

State Asphalts NSW Pty Ltd90 Jemma Road
Prestons NSW 2170**Att: Clinton Woods****Report Number:** E10520-3
Report Date: 22nd August 2023
Project Name: EPL 13262
Site Location: Yarrawa Street, Prestons NSW 2039**1. Introduction**

Atlas Geotechnical Services Pty Ltd (AGS) was commissioned by State Asphalts NSW Pty Ltd (Client) to undertake a surface water assessment to determine the suitability of onsite surface water for the Environment Protection license 13262 requirements. This assessment has been carried out at Yarrawa Street, Prestons NSW 2170.

2. Background

As part of this assessment, AGS was commissioned to undertake laboratory analysis for the following Contaminants of Potential Concerns (CoPCs):

- Ammonia;
- Oil and Grease;
- pH/EC; and
- TSS.

AGS was instructed to undertake laboratory analysis of the above analytes at the time of site attendance, with confirmation by the client nominating the aforementioned analytes as the adopted assessment criteria for the groundwater assessment.

3. Site Observation & Results Comparison

One (1) water sample was retrieved from the site on 9th August 2023, water sample was collected within the existing site compound. At the time of the site visit, groundwater ingress within the site was observed to be translucent in appearance with ingrown vegetation. AGS surmises the observed physical characteristic was the result of stagnant accumulated water at the sample collection location.

The sample was transferred into sealed glass jars and specialised containers then secured into a chilled esky and transported to Eurofins under Chain of Custody (COC) procedures. Analytical results were assessed in general accordance with trigger values stated under Point 1 of the Environment Protection Licence guideline. The analytical results along with the adopted trigger values are summarised in Table 1 below.

Table 1 – Result Summary Table

Chemical	Units	Adopted Trigger Values	Analytical Results
			E1
Ammonia	mg/L	< 0.9	< 0.01
Oil and Grease	mg/L	10	< 10
pH	-	6.5 - 8.5	7.6
Electrical Conductivity	µS/cm	< 1500	840
Total Suspended Solids	mg/L	< 50	41

4. Conclusion

The above assessment is based on laboratory test data, client correspondence, and relevant guidelines. Analyzed CoPCs revealed through laboratory testing indicate that the existing water on-site satisfied the adopted trigger values outlined within the Environment Protection Licence guideline.

5. Limitations

The findings presented in this report are provided based on analytical data and verbal advice from the client, provided during the site inspection. Furthermore, anecdotal information made available to AGS was utilised as a basis as part of this assessment. To the best of our knowledge, these observations represent a reasonable interpretation of the general condition of the site at the time of report completion. This report has been prepared solely for the client addressed above and no other parties are entitled to rely on its findings.

Regards,

Reviewed,



Isha Kothari
M.Eng (Environment)
Atlas Geotechnical Services Pty Ltd



Peter Chen (Xiao Dong Chen)
Principal
B. Eng (Civil), MIEAust
Atlas Geotechnical Services Pty Ltd

Attachment

- Figures
- Laboratory Test Results



ATTACHMENT 1
FIGURES



Figure 1 – Sample Location





CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 685 521

Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2056
02 3900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
Unit 1 21 Smallwood Place Murarie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company		Atlas Geotechnical Services		Project No		E10520-3		Project Manager		Isha		Sampler(s)		Isha	
Address		Unit 49 93-97 Newton Road, Wetherill Park NSW 2164		Project Name		Yarrawa Street, Prestons		EDD Format		ESdat, EQulS etc		Handed over by			
Contact Name		Isha		Analyses		Ammonia		Conductivity		Oil and Grease		pH		TSS	
Phone No		474137807		Where metals are requested, please specify 'Total' or 'Filtered'. SUIITE code must be used to attach SUITE pricing.											
Special Directions				Containers		Change container type & size if necessary.		Required Turnaround Time (TAT)		Default will be 5 days if not ticked.		<input type="checkbox"/> Overnight (reporting by 9am) ^{Surcharge will apply} <input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> 2 days <input type="checkbox"/> 3 days <input checked="" type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()			
Purchase Order				500mL Plastic				250mL Plastic				125mL Plastic			
Quote ID No				200mL Amber Glass				40mL VOA vial				500mL PFAS Bottle			
				Jar (Glass or HDPE)				Other (Asbestos AS4664, WA Guidelines)				Sample Comments		/ Dangerous Goods Hazard Warning	
No	Client Sample ID	Sampled Date/Time	Matrix	Solid (S)	Water (W)	Ammonia		Conductivity		Oil and Grease		pH		TSS	
1	E1	9/08/23	W			X	X	X	X	X					
2															
3															
4															
5															
6															
7															
8															
9															
10															
Total Counts						1	1	1	1	1					

Method of Shipment		<input type="checkbox"/> Courier (#) <input checked="" type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name		Signature		Date		Time	
Eurofins mgt Laboratory Use Only		Received By <i>P. Andrews</i>		SYD BNE MEL PER ADL NTL DRW		Signature <i>[Signature]</i>		Date <i>09/08</i>		Time <i>1:35</i>	
		Received By		SYD BNE MEL PER ADL NTL DRW		Signature		Date		Report No	

Atlas Geotechnical Services
12 Charter Street
Sadler
NSW 2168



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: **Isha Kothari**

Report **1015649-W**
 Project name **YARRAWA STREET PRESTONS**
 Project ID **E10520-3**
 Received Date **Aug 10, 2023**

Client Sample ID			E1
Sample Matrix			Water
Eurofins Sample No.			S23- Au0026483
Date Sampled			Aug 09, 2023
Test/Reference	LOR	Unit	
Ammonia (as N)	0.01	mg/L	< 0.01
Conductivity (at 25 °C)	10	uS/cm	840
Oil & Grease (HEM)	10	mg/L	< 10
pH (at 25 °C)	0.1	pH Units	7.6
Total Suspended Solids Dried at 103 °C to 105 °C	5	mg/L	41

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Ammonia (as N) - Method: LTM-INO-4200 Ammonia by Discrete Analyser	Sydney	Aug 14, 2023	28 Days
Conductivity (at 25 °C) - Method: LTM-INO-4030 Conductivity	Sydney	Aug 14, 2023	28 Days
Oil & Grease (HEM) - Method: LTM-INO-4380 Oil and Grease (APHA 5520B)	Melbourne	Aug 11, 2023	28 Days
pH (at 25 °C) - Method: LTM-GEN-7090 pH in water by ISE	Sydney	Aug 14, 2023	0 Hour
Total Suspended Solids Dried at 103 °C to 105 °C - Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry	Sydney	Aug 14, 2023	7 Days

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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Perth 46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370
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Auckland 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402
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Company Name:	Atlas Geotechnical Services	Order No.:		Received:	Aug 10, 2023 1:35 PM
Address:	12 Charter Street Sadlier NSW 2168	Report #:	1015649	Due:	Aug 17, 2023
Project Name:	YARRAWA STREET PRESTONS	Phone:	02 8740 0494	Priority:	5 Day
Project ID:	E10520-3	Fax:		Contact Name:	Isha Kothari

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Ammonia (as N)	Conductivity (at 25 °C)	Oil & Grease (HEM)	pH (at 25 °C)	Total Suspended Solids Dried at 103 °C to 105 °C
Melbourne Laboratory - NATA # 1261 Site # 1254								X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X		X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	E1	Aug 09, 2023		Water	S23-Au0026483	X	X	X	X	X
Test Counts						1	1	1	1	1

Internal Quality Control Review and Glossary
General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	mg/L: milligrams per litre	µg/L: micrograms per litre
ppm: parts per million	ppb: parts per billion	%: Percentage
org/100 mL: Organisms per 100 millilitres	NTU: Nephelometric Turbidity Units	MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit		

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPa, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test				Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Conductivity (at 25 °C)				uS/cm	< 10		10	Pass	
Oil & Grease (HEM)				mg/L	< 10		10	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C				mg/L	< 5		5	Pass	
LCS - % Recovery									
Conductivity (at 25 °C)				%	101		70-130	Pass	
Oil & Grease (HEM)				%	97		70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C				%	98		70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
					Result 1				
Ammonia (as N)	S23-Au0018807	NCP	%	96			70-130	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S23-Au0027069	NCP	%	92			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
					Result 1	Result 2	RPD		
Ammonia (as N)	S23-Au0024472	NCP	mg/L	0.79	0.77	3.0	30%	Pass	
Conductivity (at 25 °C)	S23-Au0026483	CP	uS/cm	840	840	<1	30%	Pass	
Oil & Grease (HEM)	S23-Au0026483	CP	mg/L	< 10	< 10	<1	30%	Pass	
Total Suspended Solids Dried at 103 °C to 105 °C	S23-Au0027069	NCP	mg/L	41	36	12	30%	Pass	

Comments**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised by:

Hannah Mawbey	Analytical Services Manager
Caitlin Breeze	Senior Analyst-Inorganic
Dilani Samarakoon	Senior Analyst-Inorganic
Ryan Phillips	Senior Analyst-Inorganic



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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