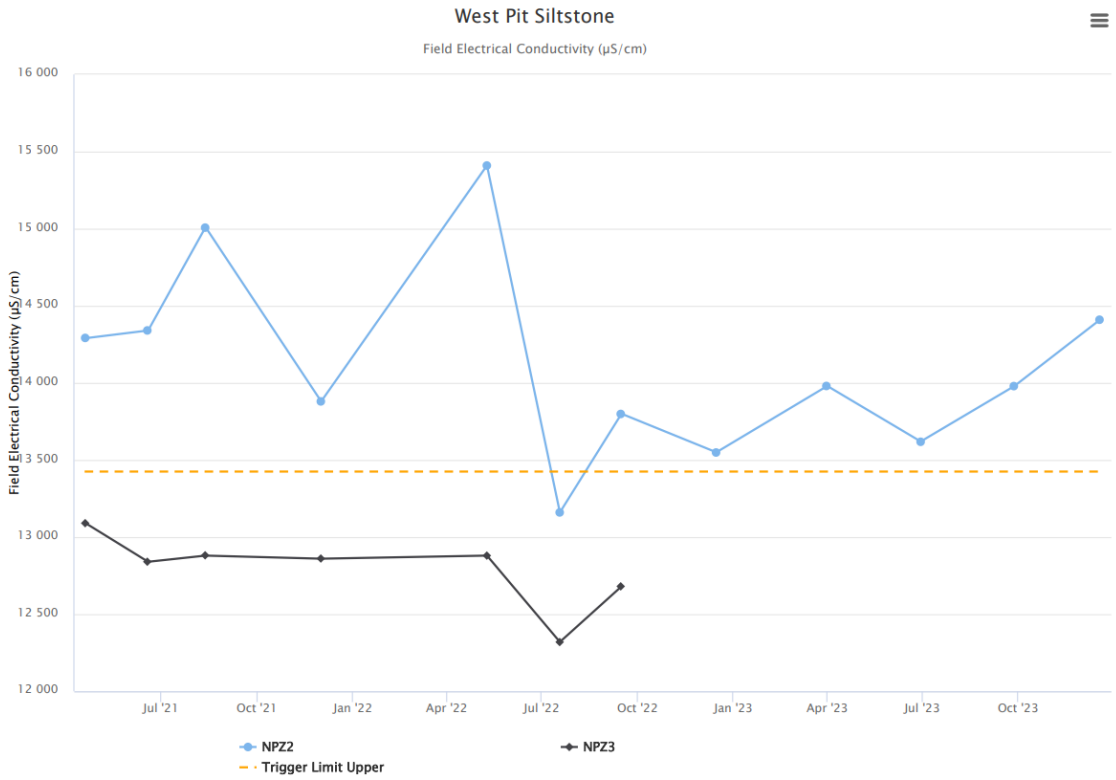

Figure 63 - West Pit Siltstone Electrical Conductivity Trend – Q4 2023

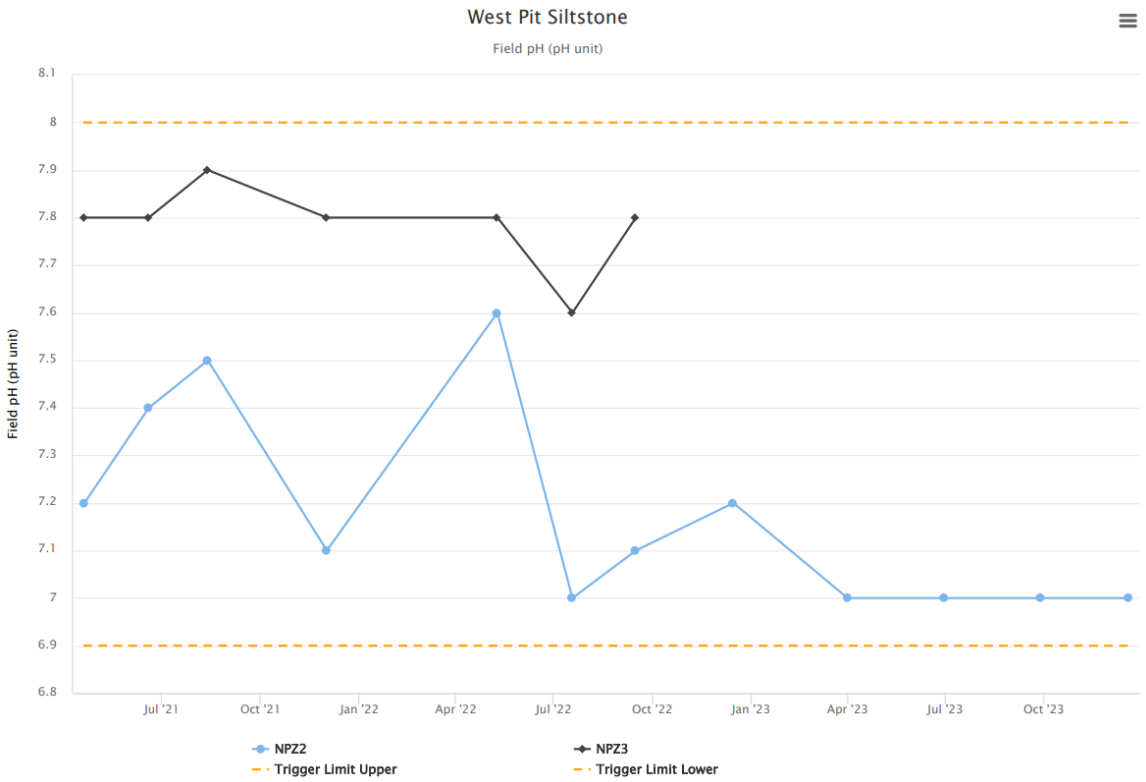

Figure 64 - West Pit Siltstone Field pH Trend – Q4 2023

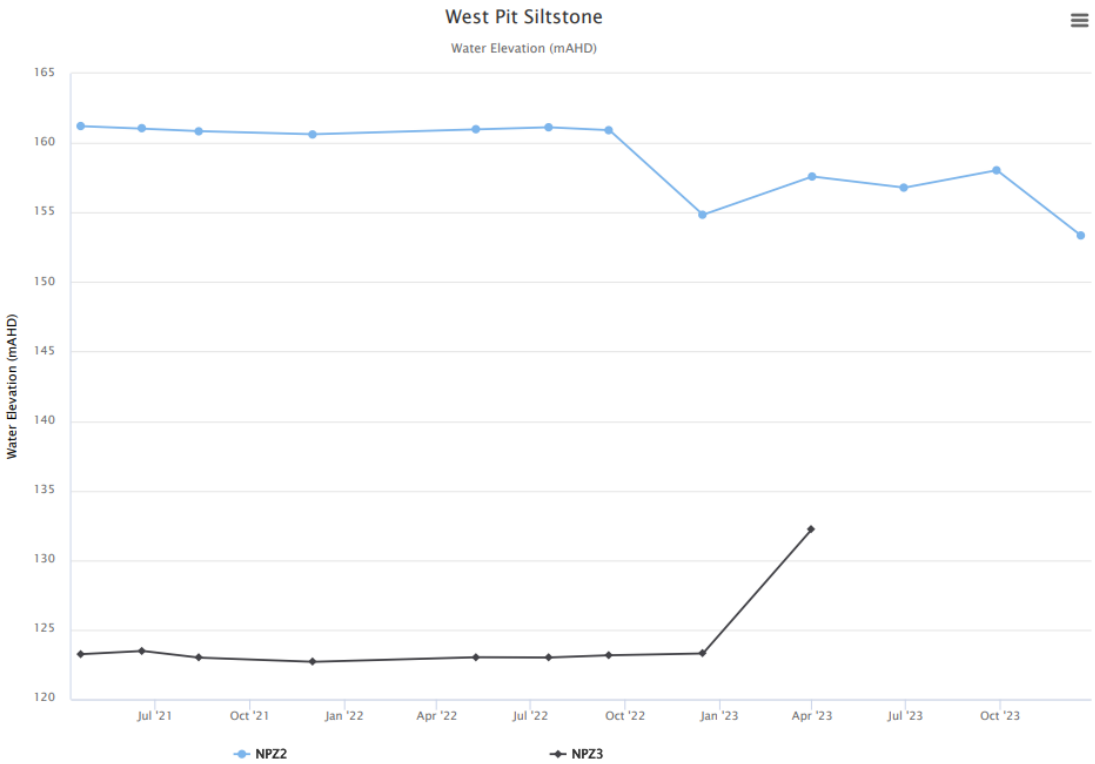

Figure 65 - West Pit Siltstone Water Elevation Trend – Q4 2023

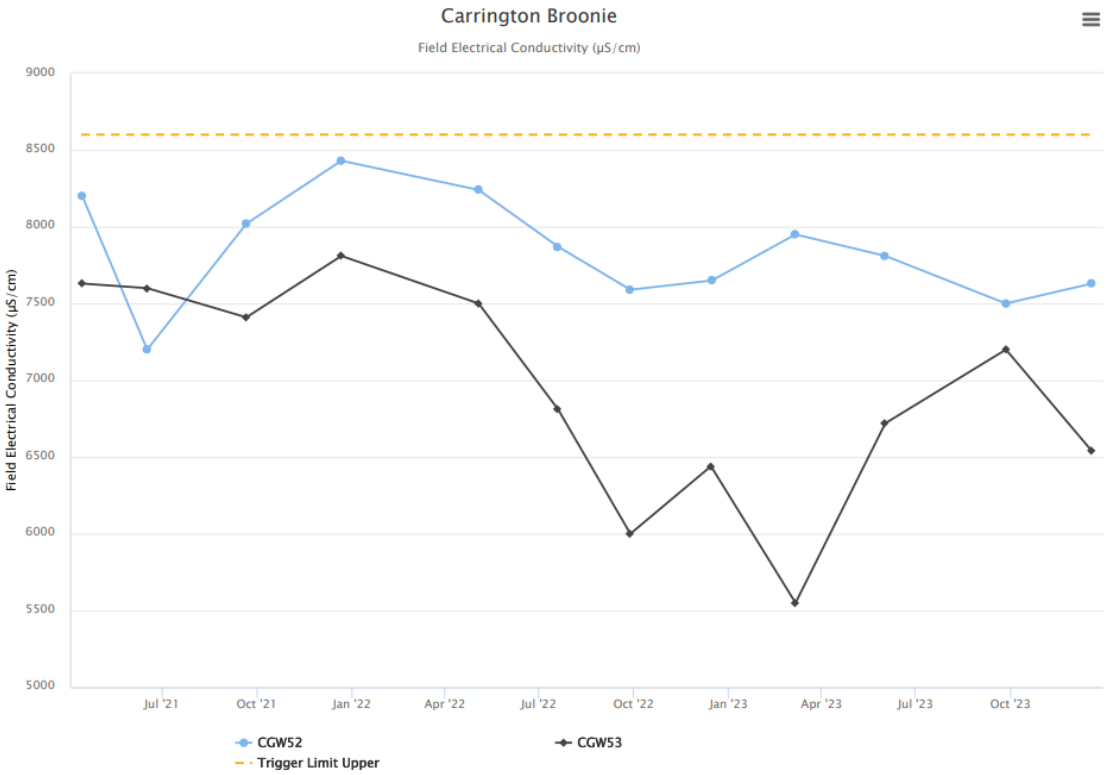

Figure 66 - Carrington Broonie Electrical Conductivity Trend – Q4 2023

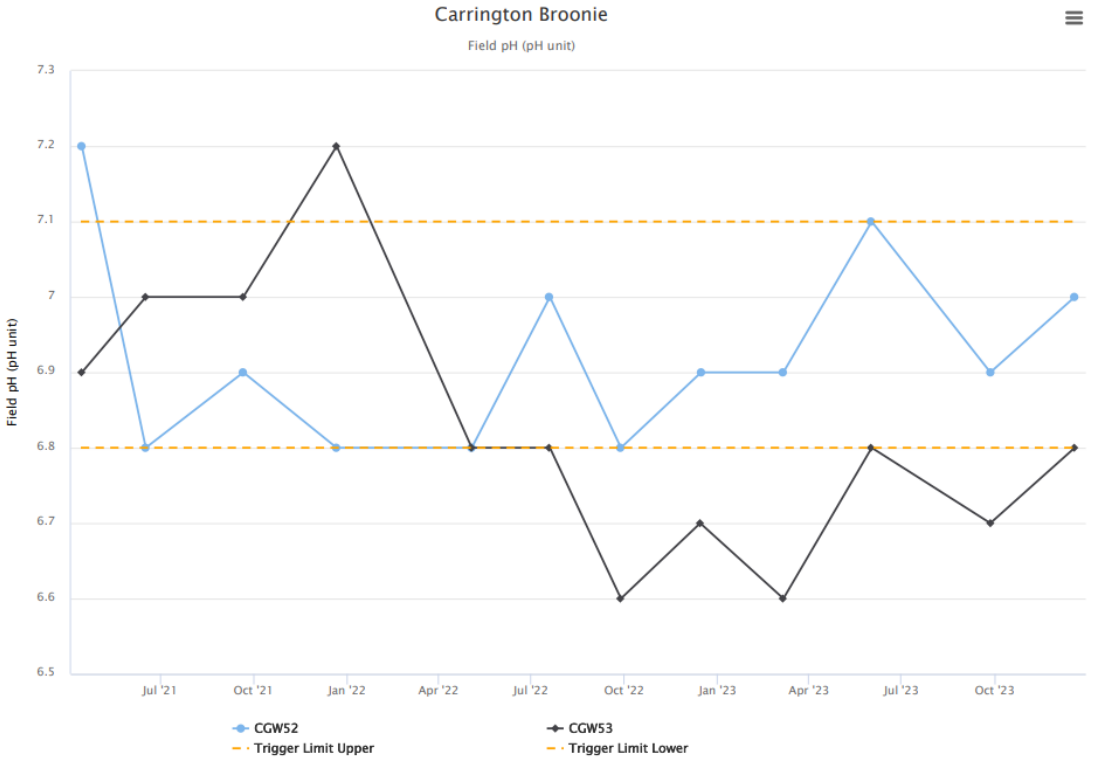

Figure 67 - Carrington Broonie Field pH Trend – Q4 2023

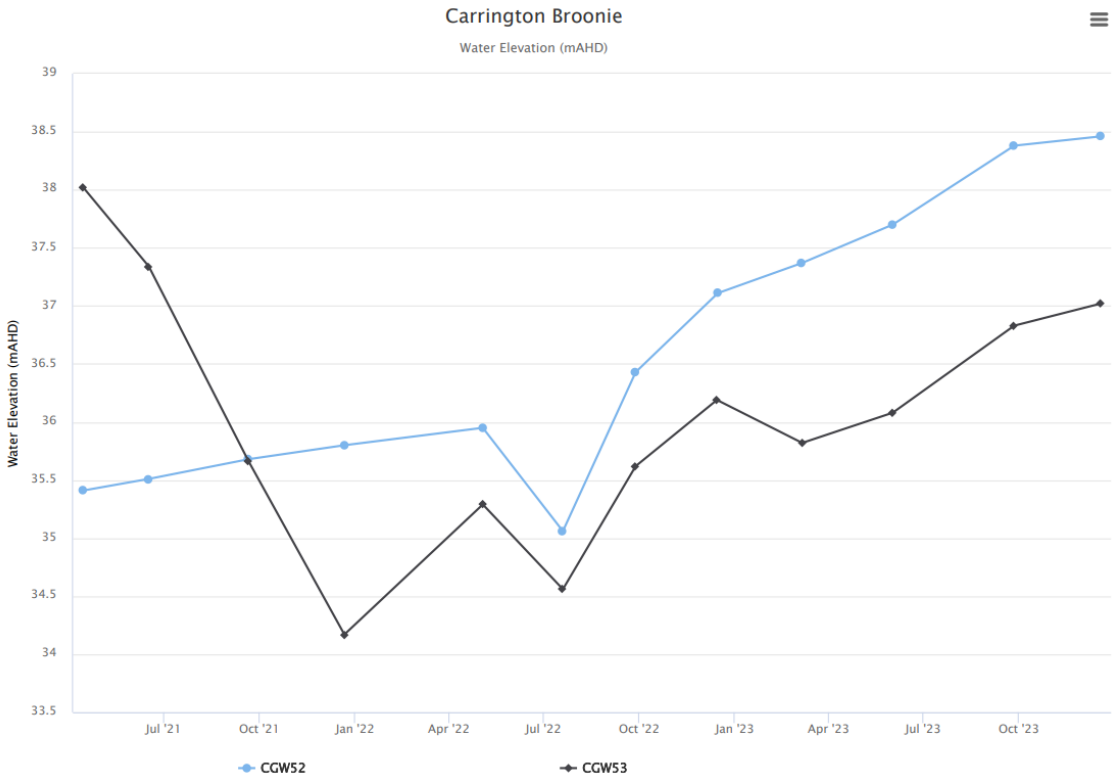

Figure 68 - Carrington Broonie Water Elevation Trend – Q4 2023

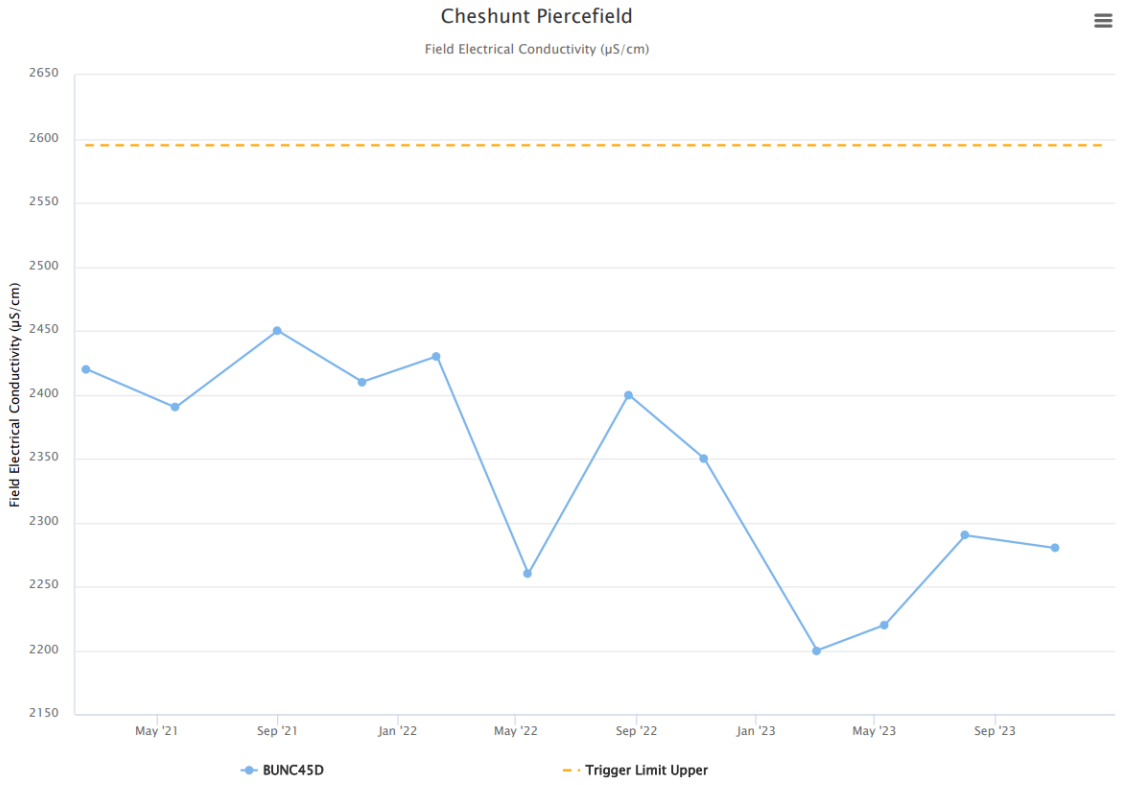

Figure 69 - Cheshunt Piercefield Electrical Conductivity Trend – Q4 2023

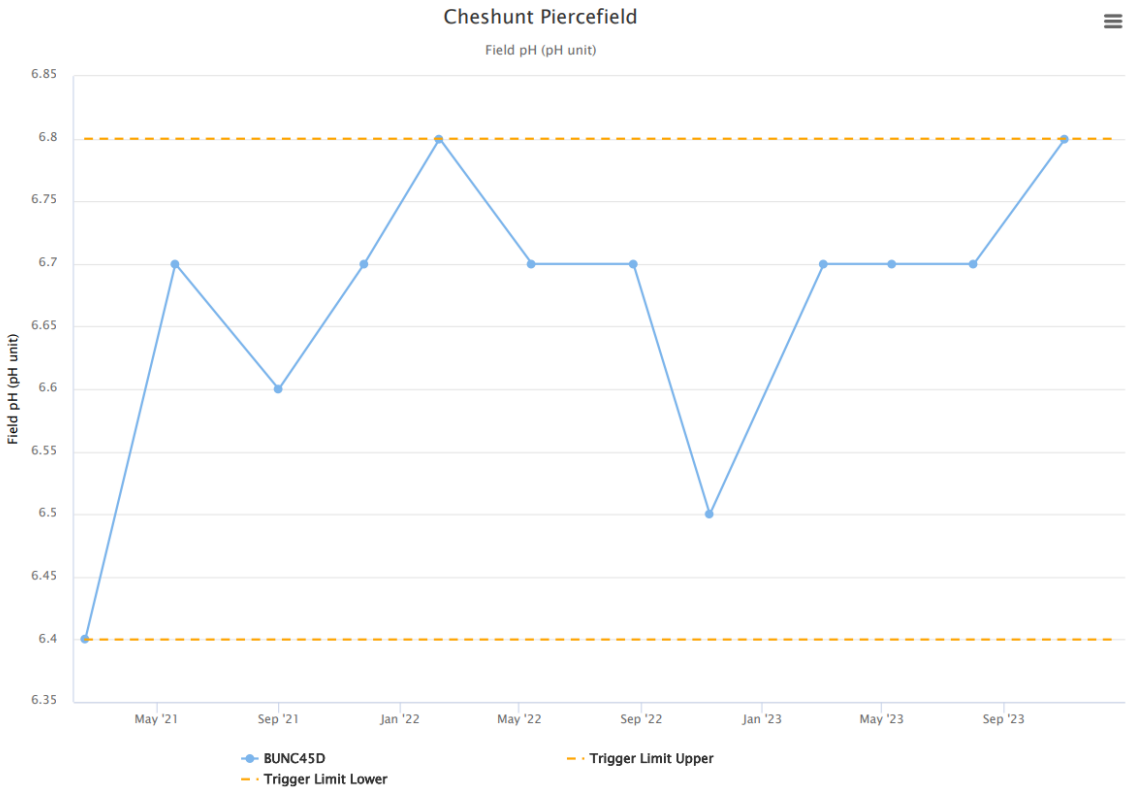

Figure 70 – Cheshunt Piercefield Field pH Trend – Q4 2023

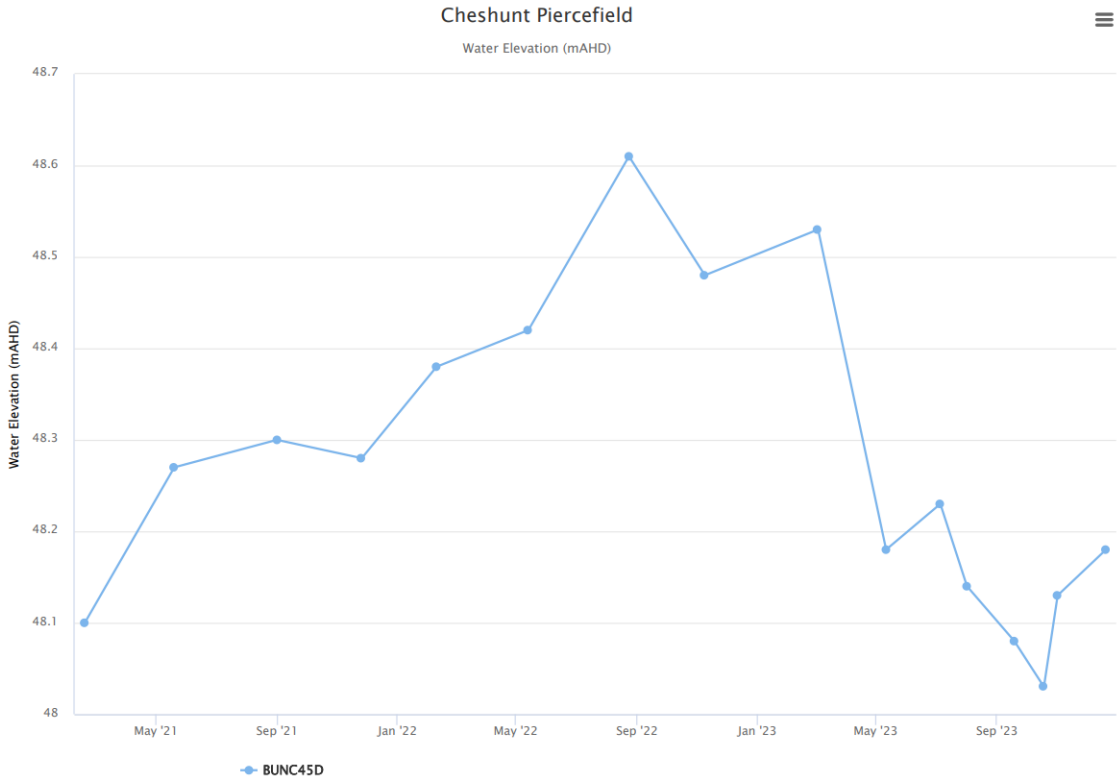

Figure 71 - Cheshunt Piercefield Water Elevation Trend – Q4 2023

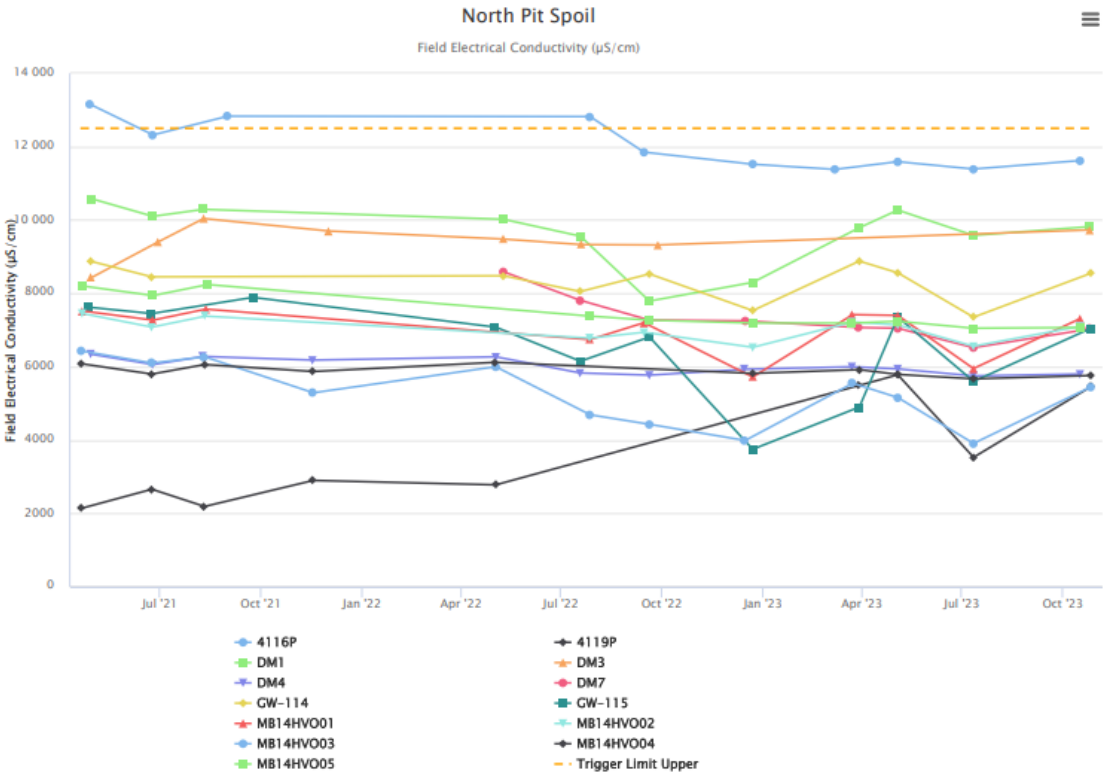

Figure 72 - North Pit Spoil Electrical Conductivity Trend – Q4 2023

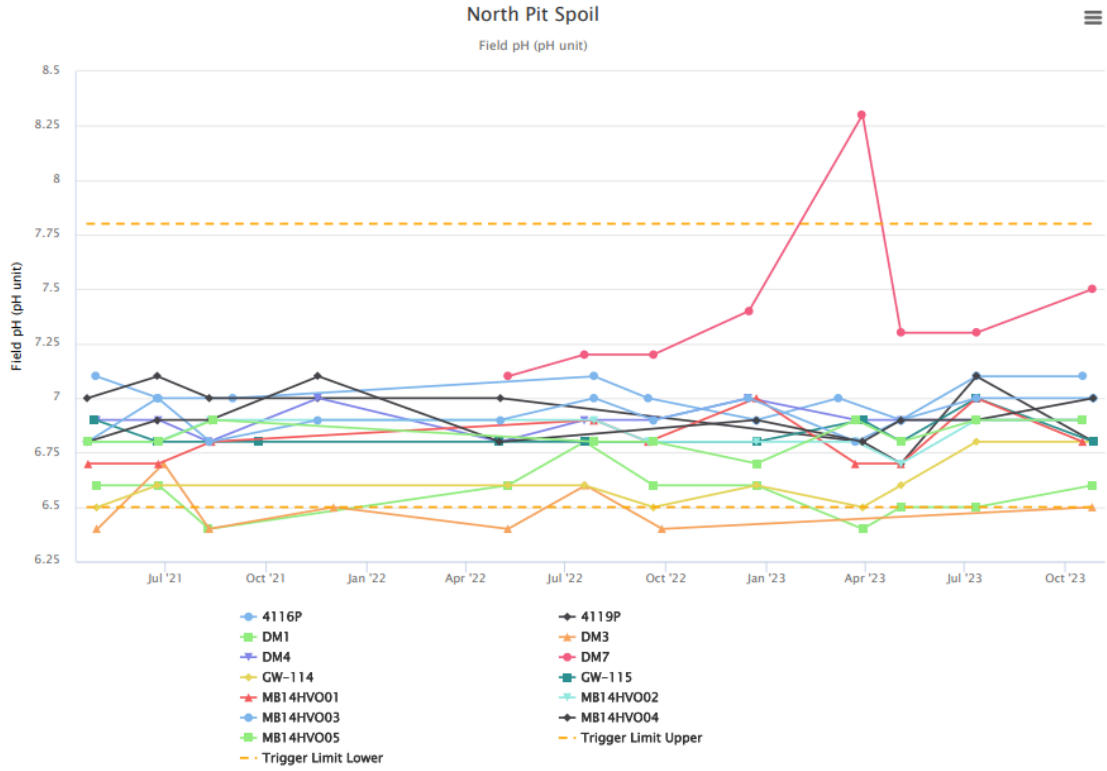

Figure 73 - North Pit Spoil Field pH Trend – Q4 2023

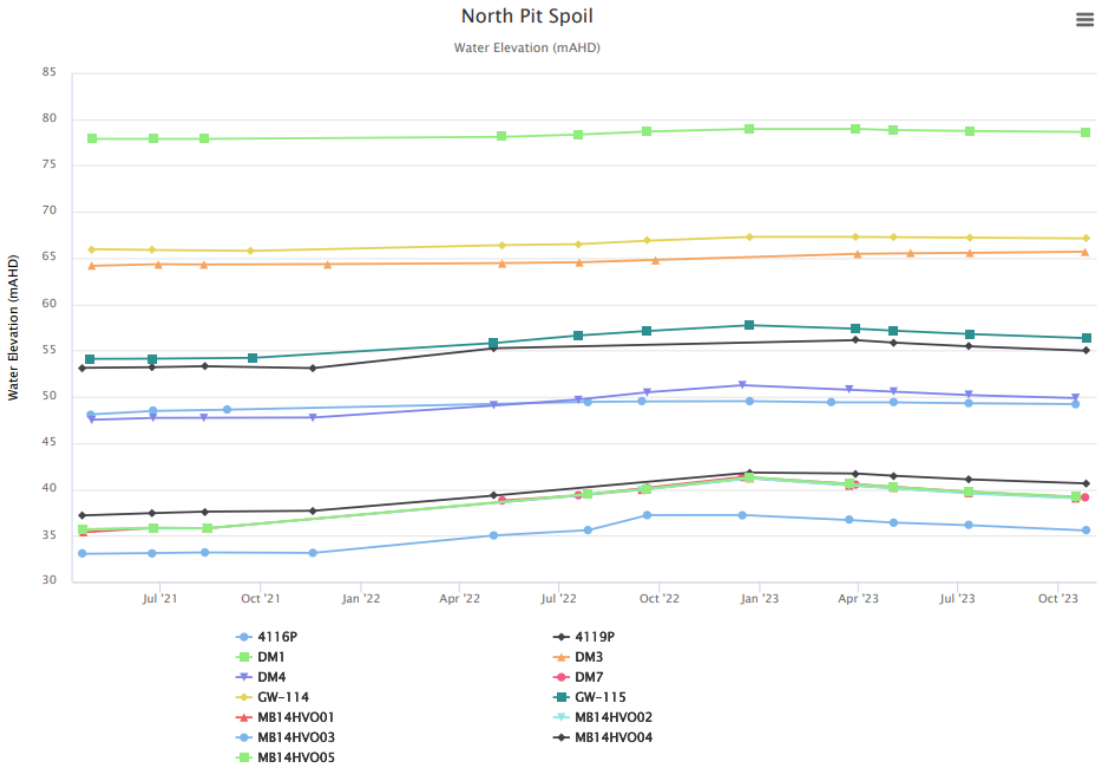

Figure 74 - North Pit Spoil Water Elevation Trend – Q4 2023

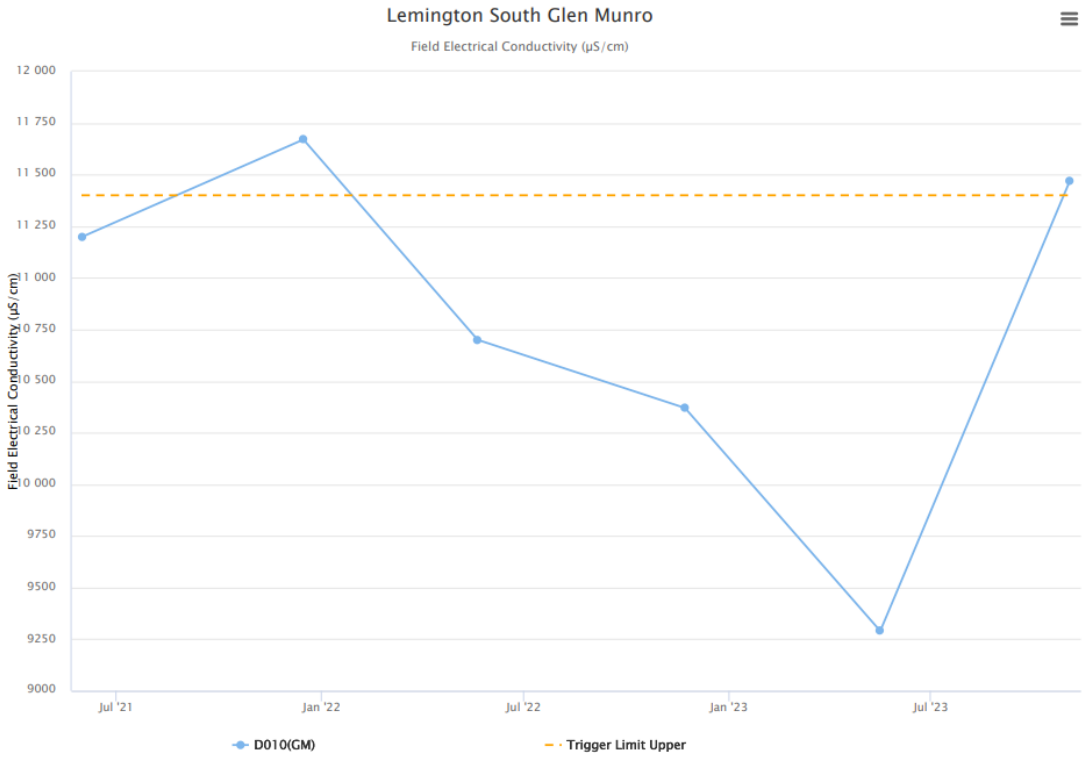

Figure 75 - Lemington South Glen Munro Electrical Conductivity Trend – Q4 2023

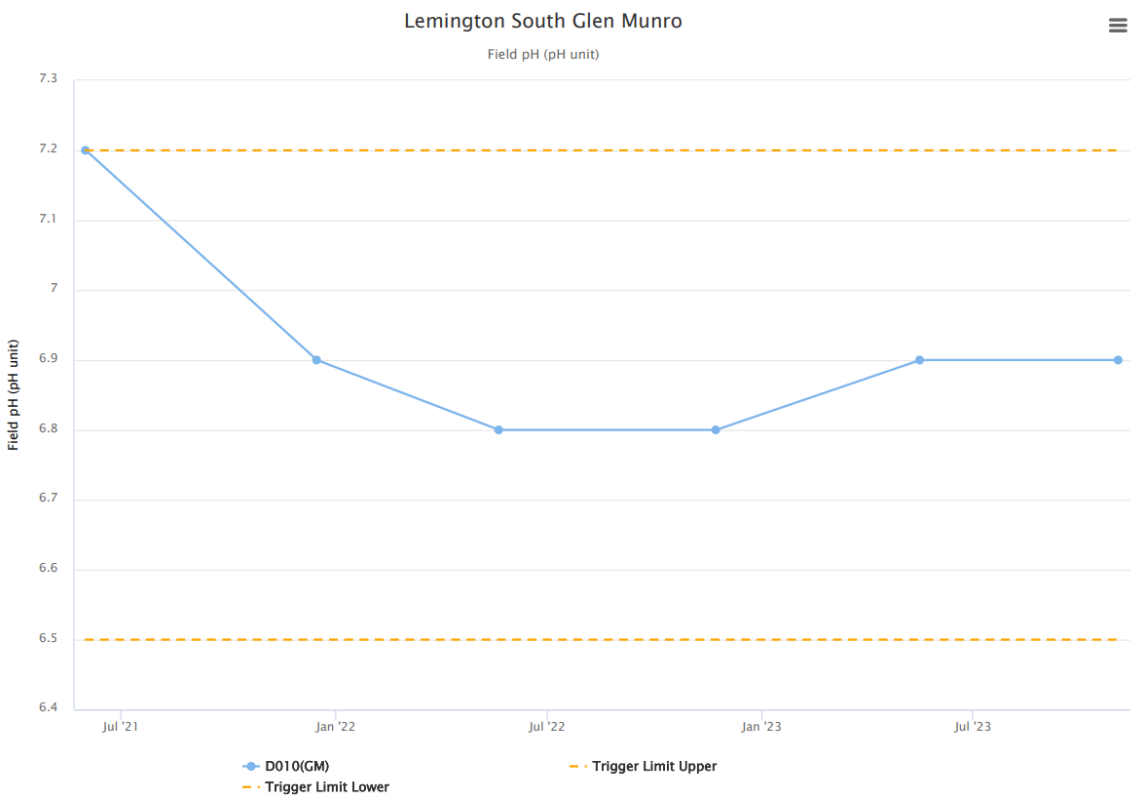

Figure 76 - Lemington South Glen Munro Field pH Trend – Q4 2023

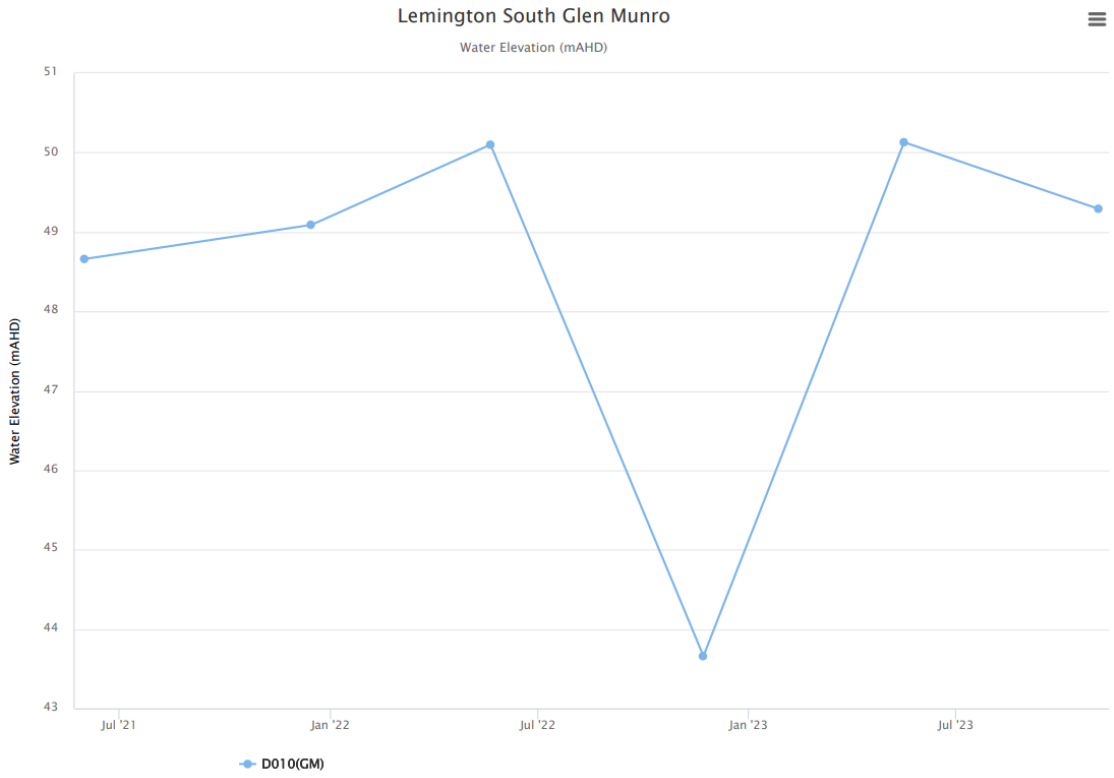

Figure 77 - Lemington South Glen Munro Water Elevation Trend – Q4 2023

3.4.1 | GROUNDWATER TRIGGER TRACKING

Internal trigger limits have been developed to assess monitoring data on an on-going basis and to highlight potentially adverse groundwater impacts. The process for evaluating monitoring results against the internal triggers and subsequent responses is outlined in the HVO Water Management Plan.

Groundwater trigger tracking results are summarised below in Table 3.

Table 3 - Groundwater Trigger Tracking Q4 2023

Site	Date	Trigger Limit Breached	Response Action
GW-100	18/12/2023	Electrical Conductivity (µS/cm)	Three consecutive readings above the trigger level of 10,751 µS/cm since June 2023. An increasing trend in EC has been recorded since December 2022 and coincides with declining groundwater levels in response to below average rainfall. The EC exceedances are due to declining groundwater levels. Trends should continue to be monitored to determine if they are related to mining activities.
NPz2	18/12/2023	Electrical Conductivity (µS/cm)	Six consecutive readings above the trigger level of 13,428 µS/cm between September 2022 and December 2023. It is noted that the bore has already been removed from the compliance monitoring network in the updated draft WMP which is currently with DPHI for approval. However, NPz2 should remain in the operational monitoring network to assist with future assessments and post closure monitoring. No further action is required
BZ3-3	1/11/2023	pH	Eleven consecutive readings below the lower pH trigger level of 6.5 since November 2019. Comprehensive water quality analysis was undertaken in August 2022. The results indicated the declining pH trend is not due to connectivity to spoil water via the nearby fault. It is noted that the bore has already been removed from the compliance monitoring network in version 3.4 of the revised WMP which is currently with DPHI for approval.
CGW51a	18/12/2023	pH	Six consecutive readings above the trigger level of 7.4 since September 2022. The 2019 Annual Review (SLR, 2019) noted the bore is screened within alluvium and weathered coal measures. It was recommended the bore be decommissioned and replaced with a new bore as the current bore does not provide representative results from one groundwater unit. It is noted that the bore has already been removed from the compliance monitoring network in version 3.4 of the revised WMP which is currently with DPHI for approval.
Hobdens Well	1/11/2023	pH	Three consecutive readings above the trigger level of 7.6 since May 2023. The pH has fluctuated above and below the upper trigger level since monitoring began in 2008. The pH level and trend are similar to nearby bore BZ1-1 which is screened within interburden. The pH trend is similar to historical trends and is in response to climatic and streamflow changes. Trends should continue to be monitored to determine if they are

			related to mining activities. Recommend reviewing trigger level to reflect historical trends.
CFW55R	20/12/2023	Water Elevation (mAHD)	Twelve consecutive water level readings above the 95th percentile trigger level of 59.41 mAH since April 2022. Groundwater levels in bore CFW55R have gradually increased since February 2020 with a sharp increase between September 2021 and September 2022 in response to above average rainfall and is not related to mining activities. Over 2023, groundwater levels declined in response to below average rainfall.
CFW57	20/12/2023	Water Elevation (mAHD)	Nineteen consecutive monthly water level readings above the 95th percentile trigger level of 59.24mAHD since December 2021. Groundwater levels in bore CFW57 have gradually increased since February 2020 with a sharp increase between September 2021 and November 2022 in response to above average rainfall., Levels have declined sharply since January 2023 in response to below average rainfall. It is noted that in September 2023 the water level was below the trigger. No further action required.
CGW53a	18/12/2023	Water Elevation (mAHD)	Ten consecutive water level readings above the 95th percentile trigger level of 59.19 mAHD since June 2021. Groundwater levels in bore CGW53a have gradually increased since December 2019 with a sharp increase between September 2021 and December 2022 in response to above average rainfall. Levels continued to decline sharply since January 2023 in response to below average rainfall. No further action required.
CGW55a	18/12/2023	Water Elevation (mAHD)	Eight consecutive water level readings above the 95th percentile trigger level of 58.43 mAHD since December 2021. Groundwater levels in bore CGW55a have gradually increased since March 2020 with a sharp increase between September 2021 and March 2023 in response to above average rainfall. Levels have continued to decline sharply since 2023 in response to below average rainfall. No further action required.

4 | BLASTING

HVO maintains a network of blast monitoring units located at nearby privately owned residences that function as regulatory compliance monitors. The location of these monitors can be found in Figure 15. Blasting criteria for HVO are summarised in Table 4.

Table 4 – Blasting Criteria

Airblast Overpressure (dBL)	Comments
115	5% of the total number of blasts in a 12-month period
120	0% of blasts
Ground Vibration (mm/s)	**Comments**
5	5% of the total number of blasts in a 12-month period
10	0% of blasts

4.1 | BLAST MONITORING RESULTS

Eighteen (18) blasts were initiated at HVO during the reporting period. Blast monitoring results for the period are shown in Table 5 and

Table 6.

Table 5 – Overpressure Blast Monitoring Results for the reporting period

Date and Time	Moses Crossing (dBL)	Jerrys Plains Village (dBL)	Maison Dieu (dBL)	Warkworth (dBL)	Knodlers Lane (dBL)
2/12/2023 13:01	96.42	80.01	87.48	89.51	97.10
4/12/2023 13:06	89.63	105.74	100.71	88.26	87.52
5/12/2023 13:08	102.72	102.35	100.96	93.87	94.62
5/12/2023 13:10	96.16	98.17	94.89	98.10	93.51
6/12/2023 13:07	112.67	106.05	111.07	96.69	103.83
15/12/2023 13:06	98.13	85.92	96.49	89.47	95.18
18/12/2023 13:12	90.80	87.22	91.52	92.12	92.76
19/12/2023 13:16	95.32	92.14	108.57	86.38	104.22
19/12/2023 13:17	91.00	94.28	106.44	101.20	108.14
20/12/2023 11:51	98.59	106.18	93.58	91.35	92.52
21/12/2023 13:15	103.44	100.26	107.29	98.49	104.68
21/12/2023 13:18	103.71	92.26	103.23	88.27	105.61
21/12/2023 15:43	103.07	101.29	110.72	95.57	108.85
23/12/2023 12:51	90.88	87.96	91.42	89.64	89.84
29/12/2023 13:54	95.90	83.31	98.90	90.80	94.61
29/12/2023 13:55	91.58	76.88	94.39	80.01	91.40
30/12/2023 9:52	94.35	81.10	81.86	80.98	86.24
30/12/2023 13:10	96.74	97.53	86.26	78.39	92.21

Table 6 – Ground Vibration Blast Monitoring Results for the reporting period

Date and Time	Moses Crossing (mm/s)	Jerrys Plains Village (mm/s)	Maison Dieu (mm/s)	Warkworth (mm/s)	Knodlers Lane (mm/s)
2/12/2023 13:01	0.10	0.04	0.05	0.21	0.11
4/12/2023 13:06	0.16	0.29	0.08	0.08	0.17
5/12/2023 13:08	0.06	0.04	0.12	0.18	0.13
5/12/2023 13:10	0.08	0.05	0.20	0.24	0.12
6/12/2023 13:07	0.08	0.05	0.06	0.10	0.25
15/12/2023 13:06	0.08	0.03	0.06	0.07	0.12
18/12/2023 13:12	0.08	0.03	0.09	0.10	0.18
19/12/2023 13:16	0.09	0.07	0.06	0.06	0.12
19/12/2023 13:17	0.08	0.03	0.06	0.54	0.12
20/12/2023 11:51	0.13	0.15	0.06	0.05	0.11
21/12/2023 13:15	0.10	0.02	0.07	0.10	0.14
21/12/2023 13:18	0.10	0.02	0.08	0.25	0.13
21/12/2023 15:43	0.17	0.06	0.11	0.39	0.18
23/12/2023 12:51	0.13	0.04	0.10	0.18	0.12
29/12/2023 13:54	0.10	0.04	0.10	0.19	0.11
29/12/2023 13:55	0.08	0.02	0.06	0.08	0.14
30/12/2023 9:52	0.09	0.03	0.05	0.11	0.12
30/12/2023 13:10	0.09	0.04	0.07	0.08	0.11

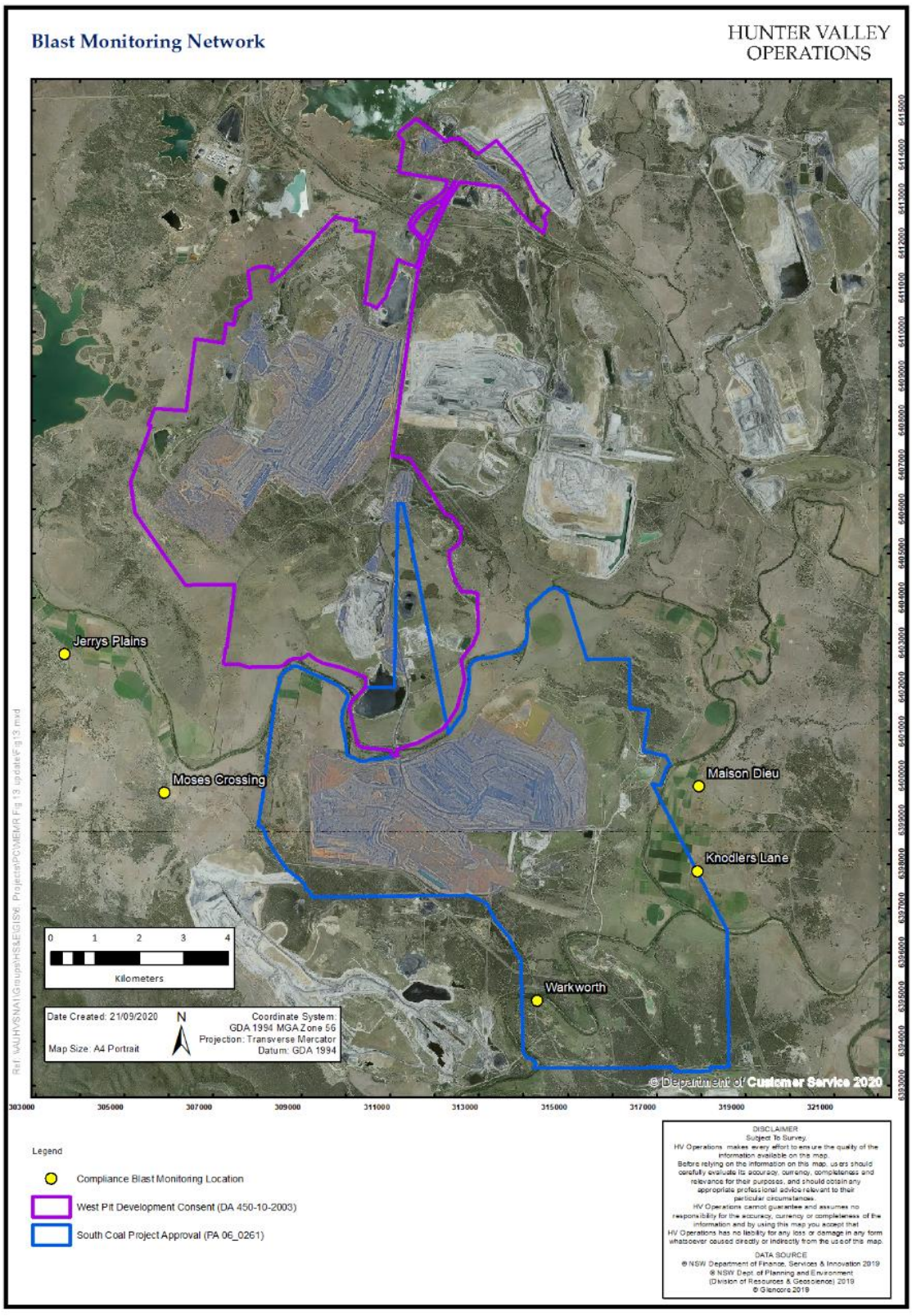

Figure 78 - Blast Monitoring Location Plan

5 | NOISE

Routine attended noise monitoring occurs at defined locations around HVO, as described in the HVO Noise Monitoring Programme. The noise monitoring aims to quantify and describe the acoustic environment around the site and compare results with specified limits. The attended noise monitoring locations are displayed in Figure 79.

5.1 | ATTENDED NOISE MONITORING RESULTS

Attended monitoring was conducted at receiver locations around HVO during the night period of the 18 December 2023.

Compliance with the HVO noise impact limits ensures compliance with the land acquisition criteria. Therefore, since no noise impact exceedances occurred for the reporting period the land acquisition assessment has not been presented. These will only be reported in instances of noise impact exceedances.

Monitoring results are detailed in Table 7 and Table 8.

Table 7 - LAeq,15minute and 1minute HVO North Against Impact Assessment Criteria for the Reporting Period

Location	Start date and time	Wind		Stability class	Very enhancing? [1]	HVO North limits, dB [1]		HVO North levels, dB		Exceedances, dB	
		Speed m/s	Direction [3]			$L_{Aeq,15minute}$	$L_{A1,1min}$	$L_{Aeq,15minute}$ [2]	$L_{A1,1min}$	$L_{Aeq,15minute}$	$L_{A1,1min}$
Shearers Lane	18/12/2023 21:24	2.9	134	D	Yes	35	46	IA	IA	Nil	Nil
Knodlers Lane	18/12/2023 22:05	3.0	133	D	Yes	35	46	IA	IA	Nil	Nil
Maison Dieu	18/12/2023 21:45	2.6	138	D	Yes	35	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	18/12/2023 22:33	2.9	131	D	Yes	35	46	IA	IA	Nil	Nil
Kilburnie South	18/12/2023 23:22	1.5	128	E	Yes	39	46	26	28	Nil	Nil
Jerrys Plains East	18/12/2023 22:58	1.8	133	E	Yes	39	46	26	28	Nil	Nil
Jerrys Plains Village	18/12/2023 21:25	2.9	134	D	Yes	40	46	37	38	Nil	Nil
Jerrys Plains West	18/12/2023 21:02	3.5	137	D	No	40	46	<30	32	N/A	N/A

1. Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfI.
2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
3. Degrees magnetic north, "-" indicates calm conditions

Table 8 - LAeq,15minute and 1minute HVO South Against Impact Assessment Criteria for the Reporting Period

Location	Start date and time	Wind		Stability class	Very enhancing? [1]	HVO South limits, dB [1]		HVO South levels, dB		Exceedances, dB	
		Speed m/s	Direction [3]			$L_{Aeq,15minute}$	$L_{A1,1min}$	$L_{Aeq,15minute}$ [2]	$L_{A1,1min}$	$L_{Aeq,15minute}$	$L_{A1,1min}$
Shearers Lane	18/12/2023 21:24	4.1	153	D	No	41	45	IA	IA	NA	NA
Knodlers Lane	18/12/2023 22:05	3.6	157	D	No	40	45	IA	IA	NA	NA
Maison Dieu	18/12/2023 21:45	3.9	162	D	No	39	45	IA	IA	NA	NA
Long Point (Dights Crossing)	18/12/2023 22:33	3.9	152	D	No	37	45	IA	IA	NA	NA
Kilburnie South	18/12/2023 23:22	3.9	150	D	No	39	45	IA	IA	NA	NA
Jerrys Plains East	18/12/2023 22:58	3.9	151	D	No	38	45	IA	IA	NA	NA
Jerrys Plains Village	18/12/2023 21:25	4.1	153	D	No	35	45	IA	IA	NA	NA
Jerrys Plains West	18/12/2023 21:02	4.4	151	D	No	35	45	IA	IA	NA	NA
HVGC	18/12/2023 23:51	3.7	143	E	No	55	-	<35	<35	NA	NA

1. Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfI.
2. Site-only LAeq,15minute, includes modifying factor penalties if applicable.
3. Degrees magnetic north, "-" indicates calm conditions.

5.2 | LOW FREQUENCY ASSESSMENT

In accordance with the requirements of the EPA's Noise Policy for Industry (NPfI), the applicability of the low frequency modification penalty has been assessed. No penalties were applied for monitoring undertaken through the reporting period. The assessments for the low frequency noise are shown in Table 9 and Table 10.

Table 9 - Modifying Factor Assessment HVO North for the Reporting Period

Location	Start date and time	Measured HVO North L_{Aeq} dB	Very enhancing? [1]	Intermittency modifying factor?	Tonality modifying factor?	Frequency of tonality	Low-frequency modifying factor? [1,2]	Exceedance of reference spectrum [2,3]	Total penalty dB [2,3]
Shearers Lane	18/12/2023 21:24	IA	Yes	No	No	NA	No	NA	Nil
Knodlers Lane	18/12/2023 22:05	IA	Yes	No	No	NA	No	NA	Nil
Maison Dieu	18/12/2023 21:45	IA	Yes	No	No	NA	No	NA	Nil
Long Point (Dights Crossing)	18/12/2023 22:33	IA	Yes	No	No	NA	No	NA	Nil
Kilburnie South	18/12/2023 23:22	26	Yes	No	No	NA	No	NA	Nil
Jerrys Plains East	18/12/2023 22:58	26	Yes	No	No	NA	No	NA	Nil
Jerrys Plains Village	18/12/2023 21:25	35	Yes	No	No	NA	Yes	1dB @ 100Hz	+2
Jerrys Plains West	18/12/2023 21:02	<30	No	NA	NA	NA	NA	NA	Nil

1. Low-frequency modifying factors are not applicable during 'very noise-enhancing meteorological conditions' in accordance with the NPfI.

2. NA denotes 'not applicable'.

3. Bold results indicate that application of NPfI modifying factor(s) is required.

Table 10 - Modifying Factor Assessment HVO South for the Reporting Period

Location	Start date and time	Measured HVO South LAeq dB	Very enhancing ? !	Intermittency modifying factor?	Tonality modifying factor?	Frequency of tonality	Low-frequency modifying factor? 1,2	Exceedance of reference spectrum 2,3	Total penalty dB 2,3
Shearers Lane	18/12/2023 21:24	IA	No	NA	NA	NA	NA	NA	Nil
Knodlers Lane	18/12/2023 22:05	IA	No	NA	NA	NA	NA	NA	Nil
Maison Dieu	18/12/2023 21:45	IA	No	NA	NA	NA	NA	NA	Nil
Long Point (Dights Crossing)	18/12/2023 22:33	IA	No	NA	NA	NA	NA	NA	Nil
Kilburnie South	18/12/2023 23:22	IA	No	NA	NA	NA	NA	NA	Nil
Jerrys Plains East	18/12/2023 22:58	IA	No	NA	NA	NA	NA	NA	Nil
Jerrys Plains Village	18/12/2023 21:25	IA	No	NA	NA	NA	NA	NA	Nil
Jerrys Plains West	18/12/2023 21:02	IA	No	NA	NA	NA	NA	NA	Nil
HVGC	18/12/2023 23:51	<35	No	NA	NA	NA	NA	NA	Nil

1. NA denotes 'not applicable'; and

2. Bold results indicate that application of NPfI modifying factor/s is required

5.3 | REAL TIME NOISE MONITORING

HVO utilises a network of real-time directional noise monitors to manage noise impacts on a continuous basis, shown in **Figure 79**. Noise alarms are in place at five monitoring locations (Knodlers Lane, Maison Dieu, Jerrys Plains, Moses Crossing, and Long Point) which alert HVO staff to elevated noise levels that require investigation.

HVO investigates and responds to noise alarms with appropriate modification / stoppage to operations. Changes in response to a noise alarm can include replacing equipment with alternative units, changing or relocating tasks, or shutting down equipment. It should be noted that this assessment does not compliment or conflict with attended noise monitoring detailed in **Section 5.1**. Real time monitoring data includes non-mine noise sources such as animals, road traffic and weather.

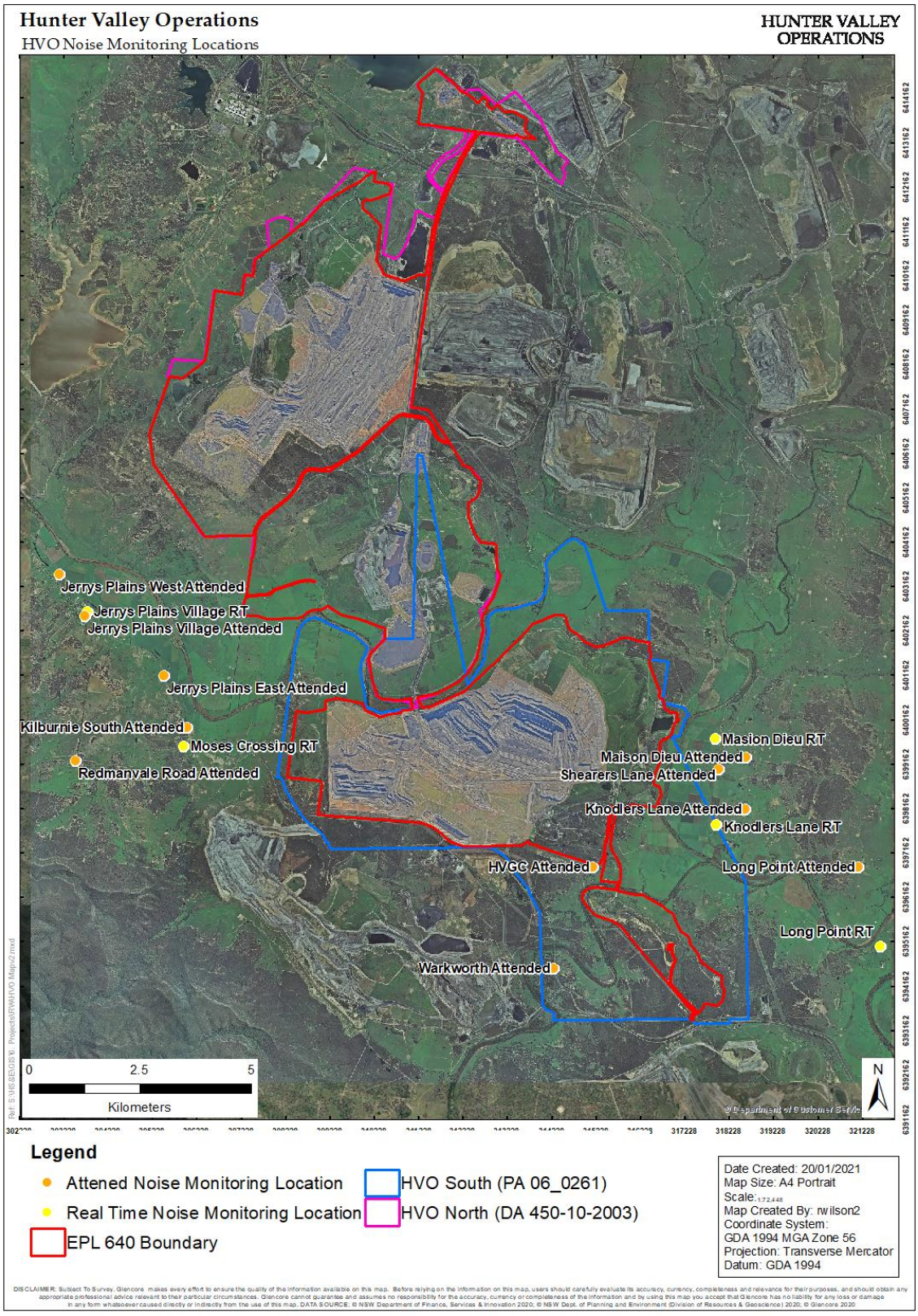

Figure 79 - Noise Monitoring Location Plan

6 | OPERATIONAL DOWNTIME

A total of approximately one thousand one hundred and thirty (1,130) hours of equipment downtime was logged in response to real time monitoring and inspections for environmental factors such as noise and dust during the reporting period. Operational downtime by equipment type is show in Figure 1780. Note that these delays are instances where operations were completely stopped and does not include occasions where operations were changed/modified but not stopped (e.g. changed from exposed dump to in-pit dump).

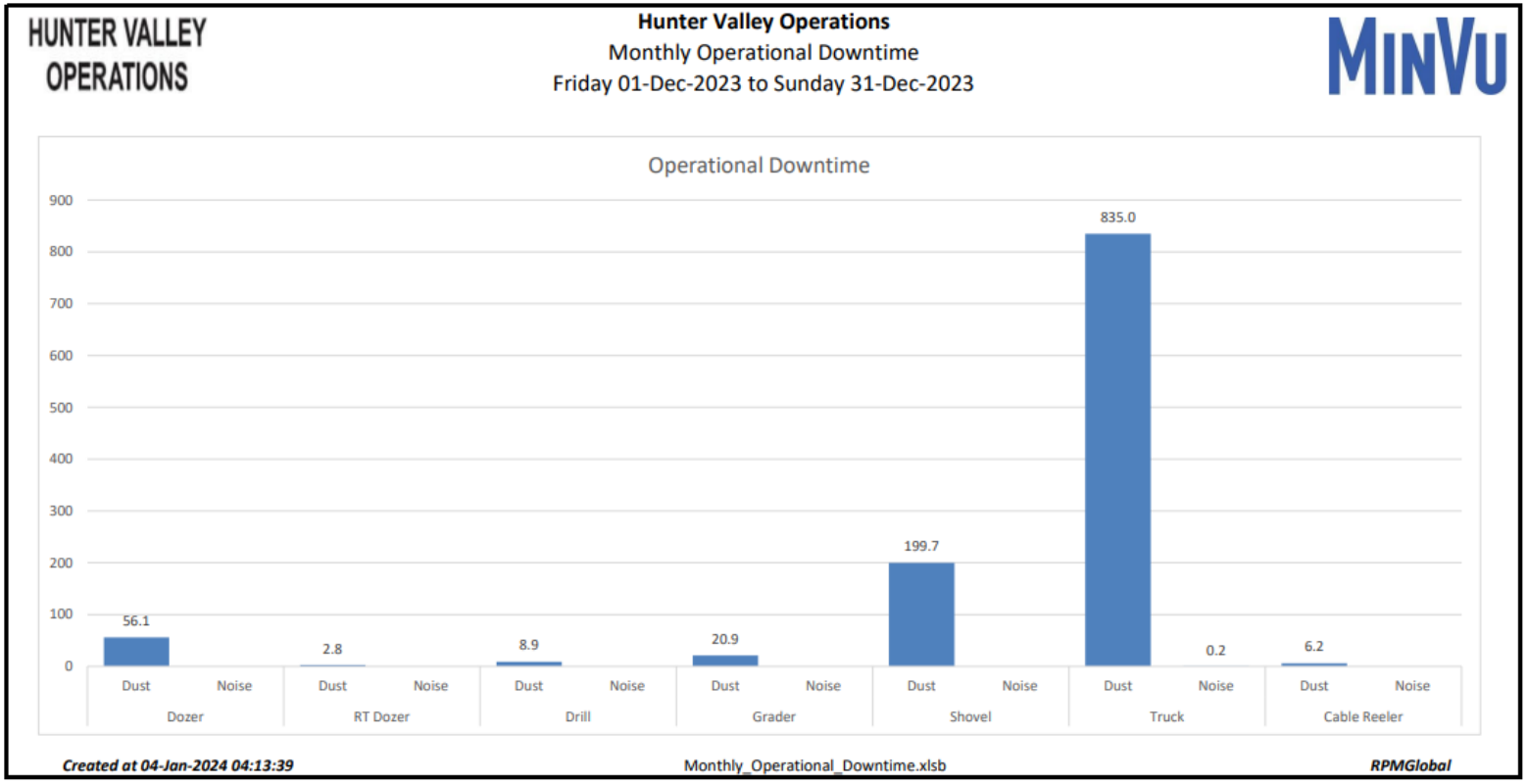

Figure 80 - Operational Downtime by Equipment Type for the Reporting Period

7 | REHABILITATION

The following activities related to rehabilitation were completed during the reporting period:

- 0.00ha of land was reshaped;
- 0.00ha of land was released (became available for the application of topsoil);
- 10.85ha of land was topsoiled; and
- 10.08ha of land was rehabilitated.

Year to date progress is shown in Figure 181.

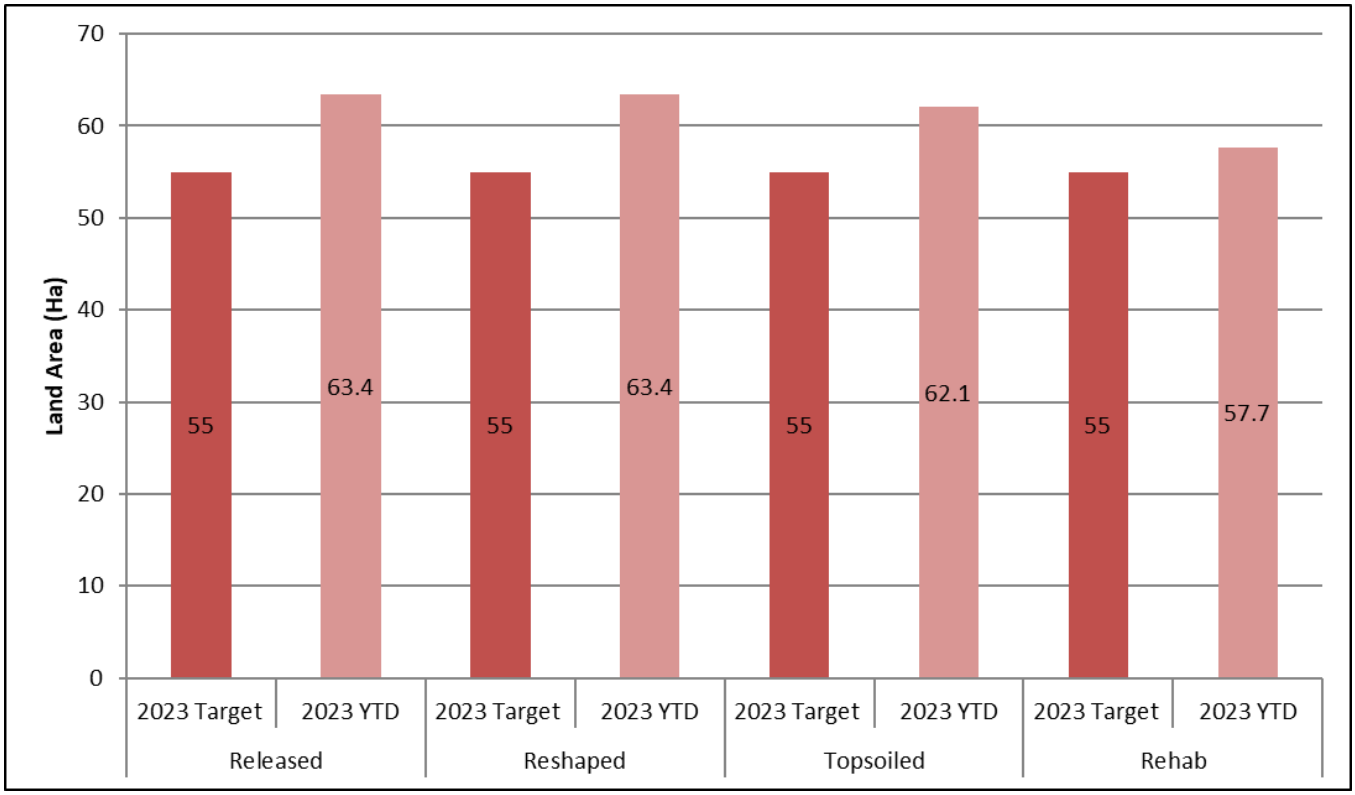

Figure 81 - Rehabilitation YTD December 2023

8 | COMPLAINTS

There were no complaints during the reporting period.

Details of complaints received during 2023 are shown in Table 11.

Table 11 – Complaints Summary 2023

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
No community complaints were received during January						
1	1 February	12:06am	1	Lighting	Community Hotline	• A complainant of Long Point called the Community Complaints Hotline at 12.06am regarding a lighting complaint, commenting that “light from HVO was shining directly into their house keeping their family awake”. • The OCE contacted the complainant at 12:27am and shutdown the lighting plant identified to be causing the disturbance. This was verified by the complainant. • An internal investigation conducted following the complaint found that the light from the lighting plant was likely to be visible from the complainant's location. Process changes have been made as a result of the complaint to close the identified gap in operational practices.
No community complaints were received during March						

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
2	11 April	7:11am	2	Traffic	Community Hotline	• A member of the public was driving east along Golden Highway near the entrance to HVO South, when a train of four cars pulled out in front of them. • The complainant reported that the last car to pull out failed to give way to them which forced them to flash their headlights, sound the horn and take evasive action and brake heavily causing their car's ABS system to engage to slow down and prevent a collision. • An internal investigation conducted following the complaint identified the driver of the vehicle. The employees supervisor notified them of the complaint and the importance of safe driving practices when travelling to and from site.
3	29 April	1:40pm	1	Blast dust	Community Hotline	• A resident of Long Point called the Community Complaints Hotline at 1:40pm on 29/4/2023. The OCE contacted the resident who asked what was going on to create the dust they saw, the OCE advised that a blast had just taken place. • The blast was fired in accordance with HVO blasting permissions for wind speed and direction. The wind direction and wind speed at the time of the blast was 2.7m/s and 268 degrees. The resident's property is located 8 kilometres from the blast location at a bearing of 295 degrees. • A review of camera footage of the blast fired at approximately 1:30pm confirmed that a dust plume was produced but was not

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						abnormal in its colour or volume. Low winds will have slowed the dissipation of the dust plume. • The nearest real-time PM_{10} monitor (Maison Dieu) located downwind of the blast, but north of the resident, issued a level 1 dust trigger (PM_{10} 10-minute average > 150u/gm3) at 2:10pm, the daily average was 27ug/m3 and below the criteria. A High-Volume Air Sampler is located within 150m of their residence and was monitoring particulates during the blast. The filter paper was analysed and was below the annual criteria level for that monitor.
No community complaints were received during May						
4	1 June	11:28pm	3	Blast fume	Community Hotline	• A blast fume complaint was received by a complainant who wished to remain anonymous at 11:28pm on 1/6/2023 following a blast fired at 1.18pm earlier that day in West Pit. The complainant described the blast as “disgraceful” and also voiced their concern about roads being closed off and the impacts associated with blast fume. • A review of the camera footage confirmed a fumy blast which was reviewed and investigated by the Drill & Blast team. The wind direction and wind speed at the time of the blast was 5.6m/s and 264 degrees. Blast fume travelled from WN47LLD02/03A post ignition across HC1 conveyor road and towards Ravensworth Open Cut where it dissipated.

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						• Pre-blast environmental assessment ranked the fume and dust risk as possible, and the blast was fired in accordance with blasting permissions for wind speed and direction.
5	10 June	1:09pm	4	Blast dust	Community Hotline	• A complainant called the HVO Hotline at 1:09pm on 10/6/2023 following a blast in Cheshunt Pit at 12:56pm. The complainant was annoyed that dust from the blast had blown towards them. • A review of camera footage of the blast fired confirmed that a dust plume did travel in the direction of the complainant, no fume was observed. • The dust plume was not excessive; however it was observed to travel lower to the ground before dispersing. The nearest real-time air quality monitor (Warkworth) recorded a maximum of 21 ug/m3 in the hour following the blast against a criteria of 50 ug/m3. • The wind direction and wind speed at 12:55pm was 4.3m/s and 314 degrees. Pre-blast environmental assessment ranked the fume and dust risk as unlikely and blast was fired in accordance with blasting permissions for wind speed and direction.
6	10 July	9:34pm	1	Lighing	Community Hotline	• A resident of Long Point called the Community Complaints Hotline at 9:34pm regarding a light shining directly into their house.

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						• The lighting plant identified as causing the disturbance was tilted downwards and checked via a phone call by OCE with the complainant, but light was still visible by the complainant. The same lighting plant was then turned off. The disturbance experienced by the complainant was again checked by OCE via a phone call, which verified the disturbance to the complainant had ceased. • An internal investigation conducted following the complaint found that lighting tower operational practices should be reviewed and updated.
7	27 July	5 – 6pm	5	Traffic	Community Hotline	• A member of the public reported that whilst driving west along the Golden Highway between 5 and 6 pm, another vehicle – a twin-cab utility – began to tailgate their vehicle (< half a car length). Between the eastern entry to HVO South and Comleroi Road (HVO Souths western entry) the offending vehicle sounded their horn more than once, flashed their high beam lights more than once as well as attempted to overtake on one occasion. When the vehicle attempted to overtake, oncoming traffic forced it to resume its original position. • The member of the public reported that the offending vehicle turned off in to Comleroi Road. They reported the incident to Singleton Police.

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
						• An internal investigation resulted in a site-wide presentation about the importance of road safety whilst travelling to and from site being undertaken at daily HCOMs.
No community complaints were received during August						
8	9 September	4:08pm	6	Blast fume	Community Hotline	• A complainant called the HVO hotline at 4:08pm. The resident of Jerry's Plains Road said they noticed "yellow stuff in the air", and although not impacted wanted further information regarding the blast ranking and management process at HVO. • The Senior Mine Supervisor contacted the resident immediately following the complaint. The Environment and Community Manager also spoke with the resident the following day to explain the blast ranking and management process at HVO.
9	11 September	9:06am	7	Blast dust	Community Hotline	• A resident of Mt Thorley called the Community Complaints Hotline at 9:06am stating that "yesterday there was dust all day" in the vicinity of their residence. • Previous data from the nearest real-time PM_{10} monitors (Knodlers Lane and Maison Dieu) were investigated. The average daily 24hr results from the two monitors were both within compliance limits. This was communicated to the resident via a phone conversation. • The resident did not state where the dust was originating from, nor could they confirm it was coming from HVO when asked, but said the levels were bad due to a morning inversion event. No further action was taken.
No community complaints were received during October						

Complaint Number	Date	Time	Complainant ID	Nature of Complaint	Mode of Complaint	Brief Description and Response
No community complaints were received during November						
No community complaints were received during December						

9 | ENVIRONMENTAL INCIDENTS

There was one reportable environmental incidents during the reporting period as follows:

Cheshunt East TEOM PM_{10} Air Quality Exceedance – 19 December 2023

Monitoring results received during January 2024 indicated that on 19 December 2023, the Cheshunt East HVAS recorded a total result of 63.8µg/m^3 for the 24-hour averaging period for PM_{10}. This result exceeds the relevant criteria of 50ug/m^3. HVO engaged a third party to undertake an investigation to determine HVO's contribution to the exceedance. It was calculated that HVO North's estimated maximum PM_{10} contribution to be less than or equal to 14.6µg/m^3, or 23% of the recorded measurement.

While this indicates HVO was not the primary source, the criteria is based on dust from HVO and all other sources. HVO notified the DPE of this exceedance on 9 January 2023 and has submitted an incident report as well as provided required notifications in accordance with the HVO Air Quality Greenhouse Gas Management Plan.

APPENDIX A: METEOROLOGICAL DATA

Date	Air Temp Max (°C)	Air Temp Min (°C)	Relative Humidity (Max %)	Relative Humidity (Min %)	Solar Radiation Maximum (W/Sq. M)	Average Wind Direction (°)	Average Wind Speed (m/sec)	Rainfall (mm)
1/12/2023	31.26	18.88	82.10	18.63	1386.00	253.60	3.81	0.00
2/12/2023	28.45	17.04	92.90	31.98	1618.00	230.30	2.17	1.40
3/12/2023	32.33	16.70	79.91	14.30	1298.00	204.00	3.66	0.00
4/12/2023	27.34	16.44	79.99	35.77	1422.00	115.80	3.42	0.00
5/12/2023	36.87	14.49	87.60	15.99	1131.00	247.60	1.84	0.00
6/12/2023	35.56	17.95	82.20	20.17	1082.00	180.90	4.48	0.00
7/12/2023	38.78	18.00	83.50	14.56	1156.00	144.20	2.96	0.00
8/12/2023	39.77	18.49	87.80	17.95	1139.00	235.30	2.33	1.60
9/12/2023	40.75	23.45	62.64	17.24	1171.00	247.80	2.95	0.20
10/12/2023	32.82	20.96	77.71	35.21	1554.00	124.10	4.38	0.00
11/12/2023	36.29	19.23	87.00	23.98	1067.00	108.50	3.00	0.00
12/12/2023	32.11	19.88	79.12	32.54	1517.00	112.50	4.54	0.00
13/12/2023	37.19	19.19	87.40	20.68	1113.00	166.00	1.96	0.00
14/12/2023	38.83	24.59	59.04	12.80	1411.00	248.60	4.19	0.00
15/12/2023	32.93	19.41	80.50	26.55	1233.00	112.00	3.72	0.00
16/12/2023	36.29	17.20	90.80	7.41	1137.00	219.70	3.55	0.00
17/12/2023	30.22	19.30	81.50	40.61	1312.00	113.00	4.51	0.00
18/12/2023	36.90	20.20	84.60	23.77	1211.00	133.00	2.74	0.00
19/12/2023	33.49	19.43	88.60	33.03	985.00	187.20	2.81	1.20
20/12/2023	21.09	15.67	95.30	75.78	279.10	149.40	1.93	29.20
21/12/2023	22.18	15.61	86.10	57.68	1148.00	123.60	2.95	0.00
22/12/2023	26.21	15.96	73.24	33.22	1492.00	114.60	2.91	0.00
23/12/2023	28.58	14.47	94.80	31.12	1171.00	134.10	1.80	23.00
24/12/2023	26.01	15.03	95.60	48.23	1530.00	135.80	1.44	9.40
25/12/2023	28.81	16.34	90.20	46.35	1522.00	130.80	2.71	13.60
26/12/2023	33.02	16.84	93.30	21.02	1322.00	186.70	1.79	0.20
27/12/2023	30.35	17.15	75.73	22.24	1720.00	237.90	3.36	0.00
28/12/2023	33.07	17.09	84.10	22.82	1158.00	249.10	2.75	0.00
29/12/2023	32.48	18.13	86.00	24.55	1392.00	245.90	2.42	0.00
30/12/2023	32.77	19.59	72.28	27.34	1337.00	189.70	3.80	0.00
31/12/2023	20.91	16.13	89.60	59.79	695.80	115.50	5.02	0.00