

Tasmania Office 76 York Street Launceston TAS 7250

T +61 (0)8 9227 9355 F +61 (0)8 9227 5033

www.syrinx.net.au ABN: 39 092 638 410



BURNIE WASTE MANAGEMENT CENTRE

WETLAND EPN 9421/2 ANNUAL ENVIRONMENTAL REVIEW JULY 2022 – OCTOBER 2023

December 2023



Document Control

Report	14010RPT042						
Version	Date	Prepared by	Approved	Issue Details			
1	13.12.23	LS, AC					

Limitations of Report

Syrinx Environmental PL has prepared this report as a professional consultant. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has not been prepared for the use, perusal or otherwise, by parties other than the Client, the Owner and their nominated consulting advisors without the consent of the Owner. No further information can be added without the consent of the Owner, nor does the report contain sufficient information for purposes of other parties or for other uses. The information contained in this report has been prepared in good faith, and accuracy of data at date of issue has been compiled to the best of our knowledge. However, Syrinx Environmental PL is not responsible for changes in conditions that may affect or alter information contained in this report before, during or after the date of issue.

Syrinx Environmental PL accepts site conditions as an indeterminable factor, creating variations that can never be fully defined by investigation. Measurements and values obtained from sampling and testing are indicative within a limited time frame and unless otherwise specified, should not be accepted as actual realities of conditions on site beyond that time frame.

© 2023 Syrinx Environmental PL

Except as provided by the Copyright Act 1968, no part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior written permission of Syrinx Environmental PL. Enquiries should be directed to the Corporate Intellectual Property Officer.

TABLE OF CONTENT

EXE	CUTIVE SUMMARY	1
ANN	UAL WETLAND ENVIRONMENTAL REVIEW	2
1.0	INTRODUCTION	2
1.1	PROJECT BACKGROUND	2
1.2	EPN 9421/2 MONITORING AND REPORTING REQUIREMENTS	2
1.2.1	Relationship with Other EPN's and Compliance Documents	4
2.0	SYSTEM MONITORING SAMPLING PLAN (CONDITIONS G8 1.6, M2, M3, M4, M5, M6)	6
2.1	SITE DETAILS	6
2.2	REFERENCES TO GUIDELINES (CONDITIONS M3-1.1)	6
2.3	SAMPLING LOCATIONS AND FREQUENCY	6
2.4	ANALYTICAL LABORATORY DETAILS (CONDITION M3-1.2, M4-1.1)	6
2.5	QUALITY ASSURANCE (QA) / QUALITY CONTROL (QC)	7
2.6	RESPONSIBLE PERSONNEL (CONDITION M4-1.2)	7
3.0	ANNUAL MONITORING RESULTS	7
3.1	FLOWS (CONDITION M4-1.3)	7
3.1.1	Rainfall	7
3.1.2	System Flows (Condition G8 1.4, 1.6)	10
3.1.3	Summary of Volumes Measured Through the System	13
3.1.4	Estimated Leachate Volumes Versus Measured Leachate Volumes	15
3.2	RECIRCULATION EVENTS (CONDITION M4-1.6)	17
3.2.1	Background to the requirement for recirculation	17
3.2.2	Recirculation events during the monitoring period	17
3.3	WATER QUALITY (CONDITIONS M2, M4-1.4, 1.5)	17
3.3.1	Water Quality Data – Continuous Monitoring	17
3.3.2	In situ Electrical Conductivity Monitoring	18
3.3.3	In situ Temperature Monitoring	18
3.3.4	In situ pH Monitoring	18
3.3.5	Issues and Maintenance Undertaken on the <i>in-situ</i> Probes (Condition M3-1.4)	18
3.3.6	Water Quality Data – Laboratory Results (Condition G8 1.6)	25
3.3.7	Water Quality Investigations Conducted During the Reporting Period (G8 1.7)	31
3.3.8	Groundwater Quality Results	31
3.3.9	Quality Control	32
3.4	RESULTS OF LANDFILL SETTLEMENT (CONDITION M4-1.7)	33
3.5	RESULTS OF PIEZOMETER MONITORING (CONDITION M4-1.7)	35

4.0 ENVIRONMENTAL PERFORMANCE

35

4.1 4.2 4.3 4.3.1 4.4 4.5	PUBLIC COMPLAINTS (EPN CONDITION G8 1.2) PROCEDURAL OR PROCESS CHANGES (EPN CONDITION G8 1.3) WASTE MINIMISATION INITIATIVE (EPN CONDITION G8 1.4) Sludge removal, treatment, and reuse DETAILS OF INCIDENTS OR NON-COMPLIANCE WITH THE EPN (EPN CONDITION G8 1.5) SUMMARY OF COMMUNITY CONSULTATION / COMMUNICATION (CONDITION G8 1.10)	35 35 37 37 37 37
5.0	SUMMARY OF RESULTS AND COMPLIANCE (CONDITION G8 1.9)	39
6.0	CONCLUSIONS	39
REFE	ERENCES	40
APPE	ENDICES	41

LIST OF TABLES

Table 1. System compliance with the water quality trigger limits listed in EPN 9421/2	1
Table 2 Summary of EPN 9421/2 (draft) Conditions that relate to the Annual Environmental Review	3
Table 3. Personnel undertaking monitoring program for the reporting period	7
Table 4 : Rainfall measured on the BWMC Site current and previous reporting periods.	8
Table 5. Volumes of leachate and treated leachate measured current reporting period and the previous months.	s 12 15
Table 6 Comparison of estimated volumes of treated leachate (DPEMP, 2015) versus measured volume treated leachate for the period 1 st November 2022 to 31 st October 2023.	s of 16
Table 7 Water quality trigger limits as set in the EPN 9421/2	25
Table 8. System compliance with the water quality trigger limits listed in EPN 9421/2.	31
Table 9 Summary of data from QA/QC samples and an assessment against their primary sample	32
Table 10: Summary of the height of each settlement survey marker in mAHD.	34
Table 11: Results from the treatment and testing of manganese contaminated sludge.	38

LIST OF FIGURES

Figure 1: Schematic of the treatment system and compliance monitoring locations sampled to satisfy EPN 9421/2. 5
Figure 2. Daily rainfall data recorded at the Burnie Waste Management Centre (Source: Burnie City Council). 9
Figure 3. Daily volumes of influent (untreated) landfill leachate pumped via INF into the treatment wetland. 11
Figure 4. Daily volumes of treated leachate which passed through EFF1 prior to infiltration in the Wet Infiltration Forest.
Figure 5. Daily volumes of treated leachate which passed through the V-notch weir at EFF2 prior to discharging to the unnamed tributary of Cooee Creek. 14
Figure 6. Hourly ammonia concentrations as measured by an <i>in-situ</i> water quality probe at EFF120
Figure 7. Hourly electrical conductivity concentrations as measured by an <i>in-situ</i> water quality probe at EFF1. 21
Figure 8. Hourly temperature measurements as measured by an <i>in-situ</i> water quality probe at EFF1. 22
Figure 9. Hourly pH measurements as determined by <i>in-situ</i> water quality probe at EFF1.23
Figure 10. Hourly pH measurements as determined by <i>in-situ</i> water quality probe at EFF1 with all values > 8.0 removed. 24
Figure 11. Ammonia concentrations in the influent (INF), discharge from the surface wetlands (EFF1) andeffluent discharge to the unnamed tributary to Cooee creek (EFF2).26

Figure 12. Total chromium concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2). 27

Figure 13. Total copper concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2). 28

Figure 14. Total nickel concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2). 29

Figure 15. Total zinc concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2). The red line shows the EPN trigger limit.

Figure 16: Leachate levels as measured by piezometers at several locations surrounding the landfill cap. Note that piezometers at MW21 and MW22 were removed during construction of the wetland. 36

LIST OF APPENDICES

Appendix 1 Table of Monitoring Parameters and Frequencies	42
Appendix 2 Laboratory Analytical Data	47
Appendix 3 Tabulated Field and Laboratory Data	48
Appendix 4 Leachate Treatment Wetland Settlement Monitoring Data	51

30

ABBREVIATIONS

The following terms are used in the document.

Abbreviation or acronym	What it stands for
AEST	Australian Eastern Standard Time
BCC	Burnie City Council
ВоМ	Bureau of Meteorology
BWMC	Burnie Waste Management Centre
EFF1	Monitoring Location – Effluent 1
EFF2	Monitoring Location – Effluent 2
EPN	Environmental Protection Notice
GW01	Monitoring Location – Groundwater 1
INF	Monitoring Location – Header Tank
IB	Infiltration Basin(s) - Wet Infiltration Forest
LOR	Limit of Reporting
MH01	Monitoring Location – Manhole 1
QA/QC	Quality Assurance/Quality Control
SB04	Monitoring Location – also EFF1
SYR	Syrinx Environmental

EXECUTIVE SUMMARY

The Burnie Waste Management Centre (BWMC) at 289 Mooreville Rd, Burnie, Tasmania operates a Leachate Treatment Wetland system for treatment and disposal of leachate generated from Stage 1 landfill. The wetland operates under Environmental Protection Notice (EPN) 9421/2 (draft revision of EPN 9421/1) which governs the operation of the system and provides specific water quality trigger values to assess compliance. This report is the Annual Wetland Environmental Review required under Condition G8.

Annual water quality sampling was undertaken by Syrinx Environmental PL during the reporting period of July 2022 to October 2023 to determine the compliance of the system with the conditions of the EPN. During the reporting period, the mean concentration of the key water quality parameters (ammonia, chromium, copper, nickel, and zinc) <u>did not exceed trigger concentrations set out within the EPN</u> (see Table 1). As such, the <u>system was deemed compliant</u> with the water quality conditions in the Environmental Protection Notice 9421/2 during the reporting period.

Date range of data:	Sep-22 to	0 ct-23					
Water Quality Parameter	EPN Condition	Sampling Location	Mean Concentration **	Max imum Concentration	EPN Trigger Lim it	Unit	Compliance with EPN 9421/2
Ammonia	EF1 - 1	EFF2	0.193	0.510	1.61		✓
AIIIIIOIIIa	EF2 - 1	EFF1	0.692	1.200	1.61		✓
Chromium (total)			0.0005	< 0.001	0.0010	mg/L	 ✓
Copper (total)	FF2 - 3*	EFF1	0.0006	< 0.001	0.0014	IIIg/L	×
Nickel (total)	EFZ - 3"		0.0055	0.0060	0.0110		✓
Zinc (total)	1		0.0025	<0.005	0.0080		×

Table 1. System com	pliance with the water	quality trigger limits	listed in EPN 9421/2
		quanty 11.990	

Legend

✓ Water quality parameter is below the respective trigger limit defined in EPN 9421/1

✗ Water quality parameter exceeds the respective trigger limit defined in EPN 9421/1

* It has been assumed that the EPN trigger limits for metals were intended to be in μ g/L rather than mg/L as was printed in the EPN. The higher, less stringent values printed in the EPN have been converted accordingly by a factor of 1000 and have been used in the above table.

** The arithmetic mean was used to calculate these values. Where a concentration was below the limit of detection, the concentration was taken at 50% of the limit of detection to enable the calculation.

ANNUAL WETLAND ENVIRONMENTAL REVIEW

1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

Burnie City Council (BCC) owns and operates the Burnie Waste Management Centre (BWMC) at 289 Mooreville Road, Burnie Tasmania (hereafter, "the site"). Within the BWMC, a Leachate Treatment Wetland system (hereafter referred to as "the system") has been constructed to treat and dispose of leachate generated from the Stage 1 landfill area. The system was constructed in late 2016 with the commissioning period completed in June 2017; the operational phase commenced in July 2017.

An overall site map is provided in Figure 1 showing the various components and sampling locations within the system. A brief description of the wetland function is provided in Section 2.1 and is discussed in greater detail in previous Annual Environmental Reports.

Since July 2022 the site has operated under Environmental Protection Notice (EPN) 9421/2 (hereafter, "the EPN"), which is a draft revised edition of the original EPN 9421/1, issued on the 5th of February 2016 by the Tasmanian Environmental Protection Agency (EPA). The revised EPN included all of the same conditions as the original, except for a reduction in sampling frequencies to annual for all analytes not already monitored remotely. This reduction was granted based on the system's ongoing and consistent performance since commissioning.

1.2 EPN 9421/2 MONITORING AND REPORTING REQUIREMENTS

A summary of the EPN Conditions that relate to the Annual Environmental Review is presented in Table 2 This Annual Wetland Environmental Review covers the reporting period from the <u>1st of July</u> <u>2022 to the 31st of October 2023</u> in fulfilment of Condition G of the EPN. Continuous (telemetric) monitoring and annual sampling are performed as required by the EPN to ensure system compliance and efficacy. These requirements are fully outlined in the EPN and discussed in further detail in previous Annual Environmental Reports.

Note, the last report produced for EPN 9421/1 covered the then annual reporting period of July 2021 – June 2022. Since then, sampling was conducted in July, August, September, and October of 2022, and most recently in October 2023 (full annual sampling suite). As such, the period of time from July - October 2022 lies outside of this 'annual' reporting period. For the ease of interpretation, many graphs and statistics within this report have been organised to cover the previous 12 or 24 months from October 2023, and do not strictly cover the July – October 2022 period (*i.e.,* rainfall and flows). Despite this, chemical analytes which have an EPN condition associated have been reported on to fully include the July – October 2022 period (*i.e.,* effluent water quality), allowing for a full interpretation of the data collected since the last report was produced against EPN conditions.

This report should be read in conjunction with several other documents which include:

 Burnie Waste Management Centre Stage 1 Landfill Leachate Treatment Wetland Development Proposal & Environmental Management Plan (DPEMP);

- Relevant technical drawings;
- Environmental Protection Notice 9421/1;
- Environmental Protection Notice 9421/2 (draft version);
- BWMC Operation and Maintenance Manual (O & M Manual); and
- Previous annual report(s).

The DPEMP contains detailed design information, historical water quality and volumetric data including the modelling used to inform the system's design. The O & M Manual contains information about the system layout and operational details. All water quality data collected during monitoring events is compiled into a comprehensive, system-specific database which is used to assess performance and any changes within the treatment system.

Table 2 Summary of EPN 9421/2 (draft) Conditions that relate to the Annual Environmental Review

G8	Annual Environmental Review
1	Unless otherwise specified in writing by the Director, a publicly available Annual Environmental Review for the activity must be submitted to the Director each year within three months of the end of the reporting period. Without limitation, each Annual Environmental Review must include the following information:
1.1	A statement by the General Manager, Chief Executive Officer or equivalent for the activity acknowledging the contents of the Annual Environmental Review;
1.2	Subject to the Personal Information Protection Act 2004, a list of all complaints received from the public during the reporting period concerning actual or potential environmental harm or environmental nuisance caused by the activity and a description of any actions taken as a result of those complaints;
1.3	Details of environment-related procedural or process changes that have been implemented during the reporting period;
1.4	A summary of the amounts (tonnes or litres) of both solid and liquid wastes produced and treatment methods implemented during the reporting period. Initiatives or programs planned to avoid, minimise, reuse, or recycle such wastes over the next reporting period should be detailed;
1.5	Details of all non-trivial environmental incidents and/or incidents of non compliance with these conditions that occurred during the reporting period, and any mitigative or preventative actions that have resulted from such incidents;
1.6	A summary of the monitoring data and record keeping required by these conditions. This information should be presented in graphical form where possible, including comparison with the results of at least the preceding reporting period. Special causes and system changes that have impacted on the parameters monitored must be noted. Explanation of significant deviations between actual results and any predictions made in previous reports must be provided;
1.7	Identification of breaches of limits specified in these conditions and significant variations from predicted results contained in any relevant DPEMP or EMP, an explanation of why each identified breach of specified limits or variation from predictions occurred and details of the actions taken in response to each identified breach of limits or variance from predictions;
1.8	A list of any issues, not discussed elsewhere in the report, that must be addressed to improve compliance with these conditions, and the actions that are proposed to address any such issues;
1.9	A summary of fulfilment of environmental commitments made for the reporting period. This summary must include indication of results of the actions implemented and explanation of any failures to achieve such commitments; and
1.10	A summary of any community consultation and communication undertaken during the reporting period.

1.2.1 Relationship with Other EPN's and Compliance Documents

The EPA has issued two Environmental Protection Notices and one Environmental Approval in relation to activities onsite at the BWMC:

- Environmental Protection Notice No. 9161/2, known as the 'Site EPN' which comprises quarterly monitoring (7 locations on site), and annual reporting.
- Environmental Approval M481808 ck (hereafter, "EA M481808 ck"), which relates to EPA approval to treat and apply manganese-contaminated sludge on site. On the 4th July 2019, the EPA approved BCC to continue the onsite storage, treatment, and reuse of manganese-contaminated sludge from the landfill leachate wetlands treatment system subject to the conditions of "EA M481808 ck".

This report is a requirement under 'draft EPN 9421/2' which specifically covers the Stage 1 Leachate Treatment Wetland system.

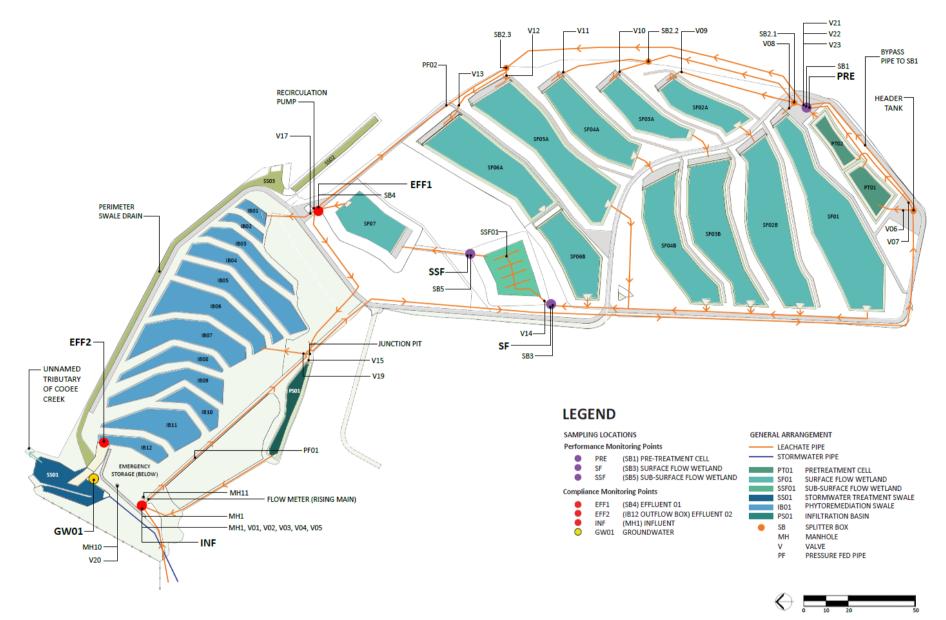


Figure 1: Schematic of the treatment system and compliance monitoring locations sampled to satisfy EPN 9421/2.

2.0 SYSTEM MONITORING SAMPLING PLAN (CONDITIONS G8 1.6, M2, M3, M4, M5, M6)

2.1 SITE DETAILS

A site map depicting system components and sampling locations within the system is shown in Figure 1. Stage 1 landfill leachate is collected within Manhole 1 (MH1) from where it is pumped to the Header Tank (the "INF" monitoring location). Leachate is treated throughout the system and eventually flows to the Wet Infiltration Forest (EFF1) before discharging into an unnamed tributary of Cooee Creek at EFF2. The system's function is discussed in greater detail in previous annual reports (Syrinx, 2022a & Syrinx, 2022b).

2.2 REFERENCES TO GUIDELINES (CONDITIONS M3-1.1)

Sample collection was conducted by qualified Syrinx Environmental (Syrinx) staff in line with the methodology outlined in the Australian/New Zealand Standards for Water Quality Sampling (AS/NZS 5667.1:1998).

2.3 SAMPLING LOCATIONS AND FREQUENCY

The original iteration of the EPN outlined a suite of surface water and groundwater sampling with various parameters being sampled from a monthly to annual frequency. On the 21^{st of} February 2023, the EPA issued a draft update of EPN 9421/2. The primary change included in this update was a reduction of all surface water and groundwater sampling frequencies to annual, for all parameters except for those which are monitored remotely (ammonia, electrical conductivity, pH, temperature, and flow) as required by Condition M2 of the EPN (Appendix 1).

The four monitoring locations are shown in Figure 1 and include:

- Influent (INF): influent leachate;
- Effluent point 1 (EFF1): treated leachate, released to the Wet Infiltration Forest;
- Effluent point 2 (EFF2): treated leachate, released as surface water to the creek; and
- Groundwater location (GW01): artesian bore, released to creek

Note that the INF sample was taken from the header tank rather than via the MH1 manhole, as the header tank is more easily accessible and the risk of falling or tripping into MH1 is then avoided.

2.4 ANALYTICAL LABORATORY DETAILS (CONDITION M3-1.2, M4-1.1)

The analytical laboratory used to carry out the water quality testing presented in this report was ALS Environmental Services in Springvale, VIC, Australia. ALS is a NATA certified laboratory.

2.5 QUALITY ASSURANCE (QA) / QUALITY CONTROL (QC)

The duplicate sampling rate objective for the reporting period was 1 in per 20 primary samples. Two duplicate samples were taken during the reporting period to satisfy this objective. A summary of the QA/QC samples collected is provided in Section 3.3.9.

2.6 **RESPONSIBLE PERSONNEL (CONDITION M4-1.2)**

The contact details for the personnel undertaking monitoring program are shown in Table 3 below.

Table 3. Personnel undertaking monitoring program for the reporting period

Person Company		Role	Contact Email	Phone
Lachlan Stemp	Syrinx	Data analysis, reporting	lstemp@syrinx.net.au	0481 098 647
Suzanne Walker	Syrinx	Water quality sampling	swalker@syrinx.net.au	0487 095 409
Dr Annachiara Codello	Syrinx	Report Review / Quality Assurance	acodello@syrinx.net.au	08 9227 9355

3.0 ANNUAL MONITORING RESULTS

3.1 FLOWS (CONDITION M4-1.3)

To satisfy condition M4-1.3 of the EPN, the volumes and flows of leachate entering and leaving the system during the reporting period were recorded by the telemetry system and have been summarised in tabulated and graphical form in the sections below. Throughout this document the term "volume" is used to describe the amount of leachate calculated (hereafter, "measured") at the INF, EFF1 and EFF2 locations.

Volumes and flows of leachate through the system are influenced by rainfall. As such, rainfall data for the reporting period is discussed in Section 3.1.1 to provide additional context to the flow monitoring results.

3.1.1 Rainfall

Rainfall is expected to increase the volume of treated leachate measured at EFF1 and EFF2, and prolonged and substantial rainfall is also expected to impact (reduce) the infiltration capacity of the Wet Infiltration Forest. Rainfall data is measured at the BWMC site and is shown in Figure 2. A tabulated summary of monthly rainfall data from the BWMC site is provided in Table 4. In the current reporting period (November 2022 – October 2023) there were 158 rainfall days, one less than the previous 12 months (Table 4). Despite this similarity in rainfall days, there was 30% less rainfall in the current reporting period than in the previous, a reduction of 366 mm.

Figure 2 displays the daily rainfall over the previous 24 months. Most of the current reporting period's rainfall fell from June – August 2023, although November 2022 was also relatively wet (Table 4, Figure 2).

The long-term (2007 – 2022) mean annual rainfall is 1,098 mm (\pm 225 mm), with the current reporting period (November 2022 – October 2023) falling well below this at 869 mm.

	Month	Daily Rainfall (mm)			Number of Days	Total Rainfall
	WOITT	Range			with Rainfall	(mm)
5	November 2021	0.0	-	10.0	14.0	61.0
2022	December 2021	0.0	-	7.0	4.0	11.0
	January 2022	0.0	-	30.0	12.0	112.0
q	February 2022	0.0	-	25.0	5.0	42.0
October	March 2022	0.0	-	46.0	8.0	109.0
ī	April 2022	0.0	-	30.0	11.0	62.0
2021	May 2022	0.0	-	22.0	17.0	118.0
	June 2022	0.0	-	42.0	19.0	145.0
pel	July 2022	0.0	-	15.0	15.0	59.0
en l	August 2022	0.0	-	23.0	22.0	155.0
November	September 2022	0.0	-	21.0	16.0	98.0
z	October 2022	0.0	-	58.0	16.0	263.0
	November 2021 - O	ctober 20)22 Su	mmary	159	1235

Table 1 ·	Rainfall measured	on the BWMC	Site current and	nrovious ro	norting periods
Table 4.	Railliali measuleu		Sile current and	previous re	porting perious.

	November 2022	0.0	-	34.0	16.0	135.0
2023	December 2022	0.0	-	7.0	5.0	15.0
	January 2023	0.0	-	9.0	7.0	26.0
October	February 2023	0.0	-	15.0	5.0	42.0
cto	March 2023	0.0	-	16.0	16.0	72.0
	April 2023	0.0	-	20.0	12.0	56.0
2022	May 2023	0.0	-	7.0	15.0	32.0
	June 2023	0.0	-	30.0	26.0	180.0
pei	July 2023	0.0	-	27.0	17.0	116.0
November	August 2023	0.0	-	23.0	15.0	95.0
<u>}</u>	September 2023	0.0	-	12.0	12.0	46.0
2	October 2023	0.0	-	15.0	12.0	54.0
	November 2022 - O	ctober 20)23 Su	158	869	
	Percentag	e differe	nce	1%	30%	

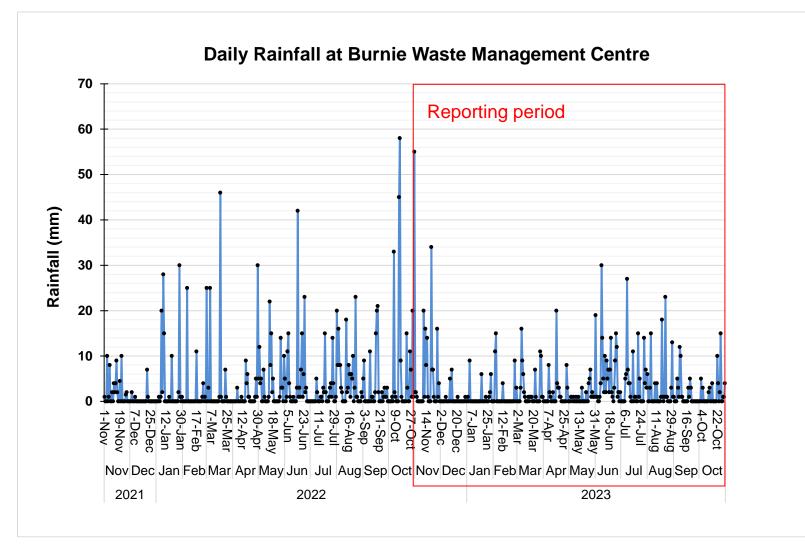


Figure 2. Daily rainfall data recorded at the Burnie Waste Management Centre (Source: Burnie City Council).

3.1.2 System Flows (Condition G8 1.4, 1.6)

Untreated Leachate Inflows – INF

The daily volumes of landfill leachate entering the system at MH01 via INF are presented in Figure 3. These volumes showed seasonal fluctuations primarily reflecting seasonal changes in rainfall, as has been observed in the past.

An increase in daily leachate volumes was observed from June 2023 through to September 2023 (range 164.55 - 523.10 kL/day, mean = 272 kL/day); this increase was much lower compared to the last reporting period (Figure 3). Last year this period had considerably higher rainfall than the same time in this reporting period (Figure 2). A total volume of 133 ML entered the wetland in this reporting period.

Treated Leachate Volumes - EFF1

The volume of treated leachate discharging to the Wet Infiltration Forest is measured at EFF1 (Figure 1). The Wet Infiltration Forest receives, and infiltrates treated leachate into the soils, with overflows being discharged into the unnamed creek system.

The daily volume (kL/day) of leachate treated by the system and exiting via EFF1 is shown in Figure 4. The general trend of flows through EFF1 correspond to the flows entering the system at INF. Spikes in volume at EFF1 are attributed to direct addition of rainfall into treatment cells and the addition of run-off. The total volume of treated leachate as measured at EFF1 during the reporting period was 102 ML. The 'wet year' leachate volume prescribed in *Development Proposal & Environmental Management Plan* (DPEMP, 2015) is any year totalling > 45 ML.

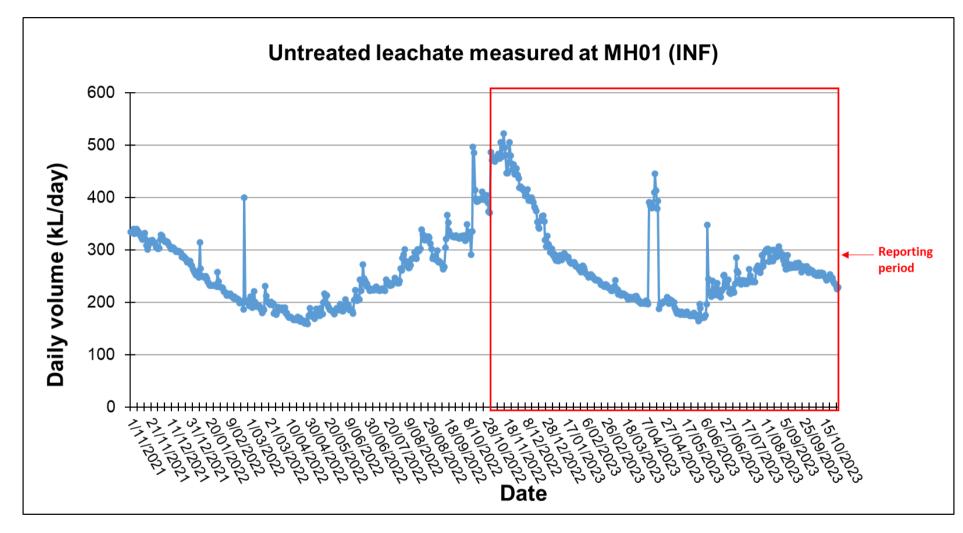


Figure 3. Daily volumes of influent (untreated) landfill leachate pumped via INF into the treatment wetland.

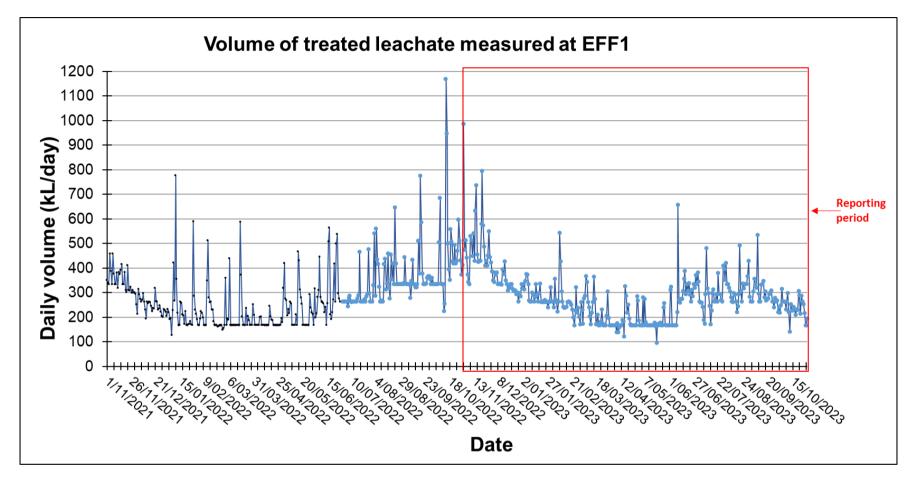


Figure 4. Daily volumes of treated leachate which passed through EFF1 prior to infiltration in the Wet Infiltration Forest.

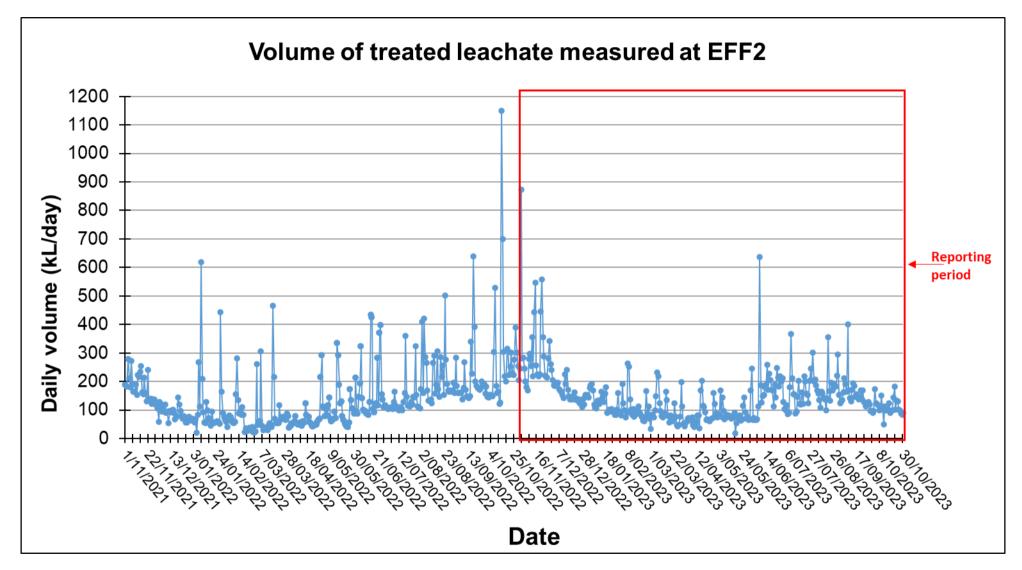
Outlet of Wet Infiltration Forest - EFF2

EFF2 measures the volume of leachate exiting the Wet Infiltration Forest (Figure 5). The daily volume of treated leachate discharged (by overland flow) via EFF2 to the unnamed tributary of Cooee Creek is shown in Figure 5. Peaks shown in Figure 5 (EFF2) mirror those in Figure 4 (EFF1). Differences in treated volume between EFF2 and EFF1 are attributed to rainfall captured within the Wet Infiltration Forest which results in overland flow discharging into EFF2. The total volume of leachate flow through EFF2 during this reporting period was 52 ML.

3.1.3 Summary of Volumes Measured Through the System

Mean and median daily treated leachate volumes and total volumes for the reporting period are summarised in Table 5. Untreated leachate entering the system (INF) has a more stable flow than treated leachate exiting the system (EFF1). This is apparent when comparing the mean, standard deviation, and range of flows between INF and EFF1, where INF has a low mean, lower median, and much more constricted range, indicating more steady flow with less spikes or anomalous highs. These differences were attributed to direct rainfall inputs which coincided with increased volumes at EFF1 (Figure 2, Figure 4).

Direct rainfall accounted for the net increase in volume of 3.5 ML during this reporting period or 3.4% of the total volume measured via EFF1 assuming no evapotranspiration (Table 5). 49.2 ML or 49.1% of the total treated leachate which passed through EFF1 was infiltrated within the Wet Infiltration Forest. The remaining 51.0 ML was discharged by overland flow to the unnamed tributary of Cooee Creek. The net volume added into the treatment system from rainfall inputs during the current reporting period was 9.1 ML lower than previous 12-month period, as reflected in the decreased rainfall recorded on site (Table 4).



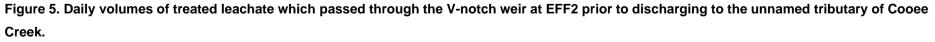


Table 5. Volumes of leachate and treated leachate measured current reporting period and the previous 12 months.

		Sum volume over								
Location	Mean ± St. Dev	Median	Unit	reporting period (kL)						
INF (A)	255 ± 65	240	158 - 497		92,763					
EFF1 (B)	289 ± 124	263	128 - 1,167	kL/day	105,287					
EFF2 (C)	144 ± 115	115	20 - 1,150		52,536					
Net volume added to	Net volume added to the treatment system by rainfall (B-A)									
Net volume added to	3)	11.9%								
Net volume of treate	52,750									
Net volume infiltrat	50.1%									
Flows in current	reporting period	d (November 20	22 - October 202	23)						

Flows in previous 12 months (November 2021 - October 2022)

Leasting		Sum volume over				
Location	Mean ± St. Dev	Median	Range	Unit	reporting period (kL)	
INF (A)	260 ± 70	96,790				
EFF1 (B)	301 ± 127	264	128 - 797	kL/day	100,247	
EFF2 (C)	154 ± 112	120	21 - 645		50,999	
Net volume added to		3,457				
Net volume added to	3.4%					
Net volume of treate	(B-C)	49,247				
Net volume infiltrat	ed (B-C) as a perce	entage of total flo	ws at (B)		49.1%	

3.1.4 Estimated Leachate Volumes Versus Measured Leachate Volumes

Table 6 compares the differences in volume between the estimated average daily volumes at EFF1 and EFF2 as described in the DPEMP (2015) with the actual volumes measured during the period 1st November 2022 to 31st October 2023. This table shows that annual mean volume measured at EFF1 was 19% less than the estimated volume. At EFF2, the measured volume was 128% greater than the volume estimated to be discharged (Table 6). It is assumed that this discrepancy is due to the soils in the Infiltration Wet Forest (silty clays and sandy clays) reaching their infiltration capacity (saturation), resulting in a reduced capacity to consistently infiltrate the soil. As a result, the actual average daily infiltrated volume was reduced by 51% compared to the estimates (Table 6). This observation was consistent with the assumptions described in the DPEMP which stated that discharge via overland flows to the unnamed Creek would occur during high or prolonged seasonal rainfall events, as soil profiles would be saturated. Further, the total volume of treated leachate measured at EFF1 during the reporting period (100 ML, Table 5) was greater than the volume contemplated in the DPEMP to represent a wet year (46 ML) (DPEMP, 2015). Overall infiltration was 7% less than in the previous reporting period.

It is worth noting that the discrepancy from the DPEMP assumptions in this reporting period are consistent with long-term trends.

Table 6 Comparison of estimated volumes of treated leachate (DPEMP, 2015) versus measured volumes of treated leachate for the period 1st November 2022 to 31st October 2023.

		Nov	Dec	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Annual mean			
	EFF1 (DPEMP, 2015)	383.9	314.5	255.4	225.3	264.5	264.5	312.6	322.7	327.3	526.2	556.8	482.1	353.0	%	6	
Estimated mean daily volume (kL/day)	EFF2 (DPEMP, 2015)	38.2	177.6	187.0	123.4	49.8	24.5	35.3	15.9	24.4	17.7	36.5	40.9	64.3		<u>%</u>	6
	Mean volume infiltrated	345.7	136.9	68.4	101.9	214.7	240.0	277.3	306.8	302.9	508.5	520.3	441.2	288.7			
	% volume infiltrated	90%	44%	27%	45%	81%	91%	89%	95%	93%	97%	93%	92%	78%]		
	EFF1 (2022 - 2023)	503.6	336.3	292.3	267.6	224.8	193.9	179.0	298.5	296.1	313.6	295.9	239.5	286.8			
Measured mean daily	EFF2 (2022 - 2023)	309.4	160.3	128.9	108.3	96.7	85.6	82.5	179.0	165.3	177.6	156.3	109.9	146.7		·	
volume (kL/day)	Mean volume infiltrated	194.2	176.0	163.4	159.3	128.1	108.3	96.5	119.5	130.8	136.0	139.6	129.6	140.1			
	% of mean volume infiltrated	39%	52%	56%	60%	57%	56%	54%	40%	44%	43%	47%	54%	50%			
Comparison of estimated versus measured volume										/							

Comparison of estimated versus measured volume

EFF1	Percentage difference in volume measured at EFF1 compared to the estimated volume	19%	less volume than estimat
EFF2	Percentage difference in volume measured at EFF2 compared to the estimated volume	128%	more volume than estimat
Volume infiltrated	Percentage difference in volume infiltrated by the Infiltration Wet Forest as a percentage of the estimated infiltrated volume		51% less volume than estimat

3.2 RECIRCULATION EVENTS (CONDITION M4-1.6)

3.2.1 Background to the requirement for recirculation

Condition EF2-1 of the EPN states that:

"...treated leachate within the polishing pond must be recirculated back into the treatment system if ammonia is detected at concentrations greater than 1.61 mg/L, and discharge is occurring to the unnamed tributary, as measured at EFF 2..."

To meet this condition the continuously monitoring telemetry system housed within the SB04 control shed (Figure 1) recirculates leachate when an ammonia reading of > 1.61 mg/L is measured at the outlet to the polishing wetland (EFF1) in conjunction with measured discharge of flows from the outlet of the infiltration forest (EFF2). During the recirculation event, the leachate is recirculated from EFF1 back into SF05A and SF06A for further treatment (see Figure 1).

3.2.2 Recirculation events during the monitoring period

<u>No recirculation occurred from July 2022 – October 2023.</u> The system was fully compliant with the EPN conditions relating to recirculation.

3.3 WATER QUALITY (CONDITIONS M2, M4-1.4, 1.5)

3.3.1 Water Quality Data – Continuous Monitoring

Continuous water quality monitoring was undertaken by a set of probes and a telemetry system at the outlet of polishing wetland monitoring point (EFF1), which provided hourly data for ammonia, electrical conductivity, pH, and temperature. An arithmetic mean for these parameters was calculated at each hourly interval.

In situ Ammonia Monitoring

Based on the pH and temperature of the system measured throughout the reporting period, a great proportion (>90%) of the total ammonia was the non-toxic ammonium form. Therefore, the *in-situ* ammonia probe measurements can be used to assess the total ammonia nitrogen concentration. Hereafter, the term "ammonia" is used in discussions regarding the *in-situ* monitoring to refer to total ammonia nitrogen (both the ionised and unionised forms).

The concentration of ammonia during the reporting period is shown in Figure 6. For all the reporting period, ammonia concentrations were below the trigger limit of 1.61 mg/L. As can be seen in Figure 6, ammonia concentrations were approximately 0.13 mg/L for the reporting period (median and mean value of 0.13 mg/L). A spike in ammonia concentration was detected on the 6^{th of} October 2022. This spike was due to a brief technical error and is reflected in a simultaneous dip in the electrical conductivity reading (Figure 7). Importantly, no recirculation events were triggered and as such <u>the system was compliant at EFF1 for ammonia.</u>

3.3.2 In situ Electrical Conductivity Monitoring

The electrical conductivity (EC) measurements across the reporting period were on average 397.4 μ S/cm (Figure 7). Fluctuations in EC coincided with rainfall events and increased flows. There were no extreme increases in EC and hence no indication that there were any adverse impacts to water quality during the reporting period.

A transmitter glitch from the 18th of August 2022 – the 6th of October 2022 went undetected due to the gap in reporting and resulted in no EC data being transmitted for this period of time.

3.3.3 *In situ* Temperature Monitoring

Temperature measurements across the previous and current reporting periods are shown in Figure 8. During this period average temperature was 13.2 °C with a range of 0.9 °C to 27.6 °C which followed the expected seasonal trends.

3.3.4 *In situ* pH Monitoring

pH of the treated leachate was generally in a circumneutral range during the reporting period, as demonstrated by the *in-situ* pH measurements at EFF1 (Figure 9). *In situ* pH measurements were comparable to laboratory pH values and were not of concern.

Anomalous pH records were recorded from 07/11/22 - 12/01/23. These spikes often lead to the pH record exceeding 8.0 (upper limit) for up to four consecutive readings (hours). This corresponds with a period of software issues with the hosting service, as noted by the telemetry service provider Cromarty. Further, the pH probe failed an initial calibration test in March 2023, which may have been a contributing factor to the errors.

These data points have been included in the reporting, although they are believed to be false and solely due to software / hardware issues, rather than a true indication of water quality. As can be seen in Figure 9, the overall trend for pH is maintained despite these spikes. There are 174 data points (1.07%) which recorded a pH \ge 8.0 during the reporting period from a total of 16,243 data points for pH. Removing this data considerably smooths the data and demonstrates that the values do not reflect an actual trend in water quality (Figure 10).

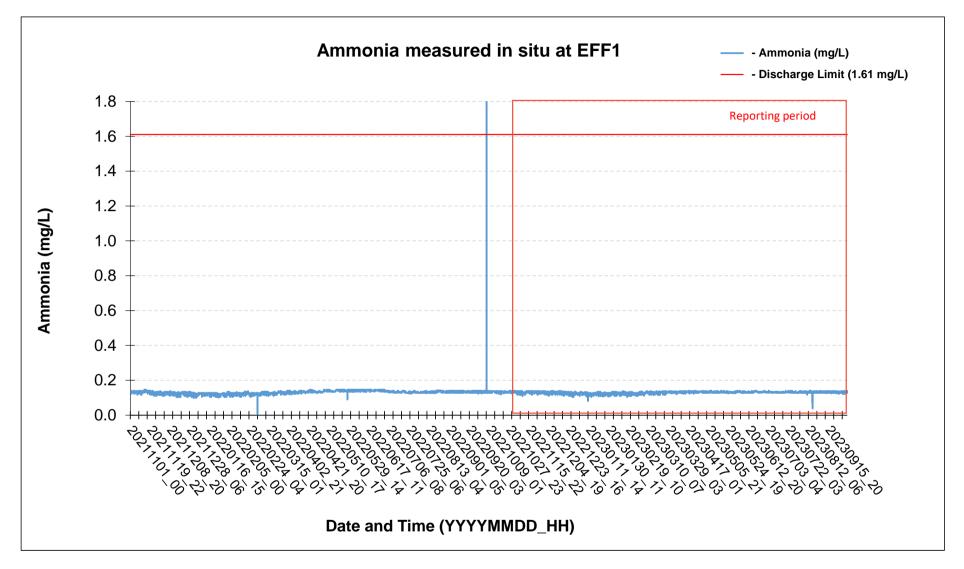
3.3.5 Issues and Maintenance Undertaken on the *in-situ* Probes (Condition M3-1.4)

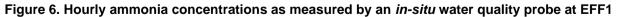
Scheduled maintenance on the in-situ probes was conducted by Cromarty.

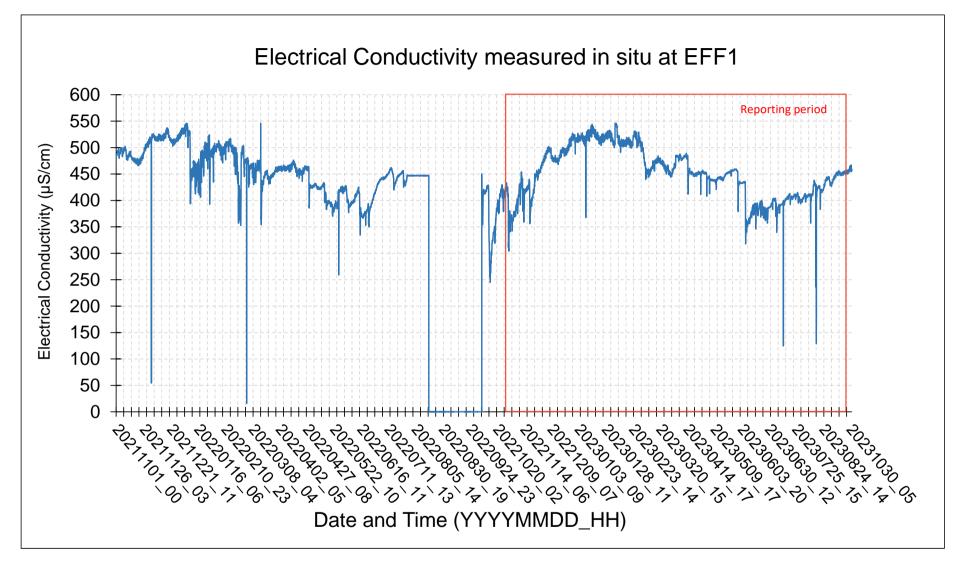
pH in situ probe

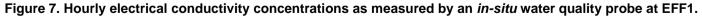
As can be seen in Figure 9, pH measurements steadily increased after calibration events which was attributed to the measurement drift of the instrument (sensor drift) rather than an actual increase in pH. The data was cross checked with the handheld field probe readings and laboratory pH measurements (Appendix 3) which showed comparable results following calibration. Sudden spikes / dips in the pH measurements shown in Figure 9 were attributed to external disruptions to the probe such as power outages or recalibration events.

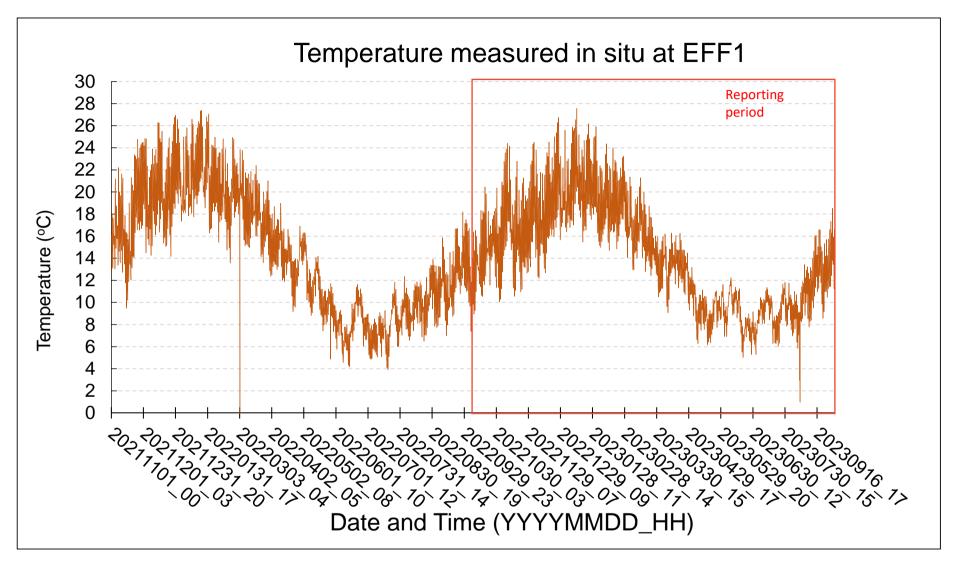
In summary, based on the *in-situ* monitoring results and taking into consideration effects associated with probe drift, effects on data from calibration events, and power outages, the **system was fully compliant with the EPN conditions related to** *in-situ* **monitoring**.



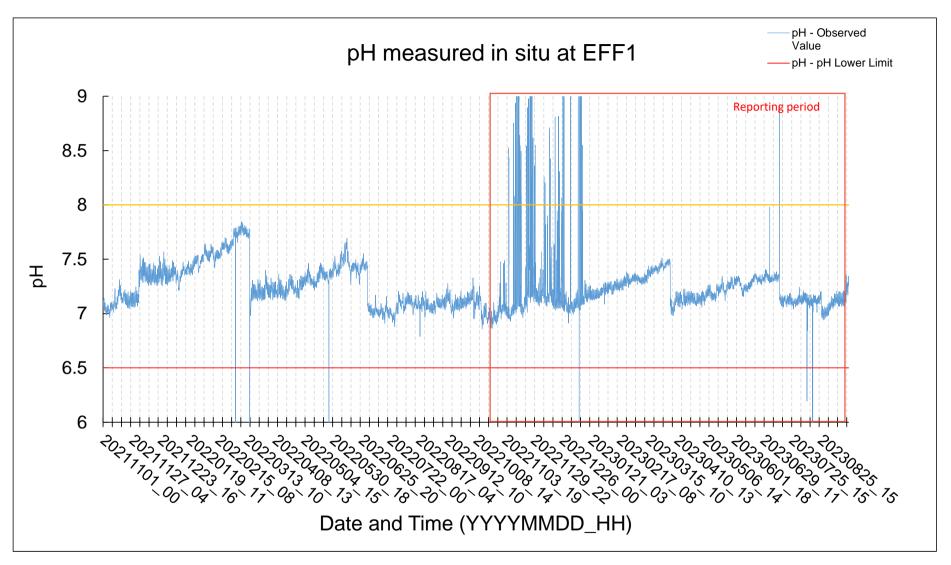














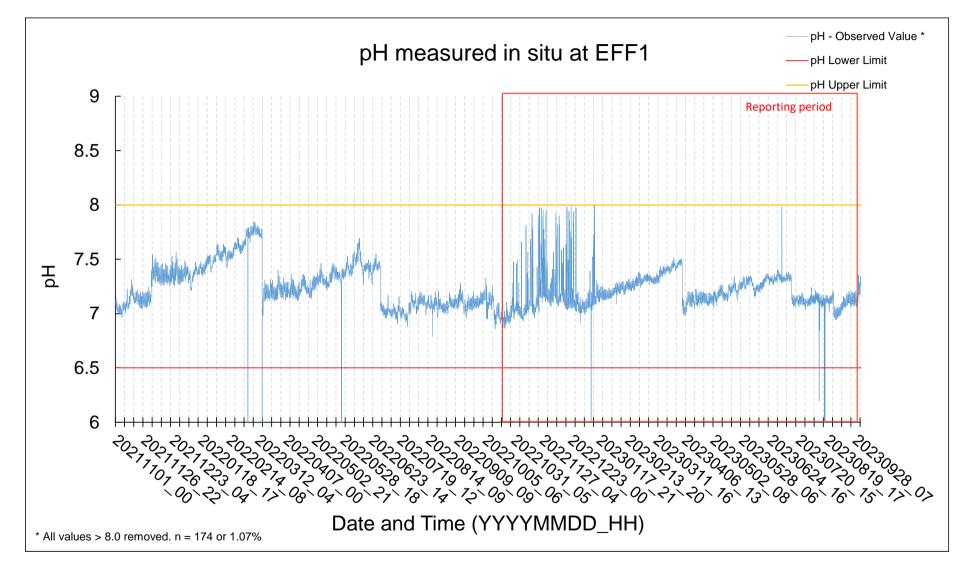


Figure 10. Hourly pH measurements as determined by *in-situ* water quality probe at EFF1 with all values > 8.0 removed.

3.3.6 Water Quality Data – Laboratory Results (Condition G8 1.6)

As outlined in Section 2.3, water quality sampling was conducted yearly at the INF, EFF1, EFF2 and GW01 sampling locations. A suite of parameters was sampled in accordance with the requirements of the EPN (see Appendix 1 for the EPN monitoring requirements). The documentation for the laboratory analysis undertaken is provided in Appendix 2, with tabulated water quality laboratory and field results provided in Appendix 3.

The five key water quality parameters with respect to the EPN (described under Conditions E1-1, EF2-3) were ammonia, copper, nickel, zinc, and chromium, with their respective trigger values shown in Table 7.

Water Quality Parameter	Unit*	EPN Trigger Limit	EPN Condition
Ammonia	mg/L	1.61	EF1 - 1
Chromium (total)	mg/L	0.001	EF2 - 3
Copper (total)	mg/L	0.0014	EF2 - 3
Nickel (total)	mg/L	0.011	EF2 - 3
Zinc (total)	mg/L	0.008	EF2 - 3

Table 7 Water quality trigger limits as set in the EPN 9421/2

*It has been assumed that the EPN trigger limits for metals were intended to be in μ g/L rather than mg/L as was printed in the EPN. The higher, less stringent values printed in the EPN have been converted accordingly by a factor of 1000 and are shown in the above table.

A summary graph for ammonia concentrations measured via laboratory analysis is shown in Figure 11. As evident in this figure, the system was fully compliant with respect to ammonia i.e., EFF1 and EFF2 ammonia concentrations were below 1.61 mg/L during the monitoring period.

The concentrations of the four total metal parameters (chromium, copper, nickel and zinc) were also below their respective trigger values as shown in Figure 12, Figure 13, Figure 14 and Figure 15.

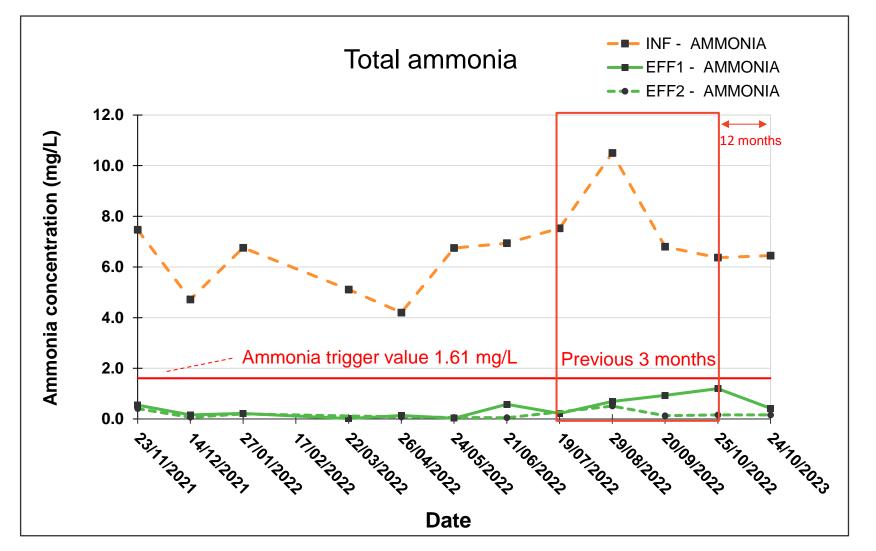


Figure 11. Ammonia concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2).

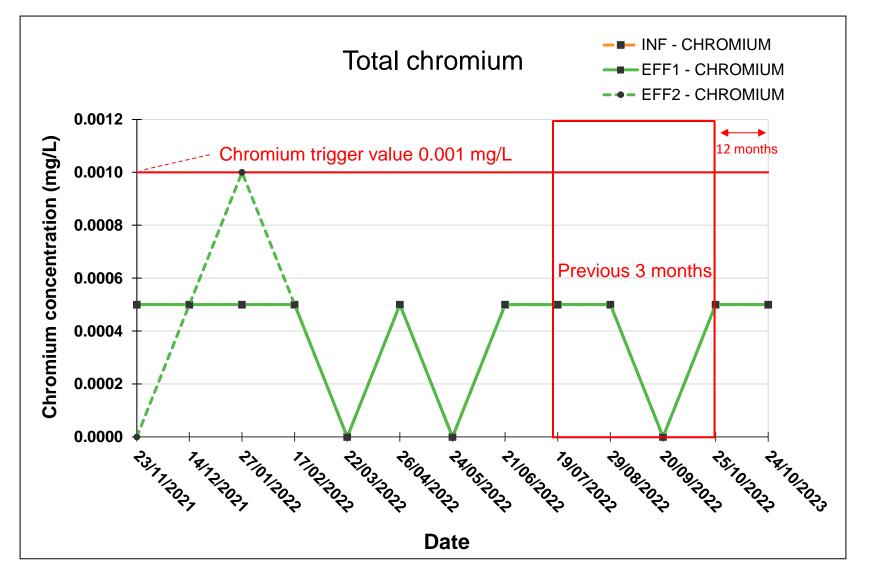


Figure 12. Total chromium concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2).

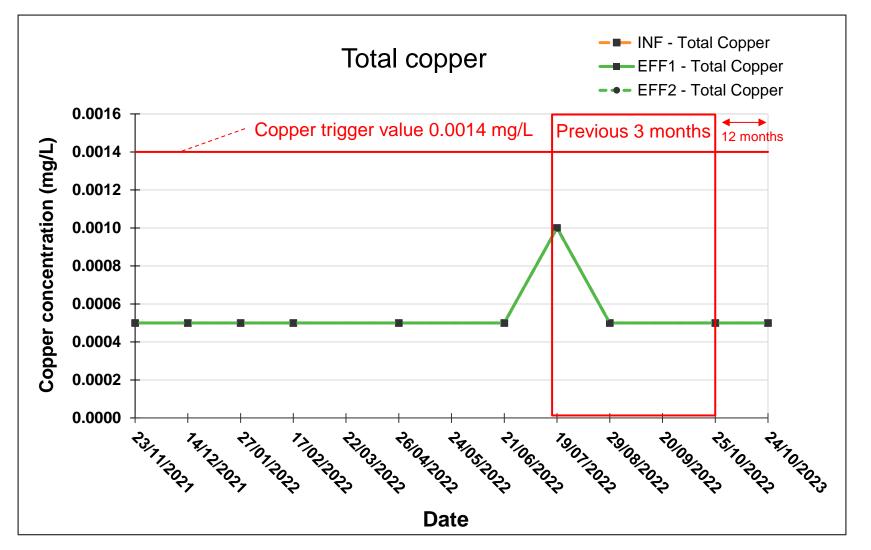


Figure 13. Total copper concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2).

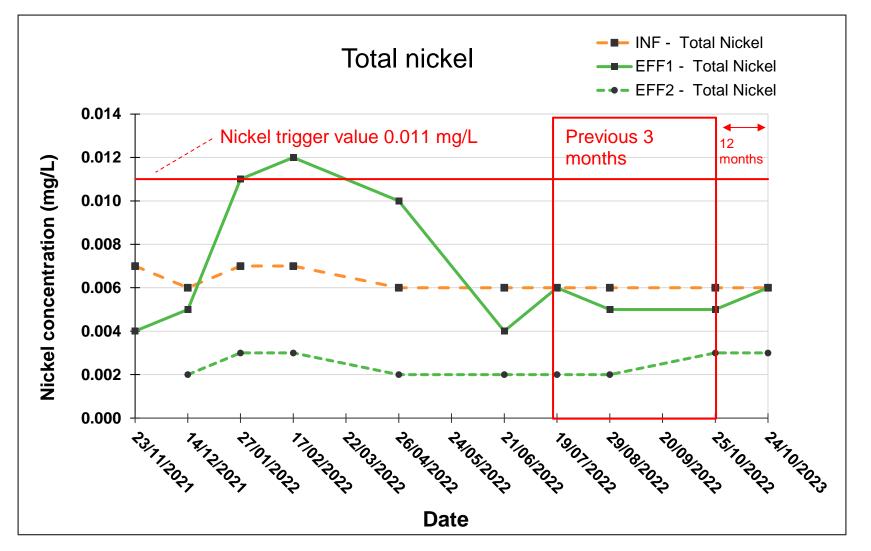


Figure 14. Total nickel concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2).

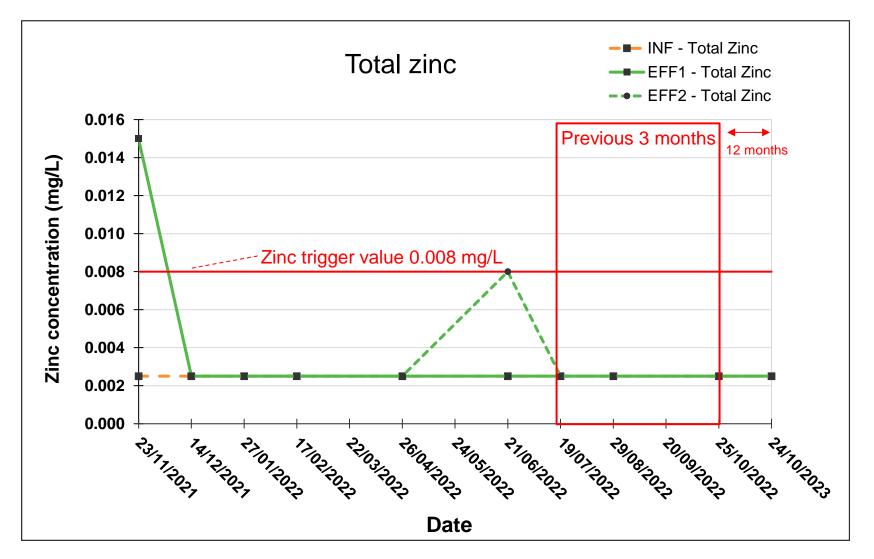


Figure 15. Total zinc concentrations in the influent (INF), discharge from the surface wetlands (EFF1) and effluent discharge to the unnamed tributary to Cooee creek (EFF2). The red line shows the EPN trigger limit.

Summary statistics for ammonia, chromium, copper, nickel, and zinc have been provided in Table 8 against their respective EPN trigger values. The arithmetic mean of the data has been presented in the table, and where the data for a parameter was below the limit of laboratory detection (e.g., <0.001 mg/L for chromium), a value of half the limit of detection (e.g., 0.0005 mg/L for chromium) was used to perform numerical calculations. As can be seen in Table 8, no water quality parameters were found to exceed water quality trigger limits of the EPN (as a mean concentration for the reporting period or as a maximum recorded value), hence <u>the system is fully compliant with EPN requirements in terms of water quality.</u>

Date range of data:	Sep-22 to	Oct-23					
Water Quality Parameter	EPN Condition	Sampling Location	Mean Concentration **	Maximum Concentration	EPN Trigger Limit	Unit	Compliance with EPN 9421/2
Ammonia	EF1 - 1	EFF2	0.193	0.510	1.61		✓
Ammonia	EF2 - 1	EFF1	0.692	1.200	1.61		✓
Chromium (total)			0.0005	< 0.001	0.0010	m a/l	✓
Copper (total)	FF2 - 3*	FFF1	0.0006	< 0.001	0.0014	mg/L	✓
Nickel (total)	EFZ-3		0.0055	0.0060	0.0110		 ✓
Zinc (total)			0.0025	< 0.005	0.0080		✓

Legend

✓ Water quality parameter is below the respective trigger limit defined in EPN 9421/1

* Water quality parameter exceeds the respective trigger limit defined in EPN 9421/1

* It has been assumed that the EPN trigger limits for metals were intended to be in μ g/L rather than mg/L as was printed in the EPN. The higher, less stringent values printed in the EPN have been converted accordingly by a factor of 1000 and have been used in the above table.

** The arithmetic mean was used to calculate these values. Where a concentration was below the limit of detection, the concentration was taken at 50% of the limit of detection to enable the calculation.

3.3.7 Water Quality Investigations Conducted During the Reporting Period (G8 1.7)

No water quality investigations were required to be undertaken during the reporting period.

3.3.8 Groundwater Quality Results

Groundwater quality results from the GW01 sampling location are tabulated in Appendix 3. Similar to previous the reporting period, groundwater quality at GW01 during the current reporting period (including July – October 2022) was generally good and characterised by low ammonia, high nitrate, low TP, and very limited and low-level detections of metals (aluminium and nickel) which all fell below the ANZECC water quality trigger values. There were no concerning trends in any water quality parameters during the reporting period.

Physico-chemical

Groundwater at GW01 was found to have a circumneutral pH (range = 7.03 - 7.49). TDS (range = 274 - 281 mg/L) and EC (range = $461 - 573 \mu$ S/cm) measurements were consistent throughout the reporting period. TSS were not detected. Bicarbonate alkalinity averaged 163 mg/L, which indicates a good acidity buffering capacity. These values are within the historical range since 2017.

Nutrients

Ammonia concentrations ranged from below the Limit of Reporting (LoR) – 0.13 mg/L at GW01. The mean nitrate concentration was 1.70 mg/L, with little variation across the reporting period. Total nitrogen concentrations averaged 2.0 mg/L (range = 1.9 - 2.1 mg/L). These results are comparable to the previous reporting period, highlighting the stability of the groundwater conditions. The slightly elevated nitrate concentrations at GW01 were likely reflective of the wider nitrate issues in groundwater across the BWMC site, the source of which extends up-gradient, beyond the boundaries of the BWMC site (off-site contamination). Ammonia, nitrate, and nitrogen concentrations have remained stable at GW01 since 2017.

The total phosphorus (TP) concentration at GW01 averaged 0.10 mg/L during this reporting period. Since measurements began in 2017, TP concentrations have i) stabilised, and ii) reduced on average.

<u>Metals</u>

Total arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, tin, and zinc were not detected at GW01. This is consistent with previous reporting periods. Minimal (0.01 mg/L) aluminium was detected in August 2022, although all other sampling rounds reported < LoR. Nickel concentrations ranged from < LoR – 0.002 mg/L and remained well below the ANCEZZ & ARMCANZ freshwater trigger value for 99% species protection for this analyte (0.008 mg/L). Both aluminium and nickel concentrations have been consistent since at least 2017.

3.3.9 Quality Control

Duplicate Sample(s)

A total of two duplicate samples were taken during the reporting period and were analysed for total metals to assess the variability of laboratory results between samples. As summarised in Table 9, 100% of QA/QC sample analysed were determined to be reflective of the primary sample concentrations, i.e. within \pm 30% of the primary result or within \pm 50% if the result was within 5 fold the limit of reporting (data provided in Appendix 2). The results of the QA/QC analysis provide confidence in the accuracy and precision of the analytical results captured during this reporting period.

Sample location	Date taken	Lab ID	Duplicate data was within ± 30% of primary result? *
GW01 Dupe	19/07/2022	EM2213812011	Yes - PASS
GW01 Dupe	17/10/2023	EM2318569008	Yes - PASS

Table 9 Summary of data from QA/QC samples and an assessment against their primary sample

* Or within ± 50% if result was < 5x the LOR.

Sample Non-Compliance

The laboratory used for analysis (ALS in Victoria) advised of holding time non-compliance for the pH and redox analysis across all sampling events, as these parameters have a short holding time of 6 hours (laboratory reports are provided in Appendix 2). The holding time non-compliance for these analytes was as a result the overnight transport of samples from Tasmania to the laboratory in Victoria

and as such were unavoidable. Field measurements were taken to supplement this data where possible.

3.4 RESULTS OF LANDFILL SETTLEMENT (CONDITION M4-1.7)

EPN Condition M4-1.7 states that the results of all settlement monitoring shall be included within the annual review. The height of each settlement survey marker has been summarised and presented in Table 10, with the tabulated results provided in Appendix 4

No settlement monitoring has been conducted since March 2021 due to ongoing management changes at BWMC. BCC has confirmed that they are seeking to urgently have surveyors attend site to perform a settlement monitoring survey.

For further information regarding the site-specific landfill settlement monitoring, consult the Leachate Treatment Wetland Settlement Monitoring Plan (Burnie Waste Management Centre, March 2016).

Table 10: Summary of the height of each settlement survey marker in mAHD.

				SURVEY MARKER IDENTIFIER ABOLT BBOLT CBOLT DBOLT EBOLT FBOLT							
	1			ABOLT	BBOLT	CBOLT	DBOLT	EBOLT	FBOLT	GBOLT	HBOLT
STAGE (Frequency)	SURVEY No.	Responsibility				HEIGHT (mAHD)				
Pre-construction (Initial survey 2 weeks prior to construction commencing)	Survey # 1	BCC	9/02/2016	153.299	158.332	163.272	160.809	158.943	156.789	152.541	152.122
Construction (Fortnightly)	Survey # 2	Batchelor (Contractor)	26/04/2016	153.299	158.334	163.277	160.813	158.944	156.791	152.543	152.124
	Survey # 3	Batchelor (Contractor)	16/05/2016	153.299	158.334	163.278	160.812	158.945	156.791	152.549	152.128
	Survey # 4	Batchelor (Contractor)	31/05/2016	153.293	158.327	163.272	160.805	158.937	156.784	152.542	152.121
	Survey # 5	Batchelor (Contractor)	14/06/2016	153.297	158.330	163.276	160.809	158.940	156.789	152.551	152.127
	Survey # 6	Batchelor (Contractor)	01/07/2016	153.296	158.329	163.276	160.808	158.940	156.788	152.551	152.126
Post Construction (Fortnightly - after constriction for a 2 month period)	Survey # 9	BCC	6/12/2016	153.297	158.321	163.273	160.797	Removed	156.786	152.551	152.125
	Survey # 10	BCC	22/12/2016	153.298	158.321	163.274	160.797	Removed	156.782	152.551	152.125
	Survey # 11	BCC	9/01/2017	153.297	158.323	163.276	160.798	Removed	156.784	152.551	152.125
	Survey # 12	BCC	23/01/2017	153.297	158.323	163.278	160.798	Removed	156.786	152.554	152.127
Post Construction (Monthly - thereafter for a 4 month period)	Survey # 13	BCC	23/02/2017	153.298	158.328	163.286	160.804	Removed	156.791	152.558	152.130
	Survey # 14	BCC	21/03/2017	153.298	158.327	163.287	160.803	Removed	156.789	152.557	152.128
	Survey # 15	BCC	27/04/2017	153.298	158.328	163.288	160.800	Removed	156.786	152.559	152.129
	Survey # 16	BCC	23/05/2017	153.298	158.328	163.288	160.798	Removed	156.785	152.559	152.129
Post Project Completion (Annual Inspections)	Survey # 17	BCC	11/12/2017	153.298	158.326	163.291	160.795	Removed	156.784	152.565	152.130
	Survey # 18	BCC	1/02/2019	153.294	158.327	<u>Disturbed</u>	160.795	Removed	156.786	152.578	152.131
	Survey # 19	BCC	12/02/2020	153.291	158.328	163.321	160.796	159.041	156.788	152.592	152.133
	Survey # 20	BCC	10/03/2021	153.288	158.332	163.356	160.803	159.069	156.834	152.621	-

3.5 **RESULTS OF PIEZOMETER MONITORING (CONDITION M4-1.7)**

The results of all piezometer monitoring (leachate level monitoring) are presented in Figure 16 to fulfil EPN Condition M4-1.7. Generally, levels measured within each of the monitoring bores during the reporting period were consistent with the trends identified during the previous reporting period. As shown in Figure 16:

- MW20 (installed within the geosynthetic clay liner unlined cap) was unusually variable, when compared to the previous 36 months of data (Figure 16). The measured leachate level ranged from 143.89 145.73 m AHD from 02/11/22 26/10/23. Leachate levels decreased from November 2022 to April 2023, and remained relatively stable from April 2023 to October 2023, although a brief spike was noted between July and August 2023 (+ 0.65 m).
- MW23 (installed within the geosynthetic clay lined cap of the Stage 1 landfill) remained relatively stable over the reporting period. A minor decline (~ 0.3 m) followed by a small spike (~ 0.5 m) was noted between June and August 2023, before the leachate level stabilised at its normal level of approximately 152 m AHD.
- MW24 (installed outside the extent of the geosynthetic clay liner unlined cap) followed the same pattern as MW20 and declined by a similar amount.

Piezometer measurement and monitoring is the responsibility of Burnie City Council. Note that two piezometers (MW21 and MW22) were removed during construction of the wetland system.

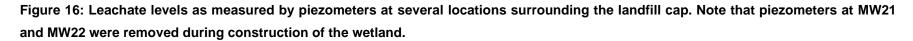
4.0 ENVIRONMENTAL PERFORMANCE

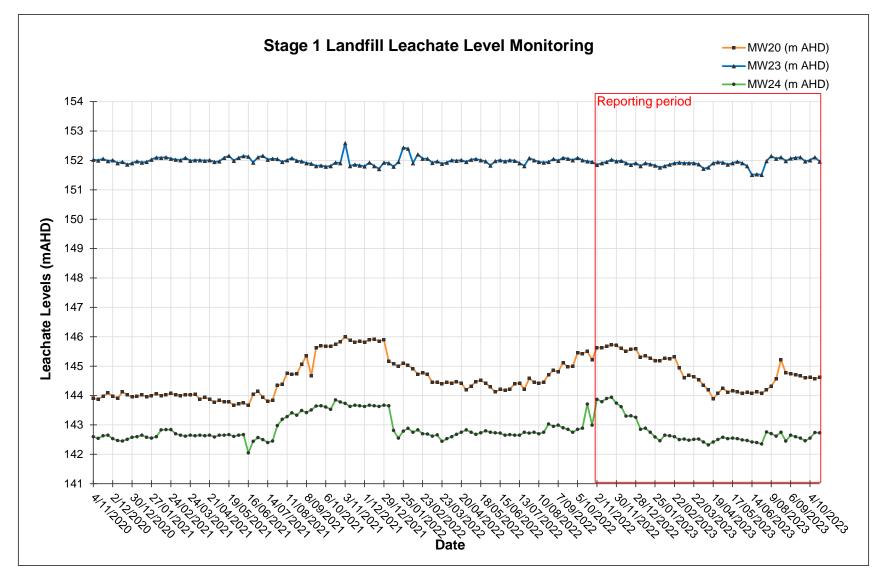
4.1 PUBLIC COMPLAINTS (EPN CONDITION G8 1.2)

No public complaints were received during the reporting period.

4.2 PROCEDURAL OR PROCESS CHANGES (EPN CONDITION G8 1.3)

No procedural or process-related changes were undertaken during the reporting period.





4.3 WASTE MINIMISATION INITIATIVE (EPN CONDITION G8 1.4)

One (1) waste minimisation initiative was implemented during the reporting period which involved:

- Harvesting of sludge from within the pre-treatment cell PT01 and MH01 (Figure 1); and
- Treatment of harvested sludge with hardwood chips.

The initiative was carried out under EPA Approval G3 of the EPN 9421/1 and document EA M481808 ck which stipulates the conditions required to treat sludge material to meet the category of Level 1 Fill Material as described in *Information Bulletin No. 105 – Classification and Management of Contaminated Soil for Disposal* (EPA Tas, 2018). The initiative is anticipated to continue in subsequent reporting periods under the standard procedure documented within the Operations and Maintenance Manual (Syrinx, 2019).

4.3.1 Sludge removal, treatment, and reuse

Several rounds of desludging and mixing occurred throughout the reporting period. The treated sludge is currently held in a secure bunded area on site. In only one sampling event (17/08/23) did the mean manganese concentration fall below the Information Bulletin No. 105 limit for Mn of 500 mg/kg (as required by the EPN for reuse on site; Table 11). In all other instances of laboratory testing, the mean Mn value was greater than 500 mg/kg.

4.4 DETAILS OF INCIDENTS OR NON-COMPLIANCE WITH THE EPN (EPN CONDITION G8 1.5)

There were no incidents or events of water quality non-compliance/breaches with respect to the EPN 9421/2 during the reporting period. The water quality effluent trigger limits described under EPN Conditions EF1 and EF2 were not breached during the reporting period (see Section 3.3.6).

4.5 SUMMARY OF COMMUNITY CONSULTATION / COMMUNICATION (CONDITION G8 1.10)

No community consultation or communication was required or undertaken during the reporting period.

Sample Description	Sample Date	Laboratory ID	Moisture Content (%)	Manganese (mg/kg)	Mean Ma (I	ngane ng/kg)		Compliant with Level 1 Fill Material? (< 500 mg/kg)
Treated sludge (1)	29/11/2022	EM2223760001	60.8	1170				
Treated sludge (2)	29/11/2022	EM2223760002	55.5	1170	1150	±	28	No.
Treated sludge (3)	29/11/2022	EM2223760003	57.1	1110				
PT02 Sludge	4/04/2023	ES2308950004	6.0	661	656.5		e	No.
Legacy	4/04/2023	ES2308950003	3.5	652	000.0	±	6	INO.
PT02 Sludge	30/05/2023	ES2318290001	4.2	511				No.
PT02 Sludge (1)	19/07/2023	ES2324690001	3.6	605				
PT02 Sludge (2)	19/07/2023	ES2324690002	3.5	689	677	±	67	No.
PT02 Sludge (3)	19/07/2023	ES2324690003	3.7	737				
PT02 Remix (1)	15/08/2023	ES2329178004	4.5	559				
PT02 Remix (2)	15/08/2023	ES2329178005	4.2	445	563	±	120	No.
PT02 Remix (3)	15/08/2023	ES2329178006	4.2	685				
MH01 treated sludge (1)	17/08/2023	ES2329178001	4.3	403				
MH01 treated sludge (2)	17/08/2023	ES2329178002	15.5	313	359	±	45	Yes.
MH01 treated sludge (3)	17/08/2023	ES2329178003	6.2	360				
PT01 Mix (1)	10/10/2023	ES2336069001	1.9	567				
PT01 Mix (2)	10/10/2023	ES2336069002	1.0	655	589	±	58	No.
PT01 Mix (3)	10/10/2023	ES2336069003	1.4	545				
PT01 Remix (1)	16/11/2023	ES2340239001	4.5	718				
PT01 Remix (2)	16/11/2023	ES2340239002	4.3	751	710	±	46	No.
PT01 Remix (3)	16/11/2023	ES2340239003	3.6	661				

Table 11: Results from the treatment and testing of manganese contaminated sludge.

5.0 SUMMARY OF RESULTS AND COMPLIANCE (CONDITION G8 1.9)

The results of the monitoring data collected during the reporting period are summarised below.

Volume of untreated and treated leachate processed by the system

- The total volume of untreated leachate entering the system via INF was 97 ML, and the treatment system discharged 100 ML via EFF1, which was greater (3 ML or 3 %) than the volume entering the treatment system at INF. The difference was attributed to the rainfall captured by the system over the period.
- 51 ML of effluent was discharged at downstream boundary of the Wet Infiltration Forest (EFF2), indicating that 49 ML (49 % of total treated flows) were infiltrated during the reporting period.
- As for previous years, the total volume of treated leachate discharged by the system at EFF2 was more than anticipated in the DPEMP. The infiltration capacity of the Wet Infiltration Forest was likely reduced by more intense rainfall and is expected to increase when rainfall stops for a sustained period.

Water quality monitoring data

- The water quality data collected during the monitoring period demonstrated full system compliance with respect to ammonia, chromium, copper, nickel, and zinc trigger values as detailed within the EPN 9421/2 (draft version). The laboratory data for these parameters are compared to the trigger limits in Table 8.
- There were no recirculation events due to water quality breaches during the reporting period.
- The quality of groundwater at GW01 during the reporting period was consistent with the previous reporting period and as such did not show a deterioration in water quality.

6.0 CONCLUSIONS

The system was fully compliant with the conditions of the EPN 9421/2 (draft version) with respect to water quality trigger limits, as the system provided adequate treatment of leachate during the annual reporting period of 1st of July 2022 to the 31st of October 2023.

REFERENCES

Burnie Waste Management Centre (2016). Leachate Treatment Wetland Settlement Monitoring Plan.

Environmental Protection Authority Tasmania (2016). Environmental Protection Notice 9421/1.

Environmental Protection Authority Tasmania (2016). Environmental Protection Notice 9421/2 (draft).

Environmental Protection Authority Tasmania (2018). Information Bulletin 105 – Classification and Management of Contaminated Soil for Disposal

Environmental Protection Authority Tasmania (2019). Landfill Leachate Wetland Treatment Sludge Management Approval Under G3 Of Environment Protection Notice No, 9421/1 M481808 ck

National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended 2013.

Natural Environment Services Tasmania (2014). Natural Values Assessment Unnamed Tributary of Cooee Creek

Syrinx Environmental PL (2015). Burnie Waste Management Centre Stage 1 Landfill Leachate Treatment Wetland Development Proposal & Environmental Management Plan (DPEMP)

Syrinx Environmental PL (2019). Burnie Waste Management Centre Stage 1 Landfill Leachate Treatment Wetland Operations and Maintenance Manual

Syrinx Environmental PL (2021a). BWMC "Site" EPN 9161/2 Annual Environmental Review August 2021 – July 2022

Syrinx Environmental PL (2021b). BWMC "Wetland" EPN 9421/1 Annual Environmental Review July 2021 – June 2022

APPENDICES

APPENDIX 1 TABLE OF MONITORING PARAMETERS AND FREQUENCIES

Surface water monitoring

Parameter	Units	Location	Frequency	Method
Flow	m³/day	INF, EFF1, EFF2	continuous	Field –online flow meter
Temp	°C		annually	Field
рН		EFFI	continuous	Field
		INF, EFF2	annually	lab
Conductivity	µS/cm	EFFI	continuous	Field
		INF, EFF2	annually	lab
Alkalinity total	mg CaCO³/L	INF, EFF1, EFF2	annually	lab
Total suspended solids	mg/L		annually	
Total dissolved solids				
Dissolved oxygen				Field
Dissolved oxygen content			annually	lab
Chemical oxygen demand			annually	
Oxidation reduction potential	Eh mV		annually	
Cyanide total	µg/L		annually	
РСВ	µg/L		annually	
Ammonia	mg/l	EFFI	continuous	Field
		INF, EFF1, EFF2	annually	lab

Nitrate		INF, EFF1, EFF2	annually	lab
Nitrite				
Total nitrogen				
Total phosphorus				
Phosphorous dissolved reactive				
Chloride			annually	
Sulphate				
Mg, K, Na				
Al, As, Cd, Cr, Cu, Fe, Hg, Mn, Ni, Pb, Se, Zn	µg/L		annually	
E.coli	Org / 100 mls	INF, EFF1, EFF2	annually	
Enterococci				
Acenaphthene	µg/L	INF, EFF1, EFF2	annually	
Acenaphthylene				
Anthracene				
Benzene				
Benzo(a)anthracene				
Benzo(a)anthracene				
Benzo(a)pyrene				
Benzo(b&k)fluoanthene				
Benzo(ghi)perylene				
Chrysene				
Dibenzo(ah)anthracene				
Fluranthrene				

Fluorene				
Indeno(123-cd)pyrene				
Naphthalene				
Phenanthrene				
Pyrene				
Ethylbenzene, Om&p Xylene, Toluene, Total BTEX	µg/L	INF, EFF1, EFF2	annually	lab

Groundwater monitoring

Parameter	Units	Location	Frequency	Method
Water level	m³/day	GWI	annually	Field
Тетр	°C		annually	Field
рН			annually	
				lab
Conductivity	µS/cm		annually	Field
Alkalinity total	mg CaCO³/L		annually	lab
Total suspended solids	mg/L		annually	
Total dissolved solids				
Dissolved oxygen				Field
Dissolved oxygen content			annually	lab
Chemical oxygen demand			annually	
Oxidation reduction potential	Eh mV		annually	

Cyanide total	µg/L	annually	
РСВ	µg/L	annually	
Ammonia	mg/l	continuous	
		annually	
Nitrate		annually	
Nitrite			
Total nitrogen			
Total phosphorus			
Phosphorous dissolved reactive			
Chloride		annually	
Sulphate			
Mg, K, Na			
Al, As, Cd, Cr, Cu, Fe, Hg, Mn, Ni, Pb, Se, Zn	µg/L	annually	

APPENDIX 2 LABORATORY ANALYTICAL DATA

ATTACHED SEPARATELY

APPENDIX 3 TABULATED FIELD AND LABORATORY DATA

		PHYSICAL PARAM	ETERS															INORGANICS					
le ID	Sample Date	ELECTRICAL CONDUCTIVITY	DO (mg/L)	DO (%)	TEMPERATURE	Eh (199 mV offset)	REDOX POTENTIAL (No offset)	REDOX (Lab)	рН	pH Redox	SALINITY	TOTAL DISSOLVED SOLIDS	TOTAL SUSPENDED SOLIDS	CHEMICAL OXYGEN DEMAND	TURBIDITY	DISSOLVED ORGANIC CARBON	TOTAL ORGANIC CARBON	ALKALINITY (TOTAL)	ALKALINITY (BICARBONATE)			HARDNESS as CaCO3	CHLORID
- 1	10/07/0000	µS/cm	mg/L	%	°C	mV	mV		pH units	pH units	PPT	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
F 2	19/07/2022 19/07/2022	502 383	4.99 12.09	48.7 89.4	14.3		-48.3 271		6.66 7.88	6.66 7.88	0.28	246 206	45 <1	<10 <10		13.7 12.9		162 105	162 105	<1 <1	<1 <1		49 41
1	19/07/2022		9.55	73.7	3.7		183		7.00	7.12	0.19	200	3	<10		14.8		103	105	<1	<1		41
01	19/07/2022	495	2.4	23	13.3		248		7.06	7.06	0.25	281	<1	<10		1.5		162	162	<1	<1		46
01	19/07/2022	170	11.01	91.6	7.3		258		7.3	7.3	0.1	112	1	<10		12		32	32	<1	<1		17
02	19/07/2022	241	6.93	59.7	7.5		264		6.91	6.91	0.13	163	32	62		20		45	45	<1	<1		23
03	19/07/2022	165	6.85	57.4	6.5		286		6.83	6.83	0.09	97	<1	<10		7		29	29	<1	<1		17
2	19/07/2022	542	6.78	62.7	11.2		310		6.86	6.86	0.16	373	32	38		15		175	175	<1	<1		45
02	19/07/2022	120					295		6.07	6.07		96		<10		6		14	14	<1	<1		14
3	19/07/2022	175					335		5.8	5.8		112		<10		4		5	5	<1	<1		14
4	19/07/2022	358					326		6.48	6.48		228		60		11		94	94	<1	<1		12
E	19/07/2022	555					-102	6.92	6.02			262	47			12.6		187	187				
	29/08/2022 29/08/2022						-102	0.92	6.92			202	47			12.6		107		<1	<1		
	29/08/2022																						
	29/08/2022																						
	29/08/2022						1.7	7.15				230	<5			13.8		120	120	<1	<1		
	29/08/2022	426					138	7.88	7.88			204	<5			14.4		114	114	<1	<1		
	29/08/2022						176	7.28	7.28			276	<5					165	165	<1	<1		5
	20/09/2022	528					126		7.17	6.51		254	46			11.8		175	175	<1	<1		
	20/09/2022						154		7.94	7.12		193	<1			12.9		214	214	<1	<1		
	20/09/2022 20/09/2022	376					161		7.84	7.81		196 279	<1			14.5		109	109 166	<1	<1		
-	25/10/2022	535					-77.3		7.66	6.46		222	60	<10		11.8		172	172	<1	<1		5
	25/10/2022						208			7.15		200	2	16		14		129	129	<1	<1		4
	25/10/2022	412					110		8.07	7.76		188	3	17		14.5		122	122	<1	<1		4
	29/11/2022																						-
	29/11/2022																						-
	29/11/2022																						-
	17/10/2023	461	1.93	19.4	14.5		460	7.16	7.03	7.66		274	<1	<10		0.8		159	159	<1	<1		4
	24/10/2023	479	5.14	51.2	14.9		6.8		6.78	6.29	0.38	567	22	18				156	156	<1	<1		3
													<1	19					153	<1	<1		4
	24/10/2023						487.7			6.79	0.32	297						153					
	24/10/2023	423	7.17	68.1	13		476.7		7.72	7.05	0.31	247	4	<10				146	146	<1	<1		4
	24/10/2023 24/10/2023	423 573 INORGANICS	2.4	24.1	13 15							247 469.6		<10			 NUTRIENTS			<1	<1		41
ID	24/10/2023 24/10/2023	423 573 INORGANICS ALKALINITY	2.4	24.1	13 15 ALKALINITY		476.7		7.72 7.82	7.05	0.31 0.35	247 469.6	4 DISSOLVED MAJO	<10				146	146	<1	<1	ORGANIC NITROGEN	NITROG (TOTA
	24/10/2023 24/10/2023 Sample Date	423 573 INORGANICS ALKALINITY (TOTAL) mg/L	2.4 ALKALINITY (BICARBONATE) mg/L	24.1 ALKALINITY (CARBONATE) mg/L	13 15 ALKALINITY (HYDROXIDE) mg/L	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L	SULFATE (AS SO4 -) mg/L	7.72 7.82 CYANIDE TOTAL mg/L	7.05 TOTAL ANIONS meg/L	0.31 0.35 TOTAL CATIONS	247 469.6 IONIC BALANCE	4 DISSOLVED MAJO CALCIUM mg/L	<10 CR CATIONS MAGNESIUM	SODIUM mg/L		AMMONIA (AS N)	146 NITRATE (AS N mg/L	146 I) NITRITE (AS N) mg/L	<1 NITRITE + NITRATE mg/L	<1 TOTAL KJELDAHL NITROGEN AS N mg/L	ORGANIC NITROGEN (calc) mg/L	41 NITRO (TOT. mg/
D	24/10/2023 24/10/2023 Sample Date 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162	2.4 ALKALINITY (BICARBONATE) mg/L 162	24.1 ALKALINITY (CARBONATE) mg/L <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49	SULFATE (AS SO4 -) mg/L 11	7.72 7.82 CYANIDE TOTAL mg/L <0.004	7.05 TOTAL ANIONS meq/L 4.85	0.31 0.35 TOTAL CATIONS meg/L 4.37	247 469.6 IONIC BALANCE % 5.17	4 DISSOLVED MAJO CALCIUM mg/L 18	<10 OR CATIONS MAGNESIUM mg/L 21	 SODIUM 	POTASSIUM	AMMONIA (AS N) mg/L 7.53	146 NITRATE (AS N mg/L 0.31	146 I) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE mg/L 0.31	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8	ORGANIC NITROGEN (calc) mg/L 6.79	4: MITRO (TOT) mg 7.
)	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105	2.4 ALKALINITY (BICARBONATE) mg/L 162 105	24.1 ALKALINITY (CARBONATE) mg/L <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1 <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41	 SULFATE (AS SO4 -) mg/L 11 12	7.72 7.82 CYANIDE TOTAL mg/L <0.004 <0.004	7.05 TOTAL ANIONS meg/L 4.85 3.5	0.31 0.35 TOTAL CATIONS meg/L 4.37 3.89	247 469.6 IONIC BALANCE	4 DISSOLVED MAJO CALCIUM mg/L 18 16	<10 OR CATIONS MAGNESIUM mg/L 21 18	 SODIUM mg/L 36 34	POTASSIUM	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01	146 NITRATE (AS N mg/L 0.31 2.01	146 I) NITRITE (AS N) mg/L <0.01 0.02	<1 NITRITE + NITRATE mg/L 0.31 2.03	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6	ORGANIC NITROGEN (calc) mg/L 6.79 0.59	4 NITRC (TO1
>	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1 <1 <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49	SULFATE (AS SO4 -) mg/L 11	7.72 7.82 CYANIDE TOTAL mg/L <0.004 <0.004	7.05 TOTAL ANIONS meg/L 4.85 3.5 3.54	0.31 0.35 TOTAL CATIONS meg/L 4.37 3.89 3.99	247 469.6 IONIC BALANCE % 5.17 5.17 6.07	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17	<10 DR CATIONS MAGNESIUM 	 SODIUM mg/L 36 34 34	POTASSIUM	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22	146 NITRATE (AS N mg/L 0.31 2.01 2.55	146) NITRITE (AS N) mg/L <0.01 0.02 0.03	<1 NITRITE + NITRATE 0.31 2.03 2.58	<1 TOTAL KJELDAHL NITROGEN AS N <u>mg/L</u> 6.8 0.6 0.8	ORGANIC NITROGEN (calc) mg/L 6.79 0.59 0.85	4
>	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 108 162	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1 <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41	 SULFATE (AS SO4 -) mg/L 11 12 12 3	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS meq/L 4.85 3.55 3.54 4.6	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08	247 469.6 IONIC BALANCE	4 DISSOLVED MAJO CALCIUM mg/L 18 16	<10 OR CATIONS MAGNESIUM mg/L 21 18	 SODIUM mg/L 36 34	POTASSIUM	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01	146 	146 →	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2	 ORGANIC NITROGEN (calc) mg/L 6,79 0.59 0.85 0.23	
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1 <1 <1 <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41	 SULFATE (AS SO4 -) mg/L 11 12	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17	<10 DR CATIONS MAGNESIUM 	 SODIUM 36 34 34 25	POTASSIUM	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22	146 NITRATE (AS N 0.31 2.01 2.55 1.77 1.17	146 i) NITRITE (AS N) mg/L <0.01 0.02 0.03 <0.01 0.01	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18	<1 TOTAL KJELDAHL NITROGEN AS N <u>mg/L</u> 6.8 0.6 0.8	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.85 0.23 0.43	NITR (TO 7 2 3 3
)	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022	423 573 573 ALKALINITY (TOTAL) 162 105 108 162 162 32	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1 <1 <1 <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17	 SULFATE (AS SO4 -) mg/L 11 12 12 12 3 10	7.72 7.82 CYANIDE TOTAL mg/L <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS meq/L 4.85 3.55 3.54 4.6	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08	247 469.6 IONIC BALANCE % 5.17 5.17 6.07	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6	<10 DR CATIONS MAGNESIUM 	 SODIUM 36 34 34 34 25 17	 POTASSIUM mg/L 7 5 4 4 4 6	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02	146 	146 →	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2	 ORGANIC NITROGEN (calc) mg/L 6,79 0.59 0.85 0.23	
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 162 162 129 175	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) (HYDROXIDE) (HYDROXIDE) <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45	 SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 21	7.72 7.82 CYANIDE TOTAL 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004 0.004	7.05 TOTAL ANIONS Meg/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04	0.31 0.35 TOTAL CATIONS meg/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6	<10 DR CATIONS MAGNESIUM 	 SODIUM 36 34 34 34 25 17 16 17 16 17 39	 POTASSIUM mg/L 7 5 4 4 4 6	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8	146 	146) NITRITE (AS N) 	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1	 ORGANIC NITROGEN (calc) (NITR (TO 3 3 3 1 4 1 1
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29	2.4 ALKALINITY (BICARBONATE) 162 105 108 162 32 45 29	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) (HARDNESS as CaCO3	476.7 512.3 CHLORIDE	 SULFATE (AS SO4 -) mg/L 11 12 12 12 3 10 21 10	7.72 7.82 CYANIDE TOTAL <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS meg/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74	0.31 0.35 TOTAL CATIONS meg/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4	<10 OR CATIONS MAGNESIUM 	 SODIUM 36 34 34 25 17 16 17 16 17 39 11	 POTASSIUM mg/L 7 5 4 4 6 17 7	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01	146 	146 with the second	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33	<1 TOTAL KJELDAHL NITROGEN AS N <u>mg/L</u> 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2	 ORGANIC NITROGEN (calc) mg/L 6.79 0.85 0.23 0.43 3.13 0.29 13.05 0.17	NITR (TO
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 573 ALKALINITY (TOTAL) 162 105 108 162 32 45 29 175 14 5	2.4 ALKALINITY (BICARBONATE) 162 105 108 162 32 45 29 175 14 5	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) (HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14	 SULFATE (AS SO4 -) mg/L 11 12 12 3 10 21 10 13 3 1	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 4.56	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3	<10 OR CATIONS MAGNESIUM 	 SODIUM mg/L 36 34 34 34 25 17 16 17 39 11 15	 POTASSIUM mg/L 7 5 4 4 6 17 7 15 15 1 2		146 	146 i) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5	 ORGANIC NTROGEN (calc) (c	NITR (TO 7 2 3 3 1 4 4 1 1 1 2 2 3 3 1 1 4 2 3 3 1 1 4 4 1 1 1 1 2 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) (HARDNESS as CaCO3	476.7 512.3 CHLORIDE	 SULFATE (AS SO4 -) mg/L 11 12 12 12 3 10 21 10	7.72 7.82 CYANIDE TOTAL <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS meg/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74	0.31 0.35 TOTAL CATIONS meg/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33	<10 OR CATIONS MAGNESIUM 	 SODIUM 36 34 34 25 17 16 17 16 17 39 11	 POTASSIUM mg/L 7 5 4 4 6 17 7	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01	146 	146 with the second	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1	 ORGANIC NITROGEN (calc) mg/L 6.79 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22	2 NITR((TO) 7 2 3 3 1 4 4 1 1 2 2 7 7 9 9
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94 	2.4 ALKALINITY (BICARBONATE) 162 105 108 162 32 45 29 175 14 5 94 	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) (HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14	 SULFATE (AS SO4 -) mg/L 11 12 12 3 10 21 10 13 3 1	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 4.56	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3	<10 OR CATIONS MAGNESIUM 	 SODIUM mg/L 36 34 34 34 25 17 16 17 39 11 15	 POTASSIUM mg/L 7 5 4 4 6 17 7 15 15 1 2	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.02 <0.01 0.02 1.49 <0.01 12.8 <0.01 <0.01 28 <0.01 <0.01 28 <0.01 <0.02 1.49 <0.01 28 <0.01 <0.02 5 -	146 	146 with number of the second seco	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 	 ORGANIC NITROGEN (calc)	
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) (HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14	 SULFATE (AS SO4 -) mg/L 11 12 12 3 10 21 10 13 3 1	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 4.56	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33	<10 OR CATIONS MAGNESIUM 	 SODIUM mg/L 36 34 34 34 25 17 16 17 39 11 15	 POTASSIUM mg/L 7 5 4 4 6 17 7 15 15 1 2		146 	146 i) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1	 ORGANIC NTROGEN (calc) (c	
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022	423 573 573 ALKALINITY (TOTAL) 162 105 108 162 32 45 29 175 14 5 94 187	2.4 ALKALINITY (BICARBONATE) 162 105 108 162 32 45 29 175 14 5 94 4 187	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) (HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14		7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.004 <-0.00	7.05 TOTAL ANIONS meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.72 2.88 	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 4.56 4.56 4.56 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 33 	<10 DR CATIONS MAGNESIUM mg/L 21 18 19 26 4 5 4 13 4 4 9 9 		 POTASSIUM mg/L 7 5 4 4 6 6 17 7 15 1 5 1 15 1 2 9 9 		146 	146 i) NITRITE (AS N) mg/L <0.01	<1 	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4	 ORGANIC NITROGEN (calc)	2 NITR((TO) 77 22 33 11 4 4 11 11 22 7 7 9 9 9 - 11
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 162 105 108 162 162 129 175 14 5 94 	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 187 	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14	SULFATE (AS SO4 -) mg/L 11 12 12 12 10 21 10 13 3 1 32	7.72 7.82 CYANIDE TOTAL 0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 	0.31 0.35 TOTAL CATIONS	247 469.6 IONIC BALANCE % 5.17 6.07 4.96 4.96 1.39 4.56 6.29 6.29 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 	<10 DR CATIONS MAGNESIUM 21 21 18 19 26 4 5 4 5 4 5 4 5 4 5 4 9 20 	 SODIUM mg/L 36 34 34 34 34 34 17 16 17 16 17 16 17 15 15 	 POTASSIUM mg/L 7 5 4 4 4 6 17 7 15 1 1 2 9 	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.22 <0.01 1.2.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 1.2.8 <0.01 1.49 <0.01 1.2.8 <0.01 1.49 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.2.8 <0.01 1.5 1.5.5 1.5.5 	146 NITRATE (AS N 0.31 0.31 2.01 2.55 1.77 1.17 1.17 1.17 1.17 1.17 1.17 1	146 0) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE NITRATE 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 0.23 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 	 ORGANIC NITROGEN (calc) mg/L 6.79 0.59 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI	
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94 187 120	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 187 120	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3 mg/L	476.7 512.3 CHLORIDE Mg/L 49 41 40 46 17 23 17 45 14 14 14 12 	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 21 10 21 10 13 3 1 1 32	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.00	7.05 TOTAL ANIONS Meq/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 	0.31 0.35 TOTAL CATIONS	247 469.6 IONIC BALANCE % 5.17 6.07 4.96 4.96 1.39 4.56 6.29 6.29 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 33 33 	<10 DR CATIONS MAGNESIUM 	 SODIUM 36 34 34 34 25 17 16 17 39 11 15 15 15 15 		 NUTRIENTS AMMONIA (AS N) mg/L 7,53 <0.01 0,22 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 <0.01 0,02 0,01 0,02 0,01 0,02 0,01 0,02 0,01 0,02 0,01 0,02 0,01 0,02 0,01 0,02 1,05 3,38 1,14 0,69 0,69 0,09 0,09 0,01 0,01 0,01 0,01 0,01 0,01 0,01 	146 NITRATE (AS N 0.31 0.31 2.01 2.55 1.77 1.17 1.17 0.81 0.55 2.33 7.02 5.58 0.23 2.16 2.56 2.61	146 0) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 0.23 2.22 2.61 2.66	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.4 3 13.1 0.2 0.5 4.1 11.4 3.4 1.3	 ORGANIC NITROGEN (calc) mg/L 6.79 0.59 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 3.44 1.64 1.39	NITR (TO
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022	423 573 573 ALKALINITY (TOTAL) 162 105 108 162 32 45 29 175 14 5 94 187 120 114	2.4 ALKALINITY (BICARBONATE) 102 105 108 162 105 108 162 32 29 175 14 5 94 45 5 94 187 187 120 114	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3 mg/L	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14 12 	SULFATE (AS SO4 -) mg/L 11 12 12 3 10 21 10 13 3 1 32	7.72 7.82 CYANIDE TOTAL 0.004	7.05 TOTAL ANIONS TOTAL ANIONS	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 4.96 4.56 4.56 4.56 4.56 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 	<10 DR CATIONS MAGNESIUM 10 12 13 19 26 4 4 5 4 13 4 4 9 9 				146 	146 i) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 0.23 0.23 0.22 2.61 2.66 2.38	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 11.4 3.4 1.6 1.3 0.7	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 11.39 0.75	NITR (TO
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94 120 114 165	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 14 5 94 14 5 94 120 114 165	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE Mg/L 49 41 40 46 17 23 17 45 14 12 53	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 10 13 3 1 1 32 3	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.74 0.72 2.88 4.85	0.31 0.35 TOTAL CATIONS 1000 1000 1000 1000 1000 1000 1000 1	247 469.6 IONIC BALANCE % 5.17 6.07 4.96 1.39 4.56 6.29 6.29 6.29 6.29 6.29 0.19	4 DISSOLVED MAJO CALCIUM 18 16 17 35 6 10 4 29 4 3 33 34	<10 DR CATIONS MAGNESIUM 21 21 18 19 26 4 5 4 4 5 4 4 5 4 4 9 		 POTASSIUM mg/L 7 5 4 4 6 17 7 15 1 1 2 9 3 3	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 10.5 3.38 1.14 0.69 0.51 0.07	146 	146 0) NITRITE (AS N) mg/L <0.01	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 11.4 3.4 1.3 0.7 0.5	 ORGANIC NITROGEN (cate) (cate) mg/L 6.79 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUE! 11.37 #VALUE! 11.37 #VALUE! 3.44 1.39 0.75 0.48	NITR (rc (rc
	24/10/2023 24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94 120 114 165 175	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 187 187 187 187 120 114 165 175 175	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) Image: Comparison of the second se	HARDNESS as CaCO3 mg/L	476.7 512.3 CHLORIDE	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 21 10 21 10 13 3 1 1 32 3 3 3	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.00	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 4.85 4.85 	0.31 0.35 TOTAL CATIONS 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 4.84 	247 469.6 ionic balance	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 3 	<10 DR CATIONS MAGNESIUM MAGNESIUM 19 26 4 19 26 4 5 4 4 9 24 24 	 SODIUM 36 34 34 34 25 17 16 17 39 11 15 15 15 15 25 25 	 POTASSIUM mg/L 7 5 4 4 6 17 7 15 1 2 9 3 3		146 	146 wg/L <0.01	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 1.3 13.1 0.2 0.5 4.1 11.4 3.4 1.3 0.7 0.5 9.2	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.43 3.13 0.29 13.05 0.43 3.13 0.29 13.05 0.48 4.22 #VALUEI 11.37 #VALUEI 11.39 0.75 0.48 9.17	NITR (TC
>	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 108 162 109 162 109 162 105 108 162 105 108 162 175 14 5 94 187 120 114 165 175 214	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 45 29 175 14 45 5 94 187 187 187 187 187 187 29 115 5 5 5 5 187 187 187 187 187 194 194 195 194 194 195 195 194 195 195 195 195 195 195 195 195	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE Mg/L 49 41 40 46 17 23 17 45 14 12 53	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 10 13 3 1 1 32 3	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.74 0.72 2.88 4.85	0.31 0.35 TOTAL CATIONS 1000 1000 1000 1000 1000 1000 1000 1	247 469.6 IONIC BALANCE % 5.17 6.07 4.96 1.39 4.56 6.29 6.29 6.29 6.29 6.29 0.19	4 DISSOLVED MAJO CALCIUM 18 16 17 35 6 10 4 29 4 3 33 34	<10 DR CATIONS MAGNESIUM 18 19 26 4 5 4 13 4 4 9 24 24 				146 MITRATE (AS N 0.31 2.01 2.55 1.77 1.17 1.17 1.17 1.17 1.17 1.17 1	146 i) NITRITE (AS N) mg/L <0.01	<1 mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 0.23 2.26 2.26 2.38 1.62 0.23 1.62 0.23 2.14	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.2 1.2 1.2	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 3.44 1.64 1.69 0.75 0.48 9.17 1.20	
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 94 120 114 165 175	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 187 187 187 187 120 114 165 175 175	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) Image: Comparison of the second se	HARDNESS as CaCO3 mg/L	476.7 512.3 CHLORIDE mg/L 49 41 40 41 40 46 17 23 17 45 14 14 12 53 		7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.00	7.05 TOTAL ANIONS 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 4.85 4.85 	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 4.84 4.84 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 4.56 4.56 4.56 4.56 4.56 4.56 4.56 4.96 4.96 4.96 4.96 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 34 34 	<10 		 POTASSIUM mg/L 7 5 4 4 6 17 7 15 1 2 9 3 3		146 	146 0) NITRITE (AS N) mg/L <0.01	<1 NITRITE + NITRATE 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 2.23 2.26 2.26 2.26 2.26 2.26 2.28 1.62 0.23 2.14 1.73	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 11.4 3.4 1.3 0.7 0.5 9.2 1.2 0.6	 ORGANIC NITROGEN (cate) (cate) mg/L 6.79 0.85 0.23 0.43 3.13 0.29 13.05 0.43 3.13 0.29 13.05 0.43 3.13 0.29 13.05 0.48 4.22 #VALUEI 3.44 1.39 0.75 0.48 9.17 1.20 0.60	NITR (TO
	24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 29 175 14 5 94 120 114 187 120 114 165 175 214 109	2.4 ALKALINITY (BICARBONATE) mg/L 162 108 162 108 162 32 45 29 175 14 5 94 14 5 94 120 114 165 176 214 109	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE Mg/L 49 41 40 46 17 23 17 45 14 14 12 53 53	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 12 10 10 13 3 1 1 3 1 1 3 3	7.72 7.82 CYANIDE TOTAL 0.0040	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.72 2.88 4.85 4.85 	0.31 0.35 TOTAL CATIONS 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 6.29 6.29 6.29 0.19 0.19	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 34 34 	<10 DR CATIONS MAGNESIUM 18 19 26 4 5 4 13 4 4 9 24 24 			 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 0.02 1.49 <0.01 12.8 <0.01 0.02 1.49 <0.01 1.28 <0.01 0.02 1.49 <0.01 1.28 <0.01 0.02 3.92 3.38 1.14 0.69 0.51 0.07 6.8 0.93 0.13	146 MITRATE (AS N 0.31 2.01 2.55 1.77 1.17 1.17 1.17 1.17 1.17 1.17 1	146 i) NITRITE (AS N) mg/L <0.01	<1 mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 0.23 2.26 2.26 2.38 1.62 0.23 1.62 0.23 2.14	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.1 0.5 4.1 1.2 1.2 1.2	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 3.44 1.64 1.69 0.75 0.48 9.17 1.20	NITR (TO
	24/10/2023 24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022 20/09/2022 20/09/2022 20/09/2022 25/10/2022	423 573 573 ALKALINITY (TOTAL) 162 105 108 162 32 45 29 175 14 5 94 187 187 187 187 187 187 187 187 187 187 187 187 14 5 94 187 187 187 187 187 198 198 198 198 175 14 187 187 187 	2.4 ALKALINITY (BICARBONATE) 162 105 105 108 162 32 45 29 175 14 5 94 187 -	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14 14 14 12 53 47	SULFATE (AS SO4 -) mg/L 11 12 12 12 3 10 21 10 13 3 1 10 13 3 1 1 3 3 1 3 3 1 3 3 1 3 3 3 1 3 3 3 3 3 1 3	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <	7.05 TOTAL ANIONS Meq/L 4.85 3.54 4.85 3.54 4.65 1.33 1.98 1.27 5.04 0.74 0.74 0.52 2.88 4.85 4.85 4.7	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 4.84 4.82	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 4.96 4.56 6.29 6.29 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 4 29 4 3 33 34 34	<10 		 POTASSIUM mg/L 7 4 4 6 17 7 15 1 2 9 3 4 4 4 4 4 4 4 4		146 	146	<1 NITRITE + NITRATE mg/L 0.31 2.03 2.58 1.77 1.18 1.28 0.81 0.55 2.33 7.02 5.67 0.23 2.22 2.61 2.66 2.38 1.62 0.23 2.14 1.73 1.74	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 3.4 1.6 1.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 0.6 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 3.44 1.64 1.39 0.75 0.48 9.17 1.20 0.60 0.26	NITR (TO
>	24/10/2023 24/10/2023 24/10/2023 324/10/2023 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022 20/09/2022 20/09/2022 20/09/2022 25/10/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 105 108 162 29 175 14 5 94 120 114 165 175 1214 109 166 172	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 45 29 175 14 45 5 94 120 114 165 175 214 109 166 172	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14 12 53 47 55		7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.00	7.05 TOTAL ANIONS Meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.75 0.75	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.54 2.04 2.04 2.04 2.04 2.04 2.04 2.04 2.0	247 469.6 IONIC BALANCE % 5.17 6.07 4.96 4.56 4.56 6.29 6.29 0.19 0.19 1.19 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 34 34 20	<10 		POTASSIUM POTASSIUM	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 10.5 3.38 1.14 0.69 0.51 0.07 6.8 0.93 0.13 0.13 6.37	146 	146 i) NITRITE (AS N) mg/L <0.01	<1 MITRITE + NITRATE 0.31 2.03 2.58 1.77 1.18 1.28 0.55 2.33 7.02 5.67 0.23 2.26 2.26 2.26 2.26 2.26 2.26 2	<1 KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 11.4 11.4 0.5 4.1 0.7 0.5 9.2 1.2 0.6 0.3 8.4	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 3.44 1.39 0.75 0.48 9.17 1.20 0.60 0.26 8.841	NITR (TO
	24/10/2023 24/10/2023 24/10/2023 324/10/2023 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022 20/09/2022 20/09/2022 20/09/2022 20/09/2022 25/10/2022 25/10/2022 25/10/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 29 175 14 5 94 120 114 187 120 114 165 175 214 109 166 172 129	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 14 5 94 120 114 165 175 214 109 166 172 129	24.1 ALKALINITY (CARBONATE) (13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE Mg/L 49 41 40 46 17 23 17 45 14 14 14 14 14 12 53 53 55 42	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 12 10 10 21 10 13 3 1 1 3 1 1 3 3 3 3 3 12 9	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.00	7.05 TOTAL ANIONS Meg/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 4.85 4.85 4.85 4.85 4.7 4.7 	0.31 0.35 TOTAL CATIONS 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 6.29 6.29 6.29 0.19 0.19 1.19	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 34 34 20 19	<10 		 POTASSIUM mg/L 7 5 4 4 4 6 17 7 15 1 2 9 3 3 4 8 6 6	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 <0.01 1.2.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 0.22 <0.01 1.49 <0.01 1.2.8 <0.01 0.02 1.49 <0.01 1.2.8 <0.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 0.02 6.01 6.8 0.33 0.13 0.13 0.13 0.13 6.37 1.2	146 	146 mg/L <0.01	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 13.1 0.2 0.5 4.1 11.4 1.6 1.3 0.7 0.5 9.2 1.2 0.6 0.3 8.4 1.4	 ORGANIC NITROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUE! 1.37 #VALUE! 3.44 1.39 0.75 0.48 9.17 1.20 0.60 0.26 8.41 1.41	nitre mm 77 73 33 11 11 11 11 12 27 71 28 29 22 22 22 22 22 22 22 22 22 22 22 22 22 22 21
	24/10/2023 24/10/2023 24/10/2023 Sample Date 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 29 175 14 5 94 120 114 187 120 114 165 175 214 109 166 172 129 122 	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 94 120 114 187 120 114 165 175 214 109 166 172 219 122	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14 14 12 53 47 55 42 40 47 47	SULFATE (AS SO4 -) mg/L 11 12 12 12 13 10 10 13 3 1 1 32 3 3 3 12 9 9 9	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.00	7.05 TOTAL ANIONS TOTAL ANIONS Meg/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 4.85 4.85 4.7 4.7	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 4.84 4.82 4.82 4.82 4.82 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 4.96 6.29 6.29 	4 DISSOLVED MAJG CALCIUM mg/L 18 16 17 35 6 10 4 29 4 3 33 33 33 33 33 33 33 33	<10 		 POTASSIUM mg/L 7 7 5 4 4 6 17 7 15 1 1 2 9 9 3 3 3 4 8 6 6 6 6 4 8 6 6 6 4 8 6 6 6		146 	146 mg/L <0.01	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 13.1 0.2 0.5 4.1 1.4 1.4 1.6 1.3 0.7 0.5 9.2 1.2 0.6 0.3 8.4 1.4 0.6 0.3 1.1 0.7 0.5 9.2 1.2 0.6 0.3 1.1 0.7 0.5 9.2 1.2 0.6 0.3 1.1 0.7 0.5 9.2 1.2 0.6 0.3 0.3 1.1 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 0.5 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.43 3.13 0.29 13.05 0.43 3.13 0.29 13.05 0.43 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 1.39 0.75 0.48 9.17 1.20 0.60 0.26 8.41 1.41 0.67 	4 NITRO (TO 7 2 3 3 1 1 4 4 1 1 2 7 9 9 9 9 - - 5 4 4 4 4 4 4 4 4 4 4 4 4 4
	24/10/2023 24/10/2023 24/10/2023 324/10/2023 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022 20/09/2022 25/10/2022 25/10/2022 25/10/2022 25/10/2022 25/10/2022 29/11/2022	423 573 INORGANICS ALKALINITY (TOTAL) 162 105 108 162 162 129 175 14 5 94 120 114 165 175 124 109 175 124 109 166 172 129 122 	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 108 162 32 45 29 175 14 5 5 175 14 165 175 114 165 175 214 109 166 172 129 122	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14 12 53 47 55 42 40 40 47 55 42 40 40 40 		7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.55 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.72 2.88 4.85 4.85 4.7 4.7 4.7	0.31 0.35 TOTAL CATIONS	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 4.96 4.56 4.56 4.56 4.56 4.56 4.96 1.19 1.19 1.19	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 4 29 4 3 33 34 20 19 18 18 34 18 	<10 		 POTASSIUM mg/L 7 5 4 4 6 17 15 1 2 9 3 3 4 8 6 6 4		146 mg/L 0.31 2.01 2.55 1.77 1.17 1.17 1.17 0.81 0.55 2.33 7.02 5.58 2.61 2.56 2.61 2.55 1.62 2.56 2.61 2.35 1.62 2.53 0.23 2.1 1.7 0.79 0.73	146 i) NITRITE (AS N) mg/L <0.01	<1 	<1 	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 0.75 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 0.60 0.26 8.41 1.41 0.67 	4 NITRC (TO 7 2 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1
	24/10/2023 24/10/2023 24/10/2023 324/10/2023 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022 20/09/2022 20/09/2022 25/10/2022 25/10/2022 25/11/2022 29/11/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 9 175 14 5 9 175 14 187 120 114 165 175 214 109 166 172 122 122 159	2.4 ALKALINITY (BICARBONATE)	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 13 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 12 53 53 55 42 40 42	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 21 10 21 10 13 3 1 3 3 12 9 9 9 9 9 3 12 9 9 9 3 12 9 9 9 3 12 9 9 9 3 12 9 9 9 9 9 9 9 9 9 9 9 9 9	7.72 7.82 CYANIDE TOTAL 0.004	7.05 TOTAL ANIONS meq/L 4.85 3.5 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.72 2.88 4.85 4.85 4.7 4.7	0.31 0.35 TOTAL CATIONS	247 469.6	4 DISSOLVED MAJO CALCIUM 18 16 17 35 6 10 4 29 4 3 33 34 34 34 34 34 34 34 34 34 34 37	<10 		 POTASSIUM mg/L 7 5 4 4 4 6 17 7 15 1 1 2 9 3 3 3 3 4 4 6 6 3 4 3 4 4 6 6 	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.05 <0.01 <0.51 0.07 <0.8 0.93 0.13 <0.13 <0.13 <0.16 0.02 <0.01 <0.02 <0.01 <0.05 <0.07 <0.8 0.03 <0.13 <0.13 <0.16 0.02 <0.01 <0.01 <0.07 <0.01 <0.07 <0.01 <0.07 <0.01 <0.07 <0.07 <0.13 <0.13 <0.13 <0.15 0.02 <0.13 <0.15 0.03 <0.13 <0.15 0.05 <0.13 0.13 0.15 0.02 <0.02 0.02	146 	146	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 3.4 1.3 0.7 0.5 9.2 1.2 0.6 0.3 8.4 1.4 0.6 0.3 8.4 1.4 0.6 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.4 1.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	ORGANIC NTROGEN (cale) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUE! 11.37 #VALUE! 11	4
	24/10/2023 24/10/2023 24/10/2023 324/10/2023 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/11/2022 29/11/2022 29/11/2022 29/11/2022	423 573 573 573 ALKALINITY (TOTAL) 162 105 108 162 32 45 29 175 14 5 94 187 187 187 187 187 187 187 187 187 187 186 199 129 129 129 129 129 129 129	2.4 ALKALINITY (BICARBONATE) mg/L 162 105 105 108 162 32 45 29 175 14 5 94 187 187 120 114 165 175 214 165 175 214 166 175 214 166 172 129 122 129 122 159 156	24.1 ALKALINITY (CARBONATE) mg/L <i <i="" <i<="" i="" td=""><td>13 15 ALKALINITY (HYDROXIDE) mg/L <1</td> <1</i>	13 15 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 14 14 12 53 53 47 55 42 40 42 38	SULFATE (AS SO4 -) mg/L 11 12 12 12 3 10 21 10 13 3 1 1 3 3 1 1 3 2	7.72 7.82 CYANIDE TOTAL 0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <0.004 <	7.05 TOTAL ANIONS TOTAL ANIONS Meq/L 4.85 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.52 2.88 4.85 4.85 4.7	0.31 0.35 TOTAL CATIONS meq/L 4.37 3.89 3.99 5.08 1.52 2.04 1.45 4.6 1.03 1.18 3.27 4.6 1.03 1.18 3.27 4.84 4.82 4.82 4.82 4.82 	247 469.6 IONIC BALANCE % 5.17 5.17 6.07 4.96 1.39 4.56 6.29 6.29 6.29 6.29 	4 DISSOLVED MAJO CALCIUM mg/L 18 16 17 35 6 10 4 29 4 33 33 34 20 34 20 19 18 37 21	<10 		 POTASSIUM mg/L 7 7 5 4 4 6 17 7 15 1 1 2 9 9 3 3 3 4 8 8 6 6 6 4 8 8 6 6 6 4 8 8 8 6 6 6 4 8 8 8 6 6 6 4 8 8 8 6 6 6 4 6 6 6 6 6 4 6 6 6 6 6		146 	146	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 3.4 1.6 1.3 0.7 0.5 9.2 1.2 0.6 0.3 8.4 1.4 0.6 0.3 8.4 1.4 0.6 0.3 0.3 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	 ORGANIC NTROGEN (calc) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUEI 11.37 #VALUEI 11.37 #VALUEI 11.39 0.75 0.48 9.17 1.20 0.60 0.26 8.41 1.41 0.67 0.22 6.79	4 NITRC (TO 7 2 3 3 3 1 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1
	24/10/2023 24/10/2023 24/10/2023 324/10/2023 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 19/07/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 29/08/2022 20/09/2022 20/09/2022 20/09/2022 25/10/2022 25/10/2022 25/11/2022 29/11/2022	423 573 INORGANICS ALKALINITY (TOTAL) mg/L 162 105 108 162 32 45 29 175 14 5 9 175 14 5 9 175 14 187 120 114 165 175 214 109 166 172 122 122 159	2.4 ALKALINITY (BICARBONATE)	24.1 ALKALINITY (CARBONATE) mg/L <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	13 13 ALKALINITY (HYDROXIDE) mg/L <1	HARDNESS as CaCO3	476.7 512.3 CHLORIDE mg/L 49 41 40 46 17 23 17 45 14 12 53 53 55 42 40 42	SULFATE (AS SO4 -) mg/L 11 12 12 12 12 10 21 10 21 10 13 3 1 3 3 12 9 9 9 9 9 3 12 9 9 9 3 12 9 9 9 3 12 9 9 9 3 12 9 9 9 9 9 9 9 9 9 9 9 9 9	7.72 7.82 CYANIDE TOTAL 0.004	7.05 TOTAL ANIONS Meq/L 4.85 3.55 3.54 4.6 1.33 1.98 1.27 5.04 0.74 0.74 0.72 2.88 4.85 4.85 4.7 4.7 	0.31 0.35 TOTAL CATIONS	247 469.6	4 DISSOLVED MAJO CALCIUM 18 16 17 35 6 10 4 29 4 3 33 34 34 34 34 34 34 34 34 34 34 37	<10 		 POTASSIUM mg/L 7 5 4 4 4 6 17 7 15 1 1 2 9 3 3 3 3 4 4 6 6 3 4 3 4 4 6 6 	 NUTRIENTS AMMONIA (AS N) mg/L 7.53 <0.01 0.22 <0.01 0.02 1.49 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 12.8 <0.01 0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 1.49 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.02 <0.01 <0.05 <0.01 <0.51 0.07 <0.8 0.93 0.13 <0.13 <0.13 <0.16 0.02 <0.01 <0.02 <0.01 <0.05 <0.07 <0.8 0.03 <0.13 <0.13 <0.16 0.02 <0.01 <0.01 <0.07 <0.01 <0.07 <0.01 <0.07 <0.01 <0.07 <0.07 <0.13 <0.13 <0.13 <0.15 0.02 <0.13 <0.15 0.03 <0.13 <0.15 0.05 <0.13 0.13 0.15 0.02 <0.02 0.02	146 	146	<1 	<1 TOTAL KJELDAHL NITROGEN AS N mg/L 6.8 0.6 0.8 0.2 0.4 3 0.3 13.1 0.2 0.5 4.1 11.4 3.4 1.3 0.7 0.5 9.2 1.2 0.6 0.3 8.4 1.4 0.6 0.3 8.4 1.4 0.6 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.4 1.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 1.2 0.6 0.3 0.3 0.7 0.5 9.2 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	ORGANIC NTROGEN (cale) mg/L 6.79 0.59 0.85 0.23 0.43 3.13 0.29 13.05 0.17 0.48 4.22 #VALUE! 11.37 #VALUE! 11	4 NITRO (TOT

PHOSPHORUS (TOTAL) PHOSPHORUS DISSOLVED REACTIVE (AS P) mg/L mg/L 0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 0.02 <0.01 0.01 <0.01 0.02 <0.01 0.034 <0.01 0.01 <0.01 0.02 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.02 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 0.01 <0.01 <t< th=""><th>TOTAL ALUMINIUM 0.02 0.06 0.02 <0.01 4.56 0.33 0.37 0.57 0.82 15.5</th><th>mg/L <0.001 <0.002 <0.001</th><th>TOTAL CADMIUM (0.0001 (0.0001 (0.0001 (0.0001 (0.0001 (0.0001</th><th>TOTAL CHROMIUM <0.001 <0.001 <0.001 <0.001</th><th>mg/L 0.001 0.001 0.001 0.001</th><th>TOTAL COPPER ORC-ICP-MS</th><th>TOTAL IRON mg/L</th><th>mg/L <0.001</th><th>TOTAL MANGANESE mg/L</th><th>TOTAL MERCURY</th><th>TOTAL NICKEL</th><th>TOTAL SELENIUM</th><th>TOTAL TIN</th><th>TOTAL ZINC</th><th>DISSOLVED ALUMINIUM</th><th>DISSOLVED ARSENIC</th><th>DISSOLVED CADMIUM</th><th>DISSOLVED TRIVALENT CHROMIUM</th><th>DISSOLVED HEXAVALENT CHROMIUM</th><th>DISSOLVED CHROMIUM</th></t<>	TOTAL ALUMINIUM 0.02 0.06 0.02 <0.01 4.56 0.33 0.37 0.57 0.82 15.5	mg/L <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.002 <0.001	TOTAL CADMIUM (0.0001 (0.0001 (0.0001 (0.0001 (0.0001 (0.0001	TOTAL CHROMIUM <0.001 <0.001 <0.001 <0.001	mg/L 0.001 0.001 0.001 0.001	TOTAL COPPER ORC-ICP-MS	TOTAL IRON mg/L	mg/L <0.001	TOTAL MANGANESE mg/L	TOTAL MERCURY	TOTAL NICKEL	TOTAL SELENIUM	TOTAL TIN	TOTAL ZINC	DISSOLVED ALUMINIUM	DISSOLVED ARSENIC	DISSOLVED CADMIUM	DISSOLVED TRIVALENT CHROMIUM	DISSOLVED HEXAVALENT CHROMIUM	DISSOLVED CHROMIUM
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0.02 0.06 0.02 <0.01 4.56 0.33 0.37 0.57 0.82	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 0.002	<0.0001 <0.0001 <0.0001 <0.0001 <0.0001 <0.0001	<0.001 <0.001 <0.001 <0.001 <0.001	0.001 0.001 0.001				mg/L	ma/l	0									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0.06 0.02 <0.01 4.56 0.33 0.37 0.57 0.82	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 0.002	<0.0001 <0.0001 <0.0001 <0.0001 <0.0001	<0.001 <0.001 <0.001 <0.001	0.001 0.001			<0.001			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.02 <0.01 <.001 4.56 0.33 0.37 0.57 0.82	<0.001 <0.001 <0.001 <0.001 <0.001 0.002	<0.0001 <0.0001 <0.0001 <0.0001	<0.001 <0.001 <0.001	0.001			<0.001	3.72	< 0.0001	0.006	< 0.01	< 0.001	< 0.005						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<0.01 <0.01 4.56 0.33 0.37 0.57 0.82	<0.001 <0.001 <0.001 <0.001 0.002	<0.0001 <0.0001 <0.0001	<0.001 <0.001				< 0.001	0.023	< 0.0001	0.002	< 0.01	< 0.001	< 0.005						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<0.01 4.56 0.33 0.37 0.57 0.82	<0.001 <0.001 <0.001 0.002	<0.0001 <0.0001	< 0.001	< 0.001			< 0.001	0.286	< 0.0001	0.006	< 0.01	< 0.001	< 0.005						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	4.56 0.33 0.37 0.57 0.82	<0.001 <0.001 0.002	< 0.0001				< 0.05	< 0.001	< 0.001	< 0.0001	0.002	< 0.01	< 0.001	< 0.005	< 0.01	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001
0.01 <0.01	0.33 0.37 0.57 0.82	<0.001 0.002			0.001		< 0.05	< 0.001	0.274	< 0.0001	0.001	< 0.01	< 0.001	< 0.005						
0.25 <0.01	0.37 0.57 0.82	0.002	<0.0001	0.013	0.006		0.1	< 0.001	0.666	< 0.0001	0.012	< 0.01	< 0.001	0.02						
<0.01	0.57 0.82		-0.0001	< 0.001	0.001		< 0.05	< 0.001	0.258	< 0.0001	0.001	< 0.01	< 0.001	0.006						
0.02 <0.01	0.82	<0.001	< 0.0001	0.002	0.005		< 0.05	0.004	2.22	< 0.0001	0.006	< 0.01	< 0.001	0.039						
0.34 <0.01			< 0.0001	0.002	0.003		< 0.05	< 0.001	0.027	< 0.0001	0.009	< 0.01	< 0.001	0.026	0.02	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001
0.01 <0.01	15.5	< 0.001	< 0.0001	0.006	0.003		< 0.05	0.002	0.019	< 0.0001	0.013	< 0.01	0.001	0.033	0.01	< 0.001	< 0.0001	0.002	< 0.001	0.002
0.01 <0.01 <0.01		< 0.001	< 0.0001	0.041	0.026		0.06	0.011	0.69	< 0.0001	0.045	< 0.01	< 0.001	0.219	< 0.01	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001
<0.01	< 0.01	< 0.001	< 0.0001	< 0.001	< 0.001			< 0.001	< 0.001	< 0.0001	0.002	< 0.01	< 0.001	< 0.005						
<0.01	0.01	< 0.001	< 0.0001	< 0.001	< 0.001		26.4	< 0.001	4.28	< 0.0001	0.006	< 0.01	< 0.001	< 0.005						
0.01 <0.01	0.03	<0.001	< 0.0001	< 0.001	< 0.001		21.5	< 0.001	4.8	< 0.0001	0.005	< 0.01	< 0.001	< 0.005						
0.01 <0.01	0.01	<0.001	< 0.0001	< 0.001	< 0.001		0.21	< 0.001	0.399	< 0.0001	0.006	< 0.01	< 0.001	0.035						
0.01 <0.01 0.01 <0.01	0.02	<0.001	< 0.0001	< 0.001	< 0.001		0.13	< 0.001	0.352	< 0.0001	0.006	< 0.01	< 0.001	< 0.005						
0.01 <0.01 0.12 0.14 0.02 <0.01	0.02	<0.001	< 0.0001	< 0.001	< 0.001	<0.5	0.08	< 0.001	0.247	< 0.0001	0.005	< 0.01	< 0.001	< 0.005						
0.12 0.14 0.02 <0.01	0.06	<0.001	< 0.0001	< 0.001	< 0.001	<0.5	0.13	< 0.001	0.031	< 0.0001	0.002	< 0.01	< 0.001	< 0.005						
0.02 <0.01 <0.01	0.01	<0.001	< 0.0001	< 0.001	< 0.001		< 0.05	< 0.001	< 0.001	< 0.0001	0.002	< 0.01	< 0.001	< 0.005						
<0.01																				
<0.01 <0.01 0.1 0.14 0.11 <0.01																				
0.1 0.14 0.11 <0.01																				
0.11 <0.01	< 0.01	< 0.001	< 0.0001	< 0.001	< 0.001		< 0.05	< 0.001	< 0.001	< 0.0001	0.002	< 0.01	< 0.001	< 0.005						
0.02 <0.01 0.02 <0.01	0.01	< 0.001	< 0.0001	< 0.001	< 0.001		36.9	< 0.001	4.64		0.006	< 0.01	<0.001	< 0.005						
0.02 <0.01	0.01	<0.001	<0.0001	<0.001	<0.001		0.42	<0.001	0.524		0.005	<0.01	<0.001	< 0.005						
	0.33	<0.001	<0.0001	< 0.001	<0.001		0.79	< 0.001	0.162		0.003	<0.01	<0.001	< 0.005						
											0.000									
0.08 0.13	< 0.01	<0.001	<0.0001	<0.001	<0.001		< 0.05	<0.001	<0.001		0.001	<0.01	<0.001	< 0.005	< 0.01	<0.001	<0.0001			<0.001
0.08 0.13	0.02				<0.001							<0.01	<0.001					< 0.01		
		< 0.001	< 0.0001	< 0.001	<0.001		19.6 0.84	< 0.001	3.35 1.74	<0.0001	0.006			< 0.005	< 0.01	<0.001	< 0.0001		<0.01	< 0.001
<0.01 <0.01 <0.01 <0.01		0.001	< 0.0001	<0.001 <0.001	<0.001			< 0.001		<0.0001	0.008	<0.01 <0.01		< 0.005	< 0.01	<0.001	<0.0001 <0.0001	<0.01	<0.01 <0.01	<0.001
	<0.01	<0.001	<0.0001 <0.0001	<0.001	<0.001		0.61	<0.001 <0.001	0.354	<0.0001 <0.0001	<0.003	<0.01		<0.005	0.01	<0.001			<0.01	
		<0.001	<0.0001		<0.001			<0.001	<0.001	<0.0001	<0.001	<0.01		ROBIOLOGICAL	<0.01	<0.001	<0.0001			

DISSOLVED COPPER	DISSOLVED COPPER ORC-ICP-MS	DISSOLVED IRON	DISSOLVED LEAD	DISSOLVED MANGANESE	DISSOLVED MERCURY	DISSOLVED NICKEL	DISSOLVED SELENIUM	DISSOLVED TIN	DISSOLVED ZINC	TOTAL COLIFORMS	ENTEROCOCCI	E. COLI
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU / 100mL	orgs /100mL	CFU / 100mL
											0	0
											230	51
											17	13
< 0.001		< 0.05	< 0.001	< 0.001	< 0.0001	0.002	< 0.01	< 0.001	< 0.005			
		< 0.05								200		
		0.1								>24000		
		< 0.05								180		
		< 0.05								83		
0.002		< 0.05	< 0.001	0.015	< 0.0001	0.008	< 0.01	< 0.001	0.014			
0.002		< 0.05	< 0.001	0.003	< 0.0001	0.011	< 0.01	< 0.001	0.011			
0.001		0.06	< 0.001	0.48	< 0.0001	< 0.001	< 0.01	< 0.001	0.02			
									-			
										<1	<10	<1
										140	88	120
										870	1200	870
0.01		< 0.05	< 0.05	<0.001		0.002	<0.01	< 0.001	< 0.005			
0.001		15.1	< 0.001	3.2	< 0.0001	0.005	<0.01		< 0.005	0	1	0
0.001		< 0.05	< 0.001	1.63	< 0.0001	0.006	<0.01		< 0.005	650	73	520
0.002		< 0.05	< 0.001	0.334	< 0.0001	0.003	<0.01		< 0.005	870	1600	770
< 0.001		< 0.05	< 0.001	<0.001	< 0.0001	< 0.001	<0.01		< 0.005			

APPENDIX 4 LEACHATE TREATMENT WETLAND SETTLEMENT MONITORING DATA

DACE			16						
		MENTS 9/02/20							
POINT ID ABOLT	EASTING 405859.730	NORTHING 5451541.880	HEIGHT 153.299						
	405859.730	5451541.880							
BBOLT CBOLT	405903.058	5451409.390	158.332 163.272						
DBOLT	406022.459	5451409.202	160.809						
EBOLT	406022.439	5451530.346	158.943						
FBOLT	400002.903	5451587.495	156.789						
GBOLT HBOLT	405879.230 405856.516	5451632.967 5451600.399	152.541 152.122						
-									
SCODH	405633.677	5451519.799	148.097						
SCKERB	405724.340	5451516.620	148.891						
Ν	MEASUREMENT	S 26/04/2016					DI	FFERENCES TO BA	SELINE
POINT ID	EASTING	NORTHING	HEIGHT				EASTING	NORTHING	HEIGHT
160426.A	405859.723	5451541.880	153.299				-0.007	0.000	0.000
160426.B	405903.047	5451409.390	158.334				-0.011	0.000	0.002
160426.C	406017.611	5451409.258	163.277				-0.010	-0.004	0.005
160426.D	406022.449	5451480.846	160.813				-0.010	-0.006	0.004
160426.E	406002.958	5451530.342	158.944				-0.007	-0.004	0.001
160426.F	405986.460	5451587.489	156.791				-0.004	-0.006	0.002
160426.G	405879.224	5451632.967	152.543				-0.004	0.000	0.002
160426.H	405856.508	5451600.399	152.124				-0.008	0.000	0.002
100-120.11	103030.300	5151000.555	152.124				0.000	0.000	0.002
Ν	IEASUREMENT	S 16/05/2016		DIFF	ERENCE TO LAS	Т	D	IFFERENCE TO BAS	SELINE
POINT ID	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT
160516.A	405859.723	5451541.876	153.299	0.000	-0.004	0.000	-0.007	-0.004	0.000
160516.B	405903.055	5451409.387	158.334	0.008	-0.003	0.000	-0.003	-0.003	0.002
	406017.617	5451409.26	163.278	0.006	0.002	0.001	-0.004	-0.002	0.006
-		5451480.849	160.812	0.004	0.003	-0.001	-0.006	-0.003	0.003
160516.C	406022.453								0.002
160516.C 160516.D	406022.453		158,945	0.001	0.002	0.001	-0.006	-0.002	0.002
160516.C 160516.D 160516.E	406002.959	5451530.344	158.945 156.791	0.001	0.002	0.001	-0.006	-0.002 -0.005	
160516.C 160516.D 160516.E 160516.F	406002.959 405986.461	5451530.344 5451587.49	156.791	0.001	0.001	0.000	-0.003	-0.005	0.002
160516.C 160516.D 160516.E	406002.959	5451530.344							0.002 0.002 0.008 0.008 0.006
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H	406002.959 405986.461 405879.223 405856.512	5451530.344 5451587.49 5451632.964 5451600.394	156.791 152.549 152.128	0.001 -0.001 0.004	0.001 -0.003 -0.005	0.000 0.006	-0.003 -0.007	-0.005 -0.003	0.002 0.008
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H	406002.959 405986.461 405879.223 405856.512	5451530.344 5451587.49 5451632.964 5451600.394	156.791 152.549 152.128	0.001 -0.001	0.001 -0.003 -0.005	0.000 0.006	-0.003 -0.007	-0.005 -0.003	0.002 0.008
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H Note: unable to	406002.959 405986.461 405879.223 405856.512	5451530.344 5451587.49 5451632.964 5451600.394 survey the we	156.791 152.549 152.128	0.001 -0.001 0.004 n due to severe v	0.001 -0.003 -0.005	0.000 0.006 0.004	-0.003 -0.007 -0.004	-0.005 -0.003	0.002 0.008 0.006
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H Note: unable to	406002.959 405986.461 405879.223 405856.512 be accurately	5451530.344 5451587.49 5451632.964 5451600.394 survey the we	156.791 152.549 152.128	0.001 -0.001 0.004 n due to severe v	0.001 -0.003 -0.005 weather.	0.000 0.006 0.004	-0.003 -0.007 -0.004	-0.005 -0.003 -0.005	0.002 0.008 0.006
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H Note: unable to	406002.959 405986.461 405879.223 405856.512 b be accurately //EASUREMENT	5451530.344 5451587.49 5451632.964 5451600.394 survey the we \$ 31/05/2016	156.791 152.549 152.128 ek of the 9th	0.001 -0.001 0.004 n due to severe v DIFF	0.001 -0.003 -0.005 weather. ERENCE TO LAS	0.000 0.006 0.004 T	-0.003 -0.007 -0.004 D	-0.005 -0.003 -0.005	0.002 0.008 0.006 SELINE HEIGHT
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H Note: unable to Note: Unable to Note: Unable to	406002.959 405986.461 405879.223 405856.512 b be accurately //EASUREMENT EASTING	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING	156.791 152.549 152.128 ek of the 9th HEIGHT	0.001 -0.001 0.004 n due to severe v DIFF EASTING	0.001 -0.003 -0.005 weather. REENCE TO LAS NORTHING	0.000 0.006 0.004 T HEIGHT	-0.003 -0.007 -0.004 D EASTING	-0.005 -0.003 -0.005 IFFERENCE TO BA	0.002 0.008 0.006 SELINE HEIGHT -0.006
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: Unable to N	406002.959 405986.461 405879.223 405856.512 b be accurately MEASUREMENT EASTING 405859.727	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881	156.791 152.549 152.128 ek of the 9th HEIGHT 153.293	0.001 -0.001 0.004 n due to severe v DIFF EASTING 0.004	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005	0.000 0.006 0.004 T HEIGHT -0.006	-0.003 -0.007 -0.004 D EASTING -0.003	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001	0.002 0.008 0.006 SELINE
160516.C 160516.D 160516.E 160516.F 160516.G 160516.H Note: unable to NOTE: UN	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.391	156.791 152.549 152.128 ek of the 9th HEIGHT 153.293 158.327	0.001 -0.001 0.004 n due to severe v DIFF EASTING 0.004 0.001	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004	0.000 0.006 0.004 T HEIGHT -0.006 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOINT ID 160531.A 160531.B 160531.C	406002.959 405986.461 405879.223 405856.512 b be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.391 5451409.263	156.791 152.549 152.128 ek of the 9th HEIGHT 153.293 158.327 163.272	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.002	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001 0.001	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.004
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.D	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451480.851	156.791 152.549 152.128 ek of the 9th HEIGHT 153.293 158.327 163.272 160.805	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.002 -0.003 -0.003	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001 0.001 -0.001	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.004 -0.006
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.E 160531.F	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451480.851 5451530.347 5451530.347	156.791 152.549 152.128 ek of the 9th HEIGHT 153.293 158.327 163.272 160.805 158.937	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.007 -0.008	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.002 -0.003 -0.003	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001 -0.001 0.001 0.001	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.006 -0.006
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.D 160531.E	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451480.851 5451530.347	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.003 0.006	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.007 -0.008 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.002 -0.003 -0.003 0.002	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001 -0.001 0.001 0.001 0.001	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.G	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451409.263 5451480.851 5451530.347 5451537.496 5451632.969	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.005 0.007	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.007 -0.008 -0.007 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 -0.003 0.002 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.006 -0.006 0.001
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451409.263 5451530.347 5451530.347 5451530.347 5451632.969 5451600.398	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.005 0.007 0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.008 -0.007 -0.007 -0.007 -0.007 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 -0.003 0.002 0.000 0.001	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.006 -0.005 0.001 -0.001
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.H	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451409.263 5451530.347 5451530.347 5451530.347 5451632.969 5451600.398	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.005 0.007 0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.008 -0.007 -0.007 -0.007 -0.007 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 -0.003 0.002 0.000 0.001	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.006 -0.005 0.001 -0.001
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H N	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451480.851 5451530.347 5451530.347 5451537.496 5451632.969 5451600.398 S 14/06/2016	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.005 0.007 0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 ERENCE TO LAS	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.008 -0.007 -0.007 -0.007 -0.007 -0.007	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.002 0.000 0.001	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.006 -0.005 0.001 -0.001 SELINE
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H NOT ID	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451409.263 5451530.347 5451530.347 5451537.496 5451632.969 5451600.398 S 14/06/2016 NORTHING	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.003 0.006 0.005 0.004 ERENCE TO LAS NORTHING	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.002 0.000 0.001 D EASTING	-0.005 -0.003 -0.005 IFFERENCE TO BA NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.002 0.008 SELINE HEIGHT -0.006 -0.005 0.000 -0.004 -0.005 0.001 -0.001 SELINE HEIGHT
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.F 160531.F 160531.F 160531.H N POINT ID 160531.H	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 405859.726	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451409.263 5451530.347 5451530.347 5451537.496 5451632.969 5451600.398 S 14/06/2016 NORTHING 5451541.88	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 UIFF EASTING 0.001	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.003 0.005 0.004 ERENCE TO LAS NORTHING 0.001	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.007 -0.007 -0.007 T HEIGHT 0.004	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.002 0.000 0.000 0.001 D EASTING 0.004	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.006 -0.005 0.001 -0.001 SELINE HEIGHT -0.002
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to M POINT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H M POINT ID 16054.A 160614.A 160614.B	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASUREMENT EASTING 405859.726 405903.057	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451530.347 5451530.347 5451537.496 5451632.969 5451600.398 S 14/06/2016 NORTHING 5451541.88 5451409.389	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 UIFF EASTING 0.001 -0.001	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 ERENCE TO LAS NORTHING 0.001 0.002	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.006 -0.004 -0.006 -0.007 -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.002 0.000 0.0001 D EASTING 0.004 0.001	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000 0.001	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.006 -0.001 -0.001 SELINE HEIGHT -0.002 -0.002 -0.002 -0.002
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to M POINT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H M POINT ID 16054.A 160614.A 160614.C	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASUREMENT EASTING 405859.726 405903.057 406017.624	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 5 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451632.969 5451632.969 5451600.398 5 14/06/2016 NORTHING 5451541.88 5451409.389 5451409.264	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.003 0.005 0.007 0.005 DIFF EASTING 0.001 -0.001 -0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.003 0.003 0.003 0.005 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.008 -0.007 -0.009 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.002 0.000 0.000 0.001 C EASTING 0.004 0.001 -0.003	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000 0.001 -0.002	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.000 0.001 -0.001 SELINE HEIGHT -0.002 -0.002 0.004 0.004 0.004 0.004
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to M POINT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H M POINT ID 16064.A 160614.A 160614.D	406002.959 405986.461 405879.223 405856.512 b be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459	5451530.344 5451587.49 5451632.964 5451600.394 survey the we S 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451632.969 5451600.398 S 14/06/2016 NORTHING 5451541.88 5451409.389 5451409.389	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 EASTING 0.001 -0.001 -0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001 -0.003	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.000 0.001 EASTING 0.004 0.001 -0.003 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000 0.001 -0.002 -0.002 -0.002	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.000 0.001 -0.001 SELINE HEIGHT -0.002 -0.002 -0.002 0.004 0.004 0.006 -0.002 -0.006
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H N POINT ID 160644.A 160614.A 160614.C 160614.E	406002.959 405986.461 405879.223 405856.512 b be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 406002.965	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451632.969 5451632.969 5451600.398 5451600.398 5451600.398 5451541.88 5451409.389 5451540.854 5451409.264 5451540.854	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.003 -0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.003 0.003 0.003 0.003 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001 -0.003 -0.005	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.006 -0.007 -0.004 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.000 0.001 -0.003 0.000 0.000 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000 0.001 -0.002 -0.002 -0.002 -0.006	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.000 0.001 -0.001 SELINE HEIGHT -0.002 -0.002 0.004 0.000 -0.002 0.004 0.000 0.000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.B 160614.F	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 406002.965 405986.463	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451632.969 5451632.969 5451600.398 5451600.398 5451600.398 5451541.88 5451409.389 5451541.88 5451409.389 5451409.354	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94 156.789	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.007 0.001 -0.001 -0.001 -0.003 -0.003 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.003 0.003 0.003 0.003 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001 -0.003 -0.005 -0.004	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.003 -0.003 -0.004 -0.003 -0.004 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.0001 0.001 -0.003 0.0001 0.0001 -0.003 0.0000 0.0001	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000 0.001 -0.002 -0.002 -0.002 -0.005	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.006 -0.001 -0.001 SELINE HEIGHT -0.002 -0.002 -0.002 0.004
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.C 160614.F 160614.G	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 406002.965 405986.463 405879.226	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451632.969 5451600.398 5451600.398 5451541.88 5451541.88 5451409.389 5451541.88 5451409.389 5451409.364 5451541.88 5451409.364 5451540.352 5451587.5 5451632.969	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94 156.789 152.551	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.001 -0.003 -0.003 0.003 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001 -0.003 -0.005 -0.004 0.000	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.000 0.000 0.001 -0.003 0.000 0.000 0.000 0.000 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA: NORTHING 0.000 0.001 -0.002 -0.002 -0.005 -0.002	0.002 0.008 0.006 SELINE HEIGHT -0.006 -0.005 0.000 -0.004 -0.005 0.001 -0.001 SELINE HEIGHT -0.002 -0.002 0.004 0.000 0.004 0.000 0.000 0.000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.B 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.B 160614.F 160614.F 160614.H	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 406002.965 405986.463 405879.226	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 5 31/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451632.969 5451600.398 5451541.88 5451541.88 5451409.264 5451541.88 5451409.264 5451540.854 5451530.352 5451632.969 5451600.399	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94 156.789 152.551	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.001 -0.003 0.003 0.003 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001 -0.003 -0.005 -0.004 0.000	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.000 0.000 0.001 -0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA: NORTHING 0.000 0.001 -0.002 -0.002 -0.005 -0.002	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.000 0.001 -0.001 SELINE HEIGHT -0.002 -0.002 0.004 0.000 0.004 0.000 0.000 0.000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.A 160614.F 160614.F 160614.F 160614.H N POINT ID	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 406022.459 406017.624 406022.459 406022.459 406022.459 406022.459 406022.459 406022.459 405859.726 405985.6512 405856.512 MEASUREMENT EASTING	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451541.88 5451409.264 5451541.88 5451409.264 5451540.854 5451530.352 5451632.969 5451600.399 5451600.399 501/07/2016 NORTHING	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94 156.789 152.551	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.001 -0.003 0.003 0.003 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.003 0.006 0.005 0.004 ERENCE TO LAS NORTHING 0.001 0.002 -0.001 -0.003 -0.004 0.000 -0.001	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.000 0.000 0.001 -0.003 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BAS NORTHING 0.000 0.001 -0.002 -0.002 -0.002 -0.005 -0.002 0.000	0.002 0.006 0.006 SELINE HEIGHT -0.006 -0.006 -0.006 -0.000 0.001 -0.001 SELINE HEIGHT -0.002 -0.002 0.004 0.000 0.004 0.000 0.000 0.000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.A 160614.F 160614.F 160614.H N	406002.959 405986.461 405879.223 405856.512 b be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 406022.459 406022.965 405986.463 405879.226 405856.512 MEASUREMENT	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451530.347 5451537.496 5451632.969 5451600.398 5451409.264 5451541.88 5451409.264 5451540.854 5451530.352 5451632.969 5451600.399 5451600.399	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 160.805 158.937 156.784 152.542 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94 156.789 152.551 152.127	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.001 -0.001 -0.003 0.003 0.003 0.003 0.003 0.004 0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.003 0.003 0.004 0.003 0.004 0.005 0.004 0.001 0.002 -0.001 -0.003 -0.003 -0.004 0.000 -0.001 ERENCE TO LAS	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.000 0.000 0.001 -0.003 0.000 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	-0.005 -0.003 -0.005 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 0.002 0.000 0.001 0.002 0.000 0.001 0.000 0.001 0.000 0.001 0.0000 0.0000 0.0000 0.000000	0.002 0.006 0.006 0.006 0.006 0.000 0.000 0.000 0.000 0.001 0.000 0.001 0.0020
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.A 160614.F 160614.F 160614.F 160614.H N POINT ID	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 406022.459 406017.624 406022.459 406022.459 406022.459 406022.459 406022.459 406022.459 405859.726 405985.6512 405856.512 MEASUREMENT EASTING	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451541.88 5451409.264 5451541.88 5451409.264 5451540.854 5451530.352 5451632.969 5451600.399 5451600.399 501/07/2016 NORTHING	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 163.272 160.805 158.937 156.784 152.542 152.121 152.121 HEIGHT 153.297 158.33 163.276 160.809 158.94 156.789 152.551 152.127 HEIGHT	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.001 -0.001 -0.003 0.003 0.003 0.003 0.003 0.003 0.004 0.005 EASTING	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.003 0.003 0.004 0.005 0.004 0.005 0.004 0.001 0.002 -0.001 -0.003 -0.003 -0.005 -0.004 0.000 -0.001 ERENCE TO LAS NORTHING	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.0002 0.0001 0.00000000	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.000 0.001 0.0000 0.0000 0.0000 0.0000 0.000000	0.002 0.006 0.006 0.006 0.006 0.000 0.000 0.000 0.000 0.000 0.001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.000000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.A 160614.F 160614.F 160614.F 160614.F 160614.H N POINT ID 160514.A	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 405022.459 406022.459 406022.459 405029.655 405986.463 405879.226 405856.512 MEASUREMENT EASTING 405859.728	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451541.88 5451409.264 5451541.88 5451409.264 5451540.352 5451632.969 5451603.399 5451603.399 5451603.399	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 163.272 160.805 158.937 156.784 152.542 152.121 152.121 153.297 158.33 163.276 160.809 158.94 156.789 152.551 152.127 152.127 153.296	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.001 0.002 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.005 0.001 -0.001 -0.001 -0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.004 0.005 -0.003 0.004 0.005 -0.003 0.004 0.005 -0.003 0.004 0.005 -0.003 0.004 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.004 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.004 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.003 0.005 -0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.003 0.003 0.004 0.005 0.004 0.005 0.004 0.001 0.002 -0.001 -0.003 -0.005 -0.004 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001 ERENCE TO LAS NORTHING -0.002	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.001 T HEIGHT -0.001	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.0002 0.0001 0.00000000	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA: NORTHING -0.002 0.000 IFFERENCE TO BA: NORTHING -0.002 0.000	0.002 0.006 0.006 0.006 0.006 0.000 0.000 0.000 0.000 0.000 0.001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.000000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to M POINT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.F 160531.H M POINT ID 160614.A 160614.A 160614.A 160614.C 160614.F 160614.F 160614.F 160614.F 160614.F 160614.H M POINT ID 160701A 160701B	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 406022.459 40602.965 405985.6512 MEASUREMENT EASTING 405859.728 405856.512 MEASUREMENT EASTING 405859.728 405903.064	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451409.264 5451541.88 5451409.264 5451540.854 5451632.969 5451603.399 5451603.399 5451603.399 5451603.399	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 163.272 160.805 158.937 156.784 152.542 152.121 152.121 153.297 158.33 163.276 160.809 158.94 156.789 152.551 152.127 152.127 153.296 153.296 153.296 158.329	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.007 0.001 -0.001 -0.001 -0.003 0.005 0.003 0.005 0.001 0.005 0.001 0.005 0.001 0.005 0.001 0.005 0.001 0.005 0.007 0.005 0.001 0.005 0.007 0.005 0	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.000 0.005 0.004 0.005 0.004 ERENCE TO LAS NORTHING 0.001 -0.003 -0.004 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001 -0.003 -0.004 -0.002 -0.004	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.001 -0.001 T HEIGHT -0.001 -0.001 -0.001	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.000000	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA: NORTHING 0.000 0.001 -0.002 -0.005 -0.002 0.000 IFFERENCE TO BA: NORTHING -0.002 0.000 IFFERENCE TO BA: 0.000 -0.003	0.002 0.006 0.006 0.006 0.006 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.000000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to M POINT ID 160531.A 160531.A 160531.C 160531.C 160531.C 160531.F 160531.F 160531.F 160531.H M POINT ID 160614.A 160614.A 160614.A 160614.C 160614.F 160614.F 160614.F 160614.F 160614.F 160614.H M POINT ID 160701A 160701B 160701C	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 4050859.726 405986.463 405879.226 405986.463 405879.226 405986.463 405879.226 405985.512 MEASUREMENT EASTING 405859.728 405903.064	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451409.364 5451541.88 5451409.364 5451541.885 5451632.969 5451603.399 5451603.399 5451603.399 5451603.399 5451603.399 5451603.399	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 163.272 160.805 158.937 156.784 152.542 152.121 152.121 153.297 158.33 163.276 160.809 158.94 156.789 152.551 152.127 153.296 153.296 158.329 163.276	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.003 0.003 0.003 0.003 0.005 0.007 0.005 EASTING 0.001 -0.001 -0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.004 0.005 EASTING 0.001 0.005	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 0.005 0.004 0.005 0.004 0.001 0.002 -0.001 -0.003 -0.003 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.001 -0.001 T HEIGHT -0.001 -0.001 -0.001 0 001 -0.002 -0.002 -0.002 -0.007 -0	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.0002 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0002 0.0002 0.0002 0.0002 0.0002	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA: NORTHING 0.000 0.001 -0.002 -0.005 -0.002 0.000 IFFERENCE TO BA: NORTHING -0.002 0.000 IFFERENCE TO BA: 0.000	0.002 0.006 0.006 0.006 0.006 0.0000 0.0000 0.0000 0.000000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.F 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.A 160614.F 160614.F 160614.F 160614.F 160614.F 160614.F 160614.F 160614.H N POINT ID 160701A 160701D	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405986.466 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 405856.512 MEASUREMENT EASTING 405859.728 405985.6512 MEASUREMENT EASTING 405859.728 405903.064 405903.064	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.391 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451409.264 5451541.88 5451409.264 5451632.969 5451642.967 5451642.9	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 163.272 160.805 158.937 156.784 152.542 152.121 152.121 153.297 158.33 163.276 160.809 152.551 152.127 152.127 HEIGHT 153.296 153.296 153.296 153.276 160.808	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.001 -0.001 -0.001 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.004 0.003 0.004 0.005 0.007 0.005 0.007 0.005 0.007 0.005 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 0.005 0.004 0.005 0.004 0.001 0.002 -0.001 0.003 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.004 0.002 -0.004 0.002 0.003	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.001 T HEIGHT -0.001 -0.001 -0.001 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.000 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0002 0.0002 0.0002 0.0002 0.0002 0.0002 0.0002 0.0003	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 -0.001 IFFERENCE TO BA: NORTHING 0.000 0.001 IFFERENCE TO BA: NORTHING -0.002 -0.005 -0.002 0.000 IFFERENCE TO BA: NORTHING 0.000 0.001 IFFERENCE TO BA: NORTHING 0.000 0.001	0.002 0.006 0.006 0.006 0.006 0.0000 0.0000 0.0000 0.000000
160516.C 160516.D 160516.F 160516.G 160516.H Note: unable to Note: unable to NOT ID 160531.A 160531.A 160531.C 160531.C 160531.C 160531.F 160531.F 160531.F 160531.F 160531.H N POINT ID 160614.A 160614.A 160614.A 160614.F 160614.F 160614.F 160614.F 160614.F 160614.F 160614.F 160614.F 160614.H N POINT ID 160701A 160701B 160701C 160701E	406002.959 405986.461 405879.223 405856.512 be accurately MEASUREMENT EASTING 405859.727 405903.056 406017.619 406022.456 406002.962 405879.23 405856.517 MEASUREMENT EASTING 405859.726 405903.057 406017.624 406022.459 4059856.512 MEASUREMENT EASTING 405859.728 405985.6512 MEASUREMENT EASTING 405859.728 40597.286 40597.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405857.286 405903.064 406017.619 406022.456 406002.963	5451530.344 5451587.49 5451632.964 5451600.394 survey the we 531/05/2016 NORTHING 5451541.881 5451409.263 5451409.263 5451587.496 5451632.969 5451600.398 5451600.398 5451409.264 5451541.88 5451409.264 5451541.885 5451632.969 5451603.399 5451603.399 5451603.399 5451603.399 5451603.399 5451603.399 5451603.399 5451541.882 5451541.882 5451541.882 5451541.882 5451541.882 5451541.882 5451541.882 5451409.393 5451409.262 5451409.262 5451540.349	156.791 152.549 152.128 ek of the 9th 153.293 158.327 163.272 163.272 160.805 158.937 156.784 152.542 152.121 152.121 153.297 158.33 163.276 160.809 158.94 155.751 152.127 153.296 153.296 153.296 158.329 163.276 160.808 158.94	0.001 -0.001 0.004 0 due to severe v DIFF EASTING 0.004 0.003 0.003 0.003 0.003 0.005 0.007 0.005 0.001 -0.001 -0.001 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.004 0.005 0.003 0.005 0.007 0.005 0.007 0.005 0.003	0.001 -0.003 -0.005 weather. ERENCE TO LAS NORTHING 0.005 0.004 0.003 0.002 0.003 0.006 0.005 0.004 0.005 0.004 0.005 0.004 0.001 0.002 -0.001 0.002 -0.001 0.003 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001 ERENCE TO LAS NORTHING 0.000 -0.001 0.002 -0.004 0.002 0.003 0.003 0.003	0.000 0.006 0.004 T HEIGHT -0.006 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.007 -0.001 -0.001 T HEIGHT -0.001 -0.001 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 0 -0.001 -0.001 0 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.001 -0.002 -0.002 -0.002 -0.002 -0.007 -	-0.003 -0.007 -0.004 D EASTING -0.003 -0.002 -0.003 -0.003 0.0002 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0001 0.0002 0.0002 0.0002 0.0003 0.0002 0.0003 0.0002	-0.005 -0.003 -0.005 IFFERENCE TO BA: NORTHING 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.000 0.001 0.000 0.000 0.000 0.000 1FFERENCE TO BA: NORTHING 0.000 0.000 1FFERENCE TO BA: NORTHING 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.000000	0.002 0.006 0.006 0.006 0.006 0.006 0.000 0.000 0.000 0.001 0.000 0.001 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.000000

1	MEASUREMENT	S 6/12/2016		DIFF	ERENCE TO LAS	T	D	IFFERENCE TO BAS	SELINE
POINTID	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT
161206A	405859.728	5451541.884	153.297	0.000	-0.002	0.001	0.002	-0.004	-0.00
161206B	405903.063	5451409.405	158.321	0.001	-0.012	-0.008	-0.005	-0.015	-0.01
161206C	406017.627	5451409.276	163.273	-0.008	-0.014	-0.003	-0.006	-0.014	0.00
161206D	406022.455	5451480.865	160.797	0.001	-0.014	-0.011	0.004	-0.013	-0.01
E (DESTROYED)									
161206F	405986.458	5451587.512	156.786	0.006	-0.010	-0.002	0.006	-0.017	-0.00
161206G	405879.222	5451632.979	152.551	0.000	-0.006	0.000	0.008	-0.012	0.01
161206H	405856.507	5451600.408	152.125	0.002	-0.008	-0.001	0.009	-0.009	0.00
		c 22/42/201C		DIFF		-			CELINE
POINT ID	AEASUREMENTS	NORTHING	HEIGHT	EASTING	ERENCE TO LAS	HEIGHT	EASTING	IFFERENCE TO BAS	HEIGHT
161222A	405859.725	5451541.88	153.298	-0.003	-0.004	0.001	-0.005	0.000	-0.00
161222B	405903.066	5451409.393	158.321	0.003	-0.012	0.000	0.008	0.003	-0.01
161222C	406017.625	5451409.264	163.274	-0.002	-0.012	0.001	0.004	0.002	0.00
161222D	406022.451	5451480.849	160.797	-0.004	-0.016	0.000	-0.008	-0.003	-0.01
E (DESTROYED)	405000 450	5454507 500	456 702	0.001	0.010	0.004	0.005	0.007	0.00
161222F	405986.459	5451587.502	156.782	0.001	-0.010	-0.004	-0.005	0.007	-0.00
161222G	405879.228	5451632.971	152.551	0.006	-0.008	0.000	-0.002	0.004	0.01
161222H	405856.511	5451600.402	152.125	0.004	-0.006	0.000	-0.005	0.003	0.00
1	MEASUREMENT	S 9/01/2017		DIFF	ERENCE TO LAS	т	D	IFFERENCE TO BAS	SELINE
POINT ID	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT
170109A	405859.727	5451541.882	153.297	0.002	0.002	-0.001	-0.003	0.002	-0.00
170109B	405903.056	5451409.398	158.323	-0.010	0.005	0.002	-0.002	0.008	-0.00
170109C	406017.616	5451409.266	163.276	-0.009	0.002	0.002	-0.005	0.004	0.00
170109D	406022.443	5451480.851	160.798	-0.008	0.002	0.001	-0.016	-0.001	-0.01
170109F	405986.456	5451587.497	156.784	-0.003	-0.005	0.002	-0.008	0.002	-0.00
170109G	405879.229	5451632.968	152.551	0.001	-0.003	0.000	-0.001	0.001	0.01
170109H	405856.511	5451600.403	152.125	0.000	0.001	0.000	-0.005	0.004	0.00
Note: Heights I	nighlighted blu	e located using		otal station to le				0.004	0.00
	highlighted blu MEASUREMENTS			otal station to le		han digital le	vel.	IFFERENCE TO BAS	
				otal station to le	esser accuracy t	han digital le	vel.		
N	/EASUREMENT	S 23/01/2017	1" robotic t	otal station to le DIFF	ERENCE TO LAS	han digital le	vel. D	IFFERENCE TO BAS	Seline Height
N POINT ID	/EASUREMENTS	S 23/01/2017 NORTHING	1" robotic t HEIGHT	otal station to le DIFF EASTING	ERENCE TO LAS	han digital le T HEIGHT	vel. D EASTING	IFFERENCE TO BAS	SELINE HEIGHT -0.00
N POINT ID 170123A	/EASUREMENTS EASTING 405859.733	S 23/01/2017 NORTHING 5451541.88	1" robotic t HEIGHT 153.297	otal station to le DIFF EASTING 0.006	ERENCE TO LAS NORTHING -0.002	han digital le ST HEIGHT 0.000	vel. D EASTING 0.003	IFFERENCE TO BAS NORTHING 0.000	SELINE HEIGHT -0.00 -0.00
N POINT ID 170123A 170123B	/EASUREMENTS EASTING 405859.733 405903.067	S 23/01/2017 NORTHING 5451541.88 5451409.391	1" robotic t HEIGHT 153.297 158.323	otal station to le DIFF EASTING 0.006 0.011	ERENCE TO LAS NORTHING -0.002 -0.007	han digital le T HEIGHT 0.000 0.000	vel. D EASTING 0.003 0.009	IFFERENCE TO BAS NORTHING 0.000 0.001	SELINE HEIGHT -0.00 -0.00 0.00
N POINT ID 170123A 170123B 170123C 170123D	AEASUREMENTS EASTING 405859.733 405903.067 406017.626 406022.455	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852	1" robotic t HEIGHT 153.297 158.323 163.278 160.798	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001	han digital le 5T HEIGHT 0.000 0.000 0.000 0.000	vel. <u>EASTING</u> 0.003 0.009 0.005 -0.004	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000	SELINE HEIGHT -0.00 -0.00 0.00 -0.01
N POINT ID 170123A 170123B 170123C 170123D 170123F	AEASUREMENTS EASTING 405859.733 405903.067 406017.626 406022.455 405986.468	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003	han digital le T HEIGHT 0.000 0.000 0.002 0.000 0.000	vel. <u>EASTING</u> 0.003 0.009 0.005 -0.004 0.004	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001	SELINE HEIGHT -0.00 -0.00 0.00 -0.01 -0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G	/EASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 4059879.235	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554	0tal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.006	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.003	han digital le T HEIGHT 0.000 0.000 0.000 0.000 0.000 0.002 0.000 0.003	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003	SELINE HEIGHT -0.00 -0.00 0.00 -0.01 -0.00 0.01
N POINT ID 170123A 170123B 170123C 170123D 170123F	AEASUREMENTS EASTING 405859.733 405903.067 406017.626 406022.455 405986.468	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003	han digital le T HEIGHT 0.000 0.000 0.002 0.000 0.000	vel. <u>EASTING</u> 0.003 0.009 0.005 -0.004 0.004	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003	SELINE HEIGHT -0.00 -0.00 0.00 -0.01 -0.00
N POINT ID 170123A 170123B 170123C 170123C 170123F 170123F 170123G 170123H	/EASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 4059879.235	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451408.852 5451587.494 5451632.97 5451600.403	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.006 0.005	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.003	han digital le	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003	SELINE HEIGHT -0.00 -0.00 -0.01 -0.00 0.01 0.00
N POINT ID 170123A 170123B 170123C 170123C 170123F 170123G 170123H	AEASUREMENT: EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451408.852 5451587.494 5451632.97 5451600.403	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.006 0.005	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000	han digital le	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004	SELINE HEIGHT -0.00 -0.00 -0.01 -0.00 0.01 0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N	/EASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405979.235 405856.516	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127	0tal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.005 0.005 DIFF	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS	han digital le T HEIGHT 0.000 0.000 0.000 0.000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 0.01 0.00 SELINE
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID	/EASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 //EASUREMENT EASTING	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT	0tal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.005 0.005 DIFF EASTING	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING	SELINE HEIGHT -0.00 -0.00 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A	/EASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 //EASUREMENT EASTING 405859.732	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298	0tal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.006 0.005 DIFF EASTING -0.001	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006	SELINE HEIGHT -0.00 -0.00 -0.01 -0.00 0.01 0.00 SELINE HEIGHT
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B	/EASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 //EASUREMENT EASTING 405859.732 405903.062	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328	DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.006 0.005 DIFF EASTING -0.001 -0.005	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004	han digital le T HEIGHT 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.001 HEIGHT 0.001 0.005	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 0.01 0.00 SELINE HEIGHT -0.00 -0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223D	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451480.846	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.001 0.012 0.005 DIFF EASTING -0.001 -0.005 -0.005 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004 -0.004 -0.006	han digital le T HEIGHT 0.000 0.000 0.000 0.000 0.000 0.000 0.000 T HEIGHT 0.001 0.005 0.008 0.008	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 -0.008	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006	SELINE HEIGHT -0.00 -0.00 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01 -0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223F	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621 406022.451	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451409.26 5451480.846	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804 	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.005 DIFF EASTING -0.001 -0.005 -0.004 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004 -0.004 -0.004 -0.006	han digital le T HEIGHT 0.000 0.000 0.000 0.000 0.000 0.000 0.000 T HEIGHT 0.001 0.005 0.008 0.006	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 -0.008	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 0.00 SELINE HEIGHT -0.00 -0.00 -0.00 0.01 -0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223D 170223F 170223F 170223G	AEASUREMENT: EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT: EASTING 405859.732 405903.062 406017.621 406022.451	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451409.26 5451480.846 5451587.496 5451632.973	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804 156.791 152.558	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.012 0.005 0.005 0.005 -0.001 -0.005 -0.004 -0.004 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004 -0.004 -0.004 -0.004 0.002 0.002 0.002	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 -0.008 0.000	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.001 0.006	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 0.00 SELINE HEIGHT -0.00 -0.00 -0.00 0.01 -0.00 0.01
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223F	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621 406022.451	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451409.26 5451480.846	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804 	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.005 DIFF EASTING -0.001 -0.005 -0.004 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004 -0.004 -0.004 -0.006	han digital le T HEIGHT 0.000 0.000 0.000 0.000 0.000 0.000 0.000 T HEIGHT 0.001 0.005 0.008 0.006	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 -0.008	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001	SELINE HEIGHT -0.00 -0.00 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223F 170223F 170223F 170223H	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621 406022.451 405986.464 405879.231 405856.514	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451409.26 5451480.846 5451587.496 5451632.973 5451600.406	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804 156.791 152.558	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.012 0.005 0.005 -0.001 -0.005 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004 -0.004 -0.004 0.002 0.002 0.003 0.003	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 0.000 0.000 0.001 -0.002	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01 -0.00 0.01 0.00
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223F 170223G 170223H	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621 406022.451 405986.464 405879.231 405856.514	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451409.26 5451480.846 5451587.496 5451632.973 5451600.406	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804 156.791 152.558 152.13	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.006 0.005 DIFF EASTING -0.001 -0.005 -0.004 -0.005 -0.004 -0.04	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.006 0.004 -0.004 -0.004 0.002 0.003 0.003 0.003 ERENCE TO LAS	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000000 00	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 SELINE HEIGHT -0.00 -0.00 -0.00 0.01 -0.00 0.01 -0.00 SELINE
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123F 170123H 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223F 170223F 170223H N POINT ID	AEASUREMENT: EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405986.468 405879.235 405856.516 AEASUREMENT: EASTING 405903.062 406017.621 406022.451 405986.464 405879.231 405856.514 AEASUREMENT: EASTING	S 23/01/2017 NORTHING 5451541.88 5451409.391 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.395 5451409.26 5451409.26 5451480.846 5451587.496 5451632.973 5451600.406 S 21/03/2017 NORTHING	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 158.328 163.286 160.804 156.791 152.558 152.13	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.001 0.005 0.005 0.005 -0.001 -0.005 -0.004 -0.005 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.004 -0.004 -0.004 -0.005 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 -0.004 0.002 0.003 0.003 0.003 ERENCE TO LAS NORTHING	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.000 0.000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 0.000 0.001 -0.008 0.000 0.001 0.001 0.001 0.001 0.002 D EASTING	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 0.01 -0.00 SELINE HEIGHT -0.00 -0.
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223G 170223H N POINT ID 170223H N POINT ID 170321A	ACASUREMENT: EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405986.468 405879.235 405856.516 ACASUREMENT: EASTING 405985.732 405903.062 406017.621 406022.451 405985.731 405856.514 ACASUREMENT: EASTING 405859.731	S 23/01/2017 NORTHING 5451541.88 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 S 23/02/2017 NORTHING 5451541.886 5451409.26 5451409.26 5451409.26 5451632.973 5451602.406 S 21/03/2017 NORTHING 5451541.881	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.127 HEIGHT 153.298 163.286 160.804 152.558 163.286 160.804 152.558 152.13	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.005 0.005 0.005 -0.001 -0.004	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 -0.004 0.002 0.003 0.003 ERENCE TO LAS NORTHING -0.003 ERENCE TO LAS NORTHING -0.005	han digital le T HEIGHT 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.0000 0.0000 0.00000 0.000000 0.0000 0.0000	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING 0.001	SELINE HEIGHT -0.00 -0.00 -0.00 -0.01 -0.00 0.01 -0.00 SELINE HEIGHT -0.00 -0.
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223G 170223F 170223G 170223H N POINT ID 170223H N POINT ID 170321A 170321B	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405985.732 405903.062 406017.621 406022.451 405986.464 405879.231 405986.514 AEASUREMENT EASTING 405859.731 405903.057	S 23/01/2017 NORTHING 5451541.88 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 5451547.494 5451541.886 5451409.395 5451409.395 5451409.26 5451632.973 5451602.406 5451632.973 5451600.406 S 21/03/2017 NORTHING 5451541.881 5451409.394	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.554 152.127 HEIGHT 153.298 163.286 160.804 152.558 152.13 152.13 152.13 152.258	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.012 0.005 0.005 0.005 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.001 -0.001 -0.001 -0.001 -0.001 -0.002 -0.001 -0.001 -0.002 -0.001 -0.002 -0.001 -0.001 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.005 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.004 -0.004 -0.004 -0.005 -0.004 -0.005 -0.004 -0.005	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.003 0.003 ERENCE TO LAS NORTHING -0.003 -0.003 -0.003 -0.003 -0.003 -0.005 -0.001	han digital le T HEIGHT 0.000 0.002 0.002 0.000 0.002 0.000 0.002 0.000 0.002 0.000 0.000 0.005 0.008 0.006 0.005 0.006 0.005 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 0.001 -0.008 0.000 0.001 -0.002 D EASTING 0.001 -0.001	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.004	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01 -0.00 0.01 -0.00 SELINE HEIGHT -0.00 -0.0
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223G 170223F 170223G 170223H N POINT ID 170223H N POINT ID 170321A 170321B 170321C	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621 405986.464 405879.231 405856.514 AEASUREMENT EASTING 405859.731 405903.057 406017.619	S 23/01/2017 NORTHING 5451541.88 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 5451600.403 5451541.886 5451409.395 5451409.395 5451409.26 5451632.973 5451600.406 5451632.973 5451600.406 5451632.973 5451600.406 5451632.973 5451600.406	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.554 152.127 HEIGHT 153.298 163.286 160.804 152.558 163.286 152.13 HEIGHT 152.258 152.13	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.001 0.005 -0.001 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.005 -0.005 -0.005 -0.005 -0.002	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 -0.003 0.003 0.003 ERENCE TO LAS NORTHING -0.003 0.003 0.003 -0.004	han digital le T HEIGHT 0.000 0.002 0.002 0.002 0.002 0.002 0.003 0.002 0.003 0.002 0.003 0.005 0.006 0.005 0.006 0.005 0.004 0.005 0.004 0.003 0.005 0.004 0.005 0.004 0.005 0.004 0.005 0.004 0.005 0.004 0.005 0.000 0.005 0.000 0.005 0.0000 0.00000 0.0000 0.0000 0.0000 0.00000 0.0	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 -0.008 0.000 0.001 -0.002 D EASTING 0.001 -0.001 -0.001 -0.002	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING 0.001 0.004 -0.006	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01 -0.00 0.01 -0.00 SELINE HEIGHT -0.00 0.01 -0.00 0.01 -0.00 0.01 -0.00 0.01 -0.00 -0
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H 170123H 170123H 170123H 170223A 170223A 170223B 170223C 170223C 170223F 170223G 170223F 170223G 170223H N POINT ID 170223H N POINT ID 170321A 170321B 170321C	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405985.732 405903.062 406017.621 406022.451 405986.464 405879.231 405986.514 AEASUREMENT EASTING 405859.731 405903.057	S 23/01/2017 NORTHING 5451541.88 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 5451547.494 5451541.886 5451409.395 5451409.395 5451409.26 5451632.973 5451602.406 5451632.973 5451600.406 S 21/03/2017 NORTHING 5451541.881 5451409.394	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.554 152.127 HEIGHT 153.298 163.286 160.804 152.558 152.13 152.13 152.13 152.258	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.012 0.005 0.005 0.005 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.001 -0.001 -0.001 -0.001 -0.001 -0.002 -0.001 -0.001 -0.002 -0.001 -0.002 -0.001 -0.001 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.002 -0.004 -0.005 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.004 -0.004 -0.004 -0.005 -0.004 -0.005 -0.004 -0.005	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.003 0.003 ERENCE TO LAS NORTHING -0.003 -0.003 -0.003 -0.003 -0.003 -0.005 -0.001	han digital le T HEIGHT 0.000 0.002 0.002 0.000 0.002 0.000 0.002 0.000 0.002 0.000 0.000 0.005 0.008 0.006 0.005 0.006 0.005 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 0.001 -0.008 0.000 0.001 -0.002 D EASTING 0.001 -0.001	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING 0.001 0.001 0.001 0.001 0.004	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 SELINE HEIGHT -0.00 -0.00 -0.00 0.01 -0.00 0.01 -0.00 SELINE
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223G 170223F 170223G 170223H N POINT ID 170321A 170321B 170321D	AEASUREMENT: EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT: EASTING 405859.732 405903.062 406017.621 405986.464 405879.231 405986.514 AEASUREMENT: EASTING 405856.514 AEASUREMENT: EASTING 405859.731 405903.057 406017.619 406022.446	S 23/01/2017 NORTHING 5451541.88 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 5451600.403 5451541.886 5451409.265 5451409.265 5451409.2017 NORTHING 5451587.496 5451632.973 5451600.406 S 21/03/2017 NORTHING 5451541.881 5451409.394 5451409.256 5451480.842	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 150.786 152.554 152.554 152.127 HEIGHT 153.298 163.286 160.804 152.558 163.286 160.804 HEIGHT 152.558 152.13	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.012 0.001 0.005 -0.001 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.005 -0.005 -0.005 -0.005 -0.002 -0.005 -0.002 -0.005 -0.002 -0.005 -0.002 -0.005 -0.004 -0.005 -0.055	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 -0.003 0.003 0.003 ERENCE TO LAS NORTHING -0.003 0.003 ERENCE TO LAS NORTHING -0.004 -0.004 -0.004 -0.004	han digital le T HEIGHT 0.000 0.002 0.000 0.002 0.000 0.002 0.000 0.000 0.000 0.000 0.005 0.008 0.005 0.006 0.005 0.005 0.006 0.005 0.005 0.000 0.005 0.0000 0.00000 0.00000 0	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.0000 0.000 0.00000 0.00000 0.00000 0.0000 0	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING 0.001 0.004 -0.006 0.001 0.004 -0.006 -0.010	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01 -0.00 0.01 -0.00 SELINE HEIGHT -0.00 0.01 -0.00 0.01 -0.00 0.01 -0.00 -
N POINT ID 170123A 170123B 170123C 170123D 170123F 170123G 170123H N POINT ID 170223A 170223B 170223C 170223C 170223F 170223F 170223G 170223H	AEASUREMENT EASTING 405859.733 405903.067 406017.626 406022.455 405986.468 405879.235 405856.516 AEASUREMENT EASTING 405859.732 405903.062 406017.621 405986.464 405879.231 405856.514 AEASUREMENT EASTING 405859.731 405903.057 406017.619	S 23/01/2017 NORTHING 5451541.88 5451409.264 5451480.852 5451587.494 5451632.97 5451600.403 5451600.403 5451541.886 5451409.395 5451409.395 5451409.26 5451632.973 5451600.406 5451632.973 5451600.406 5451632.973 5451600.406 5451632.973 5451600.406	1" robotic t HEIGHT 153.297 158.323 163.278 160.798 156.786 152.554 152.554 152.127 HEIGHT 153.298 163.286 160.804 152.558 163.286 152.13 HEIGHT 152.258 152.13	otal station to le DIFF EASTING 0.006 0.011 0.010 0.012 0.012 0.012 0.012 0.012 0.001 0.005 -0.001 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.004 -0.005 -0.005 -0.005 -0.005 -0.005 -0.002	ERENCE TO LAS NORTHING -0.002 -0.007 -0.002 0.001 -0.003 0.002 0.000 ERENCE TO LAS NORTHING 0.004 -0.004 -0.004 0.003 0.003 ERENCE TO LAS NORTHING -0.003 0.003 0.003 ERENCE TO LAS NORTHING -0.004 -0.004 -0.004 -0.004 -0.004 -0.005	han digital le T HEIGHT 0.000 0.002 0.002 0.002 0.002 0.002 0.003 0.002 0.003 0.002 0.003 0.005 0.005 0.006 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.000 0.005 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	vel. D EASTING 0.003 0.009 0.005 -0.004 0.004 0.005 0.000 D EASTING 0.002 0.004 0.000 -0.008 0.000 0.001 -0.002 D EASTING 0.001 -0.001 -0.001 -0.002	IFFERENCE TO BAS NORTHING 0.000 0.001 0.002 0.000 -0.001 0.003 0.004 IFFERENCE TO BAS NORTHING 0.006 0.005 -0.002 -0.006 0.001 0.006 0.007 IFFERENCE TO BAS NORTHING 0.001 0.004 -0.006	SELINE HEIGHT -0.00 -0.00 -0.01 -0.01 -0.00 0.01 0.00 SELINE HEIGHT -0.00 -0.00 0.01 -0.00 0.01 -0.00 SELINE HEIGHT -0.00 0.01 -0.00 0.01 -0.00 0.01 -0.00 0.01 -0.00 -0

IEASUREMENT	5 27/04/2017		DIFE	ERENCE TO LAS	т	DIFFERENCE TO BASELINE			
						1			
								HEIGHT	
								-0.00	
								-0.00	
								0.01	
406022.449	5451480.835	160.8	0.003	-0.007	-0.003	-0.010	-0.017	-0.00	
405986.468	5451587.488	156.786	0.004	-0.003	-0.003	0.004	-0.007	-0.00	
405879.238	5451632.971	152.559	0.007	0.004	0.002	0.008	0.004	0.01	
405856.52	5451600.406	152.129	0.007	0.002	0.001	0.004	0.007	0.00	
IEASUREMENT	S 23/05/2017		DIFF	ERENCE TO LAS	т	DI	FFERENCE TO BAS	ELINE	
		HEIGHT						HEIGHT	
								-0.00	
								-0.00	
								0.00	
406017.017	5451480.838	160.798	-0.001	0.003	-0.002	-0.012	-0.000	-0.01	
								-0.00	
								0.01	
405856.517	5451600.399	152.129	-0.003	-0.007	0.000	0.001	0.000	0.00	
IEASUREMENT	S 11/12/2017		DIFF	ERENCE TO LAS	т	DI	FFERENCE TO BAS	ELINE	
EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT	
405859.73	5451541.877	153.298	-0.005	-0.005	0.000	0.000	-0.003	-0.00	
				-0.003			0.003	-0.00	
								0.01	
								-0.01	
400022.442	5451400.050	100.755	0.005	0.002	0.005	0.017	0.010	0.01	
405986.466	5451587.484	156.784	-0.004	-0.007	-0.001	0.002	-0.011	-0.00	
405879.233	5451632.964	152.565	0.000	0.000	0.006	0.003	-0.003	0.02	
405856.513	5451600.395	152.13	-0.004	-0.004	0.001	-0.003	-0.004	0.00	
	rs 1/02/2010		DIFE		т			CLINE	
						1			
								HEIGHT	
								-0.00	
405903.06		158.327	0.001	0.000	0.001	0.002	0.003	-0.00	
100000 100		460 705	0.000	0.000	0.000	0.026	0.010	0.01	
406022.433		160.795	-0.009	-0.002	0.000	-0.026	-0.018	-0.01	
405986.463	5451587.486	156.786	-0.003	0.002	0.002	-0.001	-0.009	-0.00	
405879.226	5451632.96	152.578	-0.007	-0.004	0.013	-0.004	-0.007	0.03	
405856.512	5451600.395	152.131	-0.001	0.000	0.001	-0.004	-0.004	0.00	
IEASUREMENT	S 12/02/2020		DIFF	ERENCE TO LAS	т	DI	FFERENCE TO BAS	ELINE	
						1	NORTHING	HEIGHT	
EASTING	NORTHING	HEIGHT	EASTING	NORTHING	HEIGHT	EASTING			
EASTING 405859.732	NORTHING 5451541.869	HEIGHT 153.291	EASTING 0.003	NORTHING -0.005	HEIGHT -0.003	EASTING 0.002		-0.00	
405859.732	5451541.869	153.291	0.003	-0.005	-0.003	0.002	-0.011		
405859.732 405903.066	5451541.869 5451409.392	153.291 158.328						-0.00 -0.00	
405859.732 405903.066 406017.627	5451541.869 5451409.392 5451409.245	153.291 158.328 163.321	0.003 0.006	-0.005 -0.001	-0.003 0.001	0.002 0.008	-0.011 0.002	-0.00	
405859.732 405903.066 406017.627 406022.43	5451541.869 5451409.392 5451409.245 5451480.829	153.291 158.328 163.321 160.796	0.003	-0.005	-0.003	0.002	-0.011	-0.00	
405859.732 405903.066 406017.627 406022.43 406002.894	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313	153.291 158.328 163.321 160.796 159.041	0.003 0.006 -0.003	-0.005 -0.001 -0.005	-0.003 0.001 0.001	0.002 0.008 -0.029	-0.011 0.002 -0.023	-0.00	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482	153.291 158.328 163.321 160.796 159.041 156.788	0.003 0.006 -0.003 -0.008	-0.005 -0.001 -0.005 -0.004	-0.003 0.001 0.001 0.002	0.002 0.008 -0.029 -0.009	-0.011 0.002 -0.023 -0.013	-0.00 -0.01 -0.00	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949	153.291 158.328 163.321 160.796 159.041 156.788 152.592	0.003 0.006 -0.003 -0.008 -0.008	-0.005 -0.001 -0.005 -0.004 -0.011	-0.003 0.001 0.001 0.002 0.014	0.002 0.008 -0.029 -0.009 -0.012	-0.011 0.002 -0.023 -0.013 -0.018	-0.00 -0.01 -0.00 0.05	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482	153.291 158.328 163.321 160.796 159.041 156.788	0.003 0.006 -0.003 -0.008	-0.005 -0.001 -0.005 -0.004	-0.003 0.001 0.001 0.002	0.002 0.008 -0.029 -0.009	-0.011 0.002 -0.023 -0.013		
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383	153.291 158.328 163.321 160.796 159.041 156.788 152.592	0.003 0.006 -0.003 -0.008 -0.008 -0.011	-0.005 -0.001 -0.005 -0.004 -0.011	-0.003 0.001 0.001 0.002 0.014 0.002	0.002 0.008 -0.029 -0.009 -0.012 -0.015	-0.011 0.002 -0.023 -0.013 -0.018	-0.00 -0.01 -0.00 0.05 0.01	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133	0.003 0.006 -0.003 -0.008 -0.008 -0.011 DIFF	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS	-0.003 0.001 0.002 0.014 0.002 T	0.002 0.008 -0.029 -0.009 -0.012 -0.015 D	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS	-0.00 -0.01 -0.00 0.05 0.01 :ELINE	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 EASUREMENT EASTING	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT	0.003 0.006 -0.003 -0.008 -0.008 -0.011 DIFF EASTING	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING	-0.003 0.001 0.002 0.014 0.002 T HEIGHT	0.002 0.008 -0.029 -0.009 -0.012 -0.015 D EASTING	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING	-0.00 -0.01 -0.00 0.05 0.01 SELINE HEIGHT	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT: EASTING 405859.733	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288	0.003 0.006 -0.003 -0.008 -0.008 -0.011 DIFF EASTING 0.001	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002	-0.003 0.001 0.002 0.014 0.002 T T HEIGHT -0.004	0.002 0.008 -0.029 -0.012 -0.015 DI EASTING 0.003	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009	-0.00 -0.01 -0.05 0.05 0.01 SELINE HEIGHT -0.01	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT EASTING 405859.733 405903.064	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.394	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332	0.003 0.006 -0.003 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 0.002	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.004	0.002 0.008 -0.029 -0.009 -0.012 -0.015 D EASTING	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING	-0.00 -0.01 -0.05 0.05 0.01 SELINE HEIGHT -0.01	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT EASTING 405859.733 405903.064 406017.609	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.394 5451409.243	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332 163.356	0.003 0.006 -0.003 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002 -0.018	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 0.002 -0.002	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.004 0.035	0.002 0.008 -0.029 -0.012 -0.015 DI EASTING 0.003 0.006	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009 0.004	-0.00 -0.01 -0.05 0.05 0.01 SELINE HEIGHT -0.01 0.00	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT EASTING 405859.733 405903.064 406017.609 406022.427	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.394 5451409.243 5451480.820	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332 163.356 160.803	0.003 0.006 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002 -0.018 -0.004	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 0.002 -0.002 -0.009	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.004 0.035 0.007	0.002 0.008 -0.029 -0.012 -0.015 DI EASTING 0.003	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009	-0.00 -0.01 -0.00 0.05 0.01 SELINE HEIGHT	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT EASTING 405859.733 405903.064 406017.609 406022.427 406002.885	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.394 5451409.243 5451408.820 5451530.308	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332 163.356 160.803 159.069	0.003 0.006 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002 -0.018 -0.004 -0.009	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 0.002 -0.002 -0.009 -0.005	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.0035 0.007 0.028	0.002 0.008 -0.029 -0.012 -0.015 DI EASTING 0.003 0.006 -0.033	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009 0.004 -0.032	-0.00 -0.01 0.05 0.01 ELINE HEIGHT -0.01 0.00 -0.00	
405859.732 405903.066 406017.627 406022.43 405986.455 405879.218 405856.501 EASUREMENT EASUREMENT EASTING 405859.733 405903.064 406017.609 406022.427 406002.885 405986.437	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.243 5451409.243 5451408.820 5451530.308 5451587.479	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332 163.356 160.803 159.069 156.834	0.003 0.006 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002 -0.018 -0.004 -0.009 -0.018	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 -0.002 -0.002 -0.009 -0.005 -0.003	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.0035 0.007 0.028 0.046	0.002 0.008 -0.029 -0.012 -0.015 D EASTING 0.003 0.006 -0.033 -0.027	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009 0.004 -0.032 -0.016	-0.00 -0.01 0.05 0.01 SELINE HEIGHT -0.01 0.00 -0.00 0.04	
405859.732 405903.066 406017.627 406022.43 406002.894 405986.455 405879.218 405856.501 IEASUREMENT EASTING 405859.733 405903.064 406017.609 406022.427 406002.885	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.394 5451409.243 5451408.820 5451530.308	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332 163.356 160.803 159.069	0.003 0.006 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002 -0.018 -0.004 -0.009	-0.005 -0.001 -0.005 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 0.002 -0.002 -0.009 -0.005	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.0035 0.007 0.028	0.002 0.008 -0.029 -0.012 -0.015 DI EASTING 0.003 0.006 -0.033	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009 0.004 -0.032	-0.00 -0.01 0.05 0.01 SELINE HEIGHT -0.01 0.00 -0.00 0.04	
405859.732 405903.066 406017.627 406022.43 405986.455 405879.218 405856.501 IEASUREMENT EASTING 405859.733 405903.064 406017.609 406022.427 406002.885 405986.437 405879.246	5451541.869 5451409.392 5451409.245 5451480.829 5451530.313 5451587.482 5451632.949 5451600.383 5 10/03/2021 NORTHING 5451541.871 5451409.243 5451409.243 5451408.820 5451530.308 5451587.479 5451632.960	153.291 158.328 163.321 160.796 159.041 156.788 152.592 152.133 HEIGHT 153.288 158.332 163.356 160.803 159.069 156.834 152.621	0.003 0.006 -0.008 -0.008 -0.011 DIFF EASTING 0.001 -0.002 -0.018 -0.004 -0.009 -0.018 0.028	-0.005 -0.001 -0.004 -0.011 -0.012 ERENCE TO LAS NORTHING 0.002 -0.002 -0.002 -0.009 -0.005 -0.003 0.010	-0.003 0.001 0.002 0.014 0.002 T HEIGHT -0.004 0.0035 0.007 0.028 0.046 0.028	0.002 0.008 -0.029 -0.012 -0.015 DI EASTING 0.003 0.006 -0.033 -0.027 0.016	-0.011 0.002 -0.023 -0.013 -0.018 -0.016 FFERENCE TO BAS NORTHING -0.009 0.004 -0.032 -0.016	-0.00 -0.01 0.05 0.01 SELINE HEIGHT -0.01 0.00 -0.00 0.04 0.07	
	EASTING 405859.735 405903.059 406017.616 406022.449 405986.468 405879.238 405856.52 EASUREMENT EASTING 405859.735 405903.059 406017.617 406022.447 405879.233 405856.517 EASTING 405859.73 405903.059 406017.617 406022.442 405986.466 405879.233 405903.059 406017.617 406022.442 405986.465 405859.73 405903.059 406017.617 406022.442 405986.466 405879.233 405903.06 405859.729 405903.06	EASTING NORTHING 405859.735 5451541.881 405903.059 5451409.392 406017.616 5451409.253 406022.449 5451480.835 405986.468 5451587.488 405879.238 5451632.971 405856.52 5451600.406 EASUREMENTS 23/05/2017 EASUREMENTS 545140.832 405903.059 5451409.396 406017.617 5451409.396 406022.447 5451887.491 405986.47 5451603.999 EASUREMENTS 11/12/2017 EASUREMENTS 11/12/2017 EASUREMENTS 11/12/2017 EASUREMENTS 5451409.393 406017.617 5451409.393 406022.442 5451409.393 4060022.442 5451409.393 <td>EASTING NORTHING HEIGHT 405859.735 5451541.881 153.298 405903.059 5451409.392 158.328 406017.616 5451409.253 163.288 406022.449 5451480.835 160.8 405986.468 5451587.488 156.786 405986.468 5451632.971 152.559 405879.238 5451632.971 152.559 405856.52 5451600.406 152.129 EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENT 405859.735 545141.882 153.298 405030.059 5451409.396 158.328 406017.617 5451632.964 152.559 405898.647 5451587.491 156.785 405897.33 5451541.877 153.298 405986.477 5451409.393 158.326</td> <td>EASTING NORTHING HEIGHT EASTING 405859.735 5451541.881 153.298 0.004 405903.059 5451409.253 163.288 -0.003 406017.616 5451409.253 163.288 -0.003 406022.449 5451480.835 160.8 0.004 405986.468 5451587.488 156.786 0.004 405879.238 5451632.971 152.559 0.007 405856.52 5451600.406 152.129 0.007 EASUREMENTS 23/05/2017 DIFF EASTING NORTHING HEIGHT EASTING 405859.735 5451541.882 153.298 0.000 405003.059 5451409.396 158.328 0.000 405986.47 5451587.491 156.785 0.002 - - - 405986.47 5451587.491 156.785 0.002 - - - - - 405986.47 5451632.964 152.559 -0.003 - - - - - - -</td> <td>EASTING NORTHING HEIGHT EASTING NORTHING 405859.735 5451541.881 153.298 0.004 0.000 405903.059 5451409.392 158.328 0.002 -0.002 406022.449 5451480.835 160.8 0.003 -0.003 406022.449 5451480.835 160.8 0.004 -0.003 405986.468 5451587.488 156.786 0.004 -0.003 405879.238 5451632.971 152.559 0.007 0.002 EASTING NORTHING HEIGHT EASTING NORTHING 405859.735 5451541.882 153.298 0.000 0.001 405930.059 5451409.356 163.288 0.001 0.003 406017.617 5451409.356 163.288 0.002 0.003 405986.47 5451587.491 156.785 0.002 0.003 405986.47 5451480.388 160.798 -0.003 -0.007 405856.517 5451409.393 158.326 0.000 -0.007</td> <td>EASTING NORTHING HEIGHT EASTING NORTHING HEIGHT 405859.735 5451409.392 158.328 0.000 0.000 0.000 406017.616 5451409.322 158.328 0.002 -0.003 0.001 40602.449 5451480.835 160.8 0.003 -0.003 -0.003 405986.468 5451587.488 156.786 0.004 -0.002 0.001 405885.52 5451600.406 152.129 0.007 0.002 0.001 405885.52 5451600.406 152.129 0.007 0.002 0.001 405885.73 5451541.882 153.298 0.000 0.001 0.000 405930.55 5451409.396 158.328 0.000 0.003 0.000 405935.75 545141.821 153.298 0.002 0.003 -0.002 405936.47 545148.038 160.798 -0.002 0.003 -0.002 405986.47 5451587.491 156.785 0.002 0.003 -0.002</td> <td>EASTING NORTHING HEIGHT EASTING NORTHING HEIGHT EASTING 405839.735 5451541.881 153.298 0.004 0.000 0.000 0.001 406017.616 5451409.392 158.328 0.003 -0.003 -0.003 -0.003 406017.616 5451409.235 163.288 -0.003 -0.003 -0.003 405986.468 5451587.488 156.786 0.004 -0.003 -0.003 405887.23 5451632.971 152.559 0.007 0.004 0.002 0.004 405887.23 5451541.882 153.298 0.000 0.001 0.000 0.001 405895.73 5451541.882 153.298 0.000 0.001 0.000 0.001 406022.447 545141.882 158.228 0.000 0.003 -0.002 -0.002 405896.47 5451541.482 158.228 0.000 0.003 -0.002 -0.003 405826.517 5451409.393 158.226 0.002 -0.001 -0</td> <td>EASTING NORTHING HEIGHT EASTING NORTHING HEIGHT EASTING NORTHING 405859,755 5451643.22 153.228 0.002 0.000 0.000 0.001 0.002 405903.059 5451409.253 163.288 -0.003 -0.003 0.001 -0.003 -0.001 -0.001 -0.007 405986.468 5451587.488 156.786 0.004 -0.003 -0.001 0.004 -0.003 405896.52 545162.971 152.559 0.007 0.002 0.004 -0.003 405856.52 5451507.488 152.129 0.007 0.002 0.004 0.007 EASUREMENTS 23/05/2017 DIFFERENCE TO LAST DIFFERENCE TO BASC EASTING NORTHING 405859.735 5451541.882 153.298 0.000 0.001 0.000 0.002 405859.735 5451540.388 160.798 -0.002 0.003 -0.001 0.006 405076.617 5451400.399 152.129 -0.002 0.003 -0.001</td>	EASTING NORTHING HEIGHT 405859.735 5451541.881 153.298 405903.059 5451409.392 158.328 406017.616 5451409.253 163.288 406022.449 5451480.835 160.8 405986.468 5451587.488 156.786 405986.468 5451632.971 152.559 405879.238 5451632.971 152.559 405856.52 5451600.406 152.129 EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENTS EASUREMENTS 23/05/2017 EASUREMENT 405859.735 545141.882 153.298 405030.059 5451409.396 158.328 406017.617 5451632.964 152.559 405898.647 5451587.491 156.785 405897.33 5451541.877 153.298 405986.477 5451409.393 158.326	EASTING NORTHING HEIGHT EASTING 405859.735 5451541.881 153.298 0.004 405903.059 5451409.253 163.288 -0.003 406017.616 5451409.253 163.288 -0.003 406022.449 5451480.835 160.8 0.004 405986.468 5451587.488 156.786 0.004 405879.238 5451632.971 152.559 0.007 405856.52 5451600.406 152.129 0.007 EASUREMENTS 23/05/2017 DIFF EASTING NORTHING HEIGHT EASTING 405859.735 5451541.882 153.298 0.000 405003.059 5451409.396 158.328 0.000 405986.47 5451587.491 156.785 0.002 - - - 405986.47 5451587.491 156.785 0.002 - - - - - 405986.47 5451632.964 152.559 -0.003 - - - - - - -	EASTING NORTHING HEIGHT EASTING NORTHING 405859.735 5451541.881 153.298 0.004 0.000 405903.059 5451409.392 158.328 0.002 -0.002 406022.449 5451480.835 160.8 0.003 -0.003 406022.449 5451480.835 160.8 0.004 -0.003 405986.468 5451587.488 156.786 0.004 -0.003 405879.238 5451632.971 152.559 0.007 0.002 EASTING NORTHING HEIGHT EASTING NORTHING 405859.735 5451541.882 153.298 0.000 0.001 405930.059 5451409.356 163.288 0.001 0.003 406017.617 5451409.356 163.288 0.002 0.003 405986.47 5451587.491 156.785 0.002 0.003 405986.47 5451480.388 160.798 -0.003 -0.007 405856.517 5451409.393 158.326 0.000 -0.007	EASTING NORTHING HEIGHT EASTING NORTHING HEIGHT 405859.735 5451409.392 158.328 0.000 0.000 0.000 406017.616 5451409.322 158.328 0.002 -0.003 0.001 40602.449 5451480.835 160.8 0.003 -0.003 -0.003 405986.468 5451587.488 156.786 0.004 -0.002 0.001 405885.52 5451600.406 152.129 0.007 0.002 0.001 405885.52 5451600.406 152.129 0.007 0.002 0.001 405885.73 5451541.882 153.298 0.000 0.001 0.000 405930.55 5451409.396 158.328 0.000 0.003 0.000 405935.75 545141.821 153.298 0.002 0.003 -0.002 405936.47 545148.038 160.798 -0.002 0.003 -0.002 405986.47 5451587.491 156.785 0.002 0.003 -0.002	EASTING NORTHING HEIGHT EASTING NORTHING HEIGHT EASTING 405839.735 5451541.881 153.298 0.004 0.000 0.000 0.001 406017.616 5451409.392 158.328 0.003 -0.003 -0.003 -0.003 406017.616 5451409.235 163.288 -0.003 -0.003 -0.003 405986.468 5451587.488 156.786 0.004 -0.003 -0.003 405887.23 5451632.971 152.559 0.007 0.004 0.002 0.004 405887.23 5451541.882 153.298 0.000 0.001 0.000 0.001 405895.73 5451541.882 153.298 0.000 0.001 0.000 0.001 406022.447 545141.882 158.228 0.000 0.003 -0.002 -0.002 405896.47 5451541.482 158.228 0.000 0.003 -0.002 -0.003 405826.517 5451409.393 158.226 0.002 -0.001 -0	EASTING NORTHING HEIGHT EASTING NORTHING HEIGHT EASTING NORTHING 405859,755 5451643.22 153.228 0.002 0.000 0.000 0.001 0.002 405903.059 5451409.253 163.288 -0.003 -0.003 0.001 -0.003 -0.001 -0.001 -0.007 405986.468 5451587.488 156.786 0.004 -0.003 -0.001 0.004 -0.003 405896.52 545162.971 152.559 0.007 0.002 0.004 -0.003 405856.52 5451507.488 152.129 0.007 0.002 0.004 0.007 EASUREMENTS 23/05/2017 DIFFERENCE TO LAST DIFFERENCE TO BASC EASTING NORTHING 405859.735 5451541.882 153.298 0.000 0.001 0.000 0.002 405859.735 5451540.388 160.798 -0.002 0.003 -0.001 0.006 405076.617 5451400.399 152.129 -0.002 0.003 -0.001	

PLEASE QUOTE Your Ref: Our Ref: 34/12/8; 7629573; 23/27562

Enquiries: Raymond Mee (RM:JYC)

80 Wilson Street, Burnie Tasmania PO Box 973, Burnie TAS 7320

ABN: 29 846 979 690 Phone: (03) 6430 5700 Email: burnie@burnie.tas.gov.au Web: www.burnie.tas.gov.au We value your feedback on our service. Tell us about it at www.burnie.tas.gov.au/feedback



20 December 2023

Mr Wes Ford Director Environment Protection Authority Tasmania GPO Box 1550 HOBART TAS 7001

Email: enquiries@epa.tas.gov.au; tanya.mijak@epa.tas.gov.au A hard copy will not be sent unless requested

Dear Wes,

BURNIE WASTE MANAGEMENT CENTRE – WETLAND ANNUAL ENVIRONMENTAL REVIEW 2022-2023

The Burnie City Council commissioned Syrinx Environmental to undertake the Annual Environmental Review in accordance with EPN 9421/2 applicable to the Burnie Waste Management Centre Wetland.

The annual review report for 2022-23 is **attached** and will be placed on Council's website. This review covers the matters listed in EPN 9421/2, in particular Condition G8.

I look forward to receiving your advice that this review satisfies Council's obligations.

Please refer feedback and discussion regarding this report to Mr Raymond Mee, Manager Works on (03) 6430 5853 or email: rmee@burnie.tas.gov.au

Yours sincerely,

Belinda Lynch ACTING GENERAL MANAGER

Enc: BWMC Wetland EPN 9421/2 – Annual Environmental Review 2022/2023