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Analysis and Testing Report - Walker Quarries Bi Annual Groundwater & Surface Monitoring, November 2024

Report To:	Wayne Chapman
Address:	Lot 6 Great Western Highway, Wallerwang NSW 2845
Report On:	Walker Quarries Bi Annual Groundwater & Surface Monitoring, November 2024
Report No:	2400-7303-11
Report Status:	Final Report
Date Sampled:	8/11/2024
Unique ID of Sample(s):	As per Result tab
Sampled By:	M. Andrews & L. Pyne
Testing & Analysis Requireme	Client Instructions
Report Prepared By:	Adriana Hernandez
Date Reported:	19/11/2024
Reported By :	Adriana Hernandez Environmental Project/Quality Officer - Lithgow NSW

These reported results only relate to the items sampled and tested.
Sampling performed by: ACIRL Lithgow NSW NATA Accreditation No. 15784, Site No. 11436 in accordance with AS Standards listed on Page 4.

NATA Accredited for compliance with ISO 17025 - Testing
Accreditation Number 15784

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ACIRL Lithgow NSW
ABN 66 003 451 876

Analysis and Testing Report-
Walker Quarries
Bi Annual Groundwate Monitoring

	Units							
Date of Sample		8/11/2024						
Report No:		2400-7303-11						
ALS Sydney Report No.		ES2341121						
Site Reference		SD3 Cox River Downstream	SD4 Upstream	SD1	SB2	GW1	GW2	GW3
Sampled by		M. Andrews & L. Pyne						
General Comments/ Observations		Clear/Mod flow	Clear/mod flow	Clear/Mod Level	Clear/Mod Level	Clear	Slightly Cloudy	Clear
Standing Water Level	m					46.30	26.3	15.95
Total Volume Purged	L							
pH	pH Unit	6.3	6.6	7.5	6.0	6.4	6.1	5.8
Electrical Conductivity	µS/cm	682	760	687	221	739	56	449
Total Suspended Solids	mg/L	<5	<5	10	21			
Turbidity	NTU-	2.2	2.1	12	15			
Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	mg/L					<1	<1	<1
Carbonate Alkalinity as CaCO3	mg/L					<1	<1	<1
Bicarbonate Alkalinity as CaCO3	mg/L					314	227	153
Total Alkalinity as CaCO3	mg/L					314	227	153
Sulfate (Turbidimetric) as SO4								
Sulfate as SO4 - Turbidimetric	mg/L	153	204	224	43	38	31	14
Chloride by Discrete Analyser								
Chloride	mg/L					18	13	22
Dissolved Major Cations								
Calcium	mg/L					81	81	38
Magnesium	mg/L					13	4	9
Sodium	mg/L					55	33	31
Potassium	mg/L					6	4	3

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Site Reference		SD3 Cox River Downstream	SD4 Upstream	SD1	SB2	GW1	GW2	GW3
Dissolved Metals by ICP-MS								
Arsenic	mg/L	<0.001	<0.001			<0.001	0.001	0.001
Cadmium	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Chromium	mg/L	<0.001	<0.001			0.00	0.003	<0.001
Copper	mg/L	0.001	0.002			<0.001	0.009	0.001
Lead	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001
Nickel	mg/L	0.01	0.015			0.002	0.011	0.019
Zinc	mg/L	0.007	0.018			0.009	0.157	0.146
Dissolved Mercury by FIMS								
Mercury	mg/L	0.0001	0.001	----	----	<0.0001	0.0002	0.0001
EN055: Ionic Balance								
Total Anions	meq/L					7.57	5.55	3.97
Total Cations	meq/L					7.66	5.91	4.06
Ionic Balance	%					0.56	3.15	1.16
Oil and Grease (O&G)								
Oil & Grease	mg/L	<5	<5					

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METHODS OF ANALYSIS

Tests for results issued in this report have been carried out at the following NATA accredited laboratories in accordance with the methods as detailed below:-

TEST	METHOD	ACIRL Lithgow NATA Accreditation #11436	Measure of Uncertainty
Electrical Conductivity uS/cm	CBM-E006	APHA 2510 B	2.0%
pH value	CBM-E005	APHA 4500 H	0.10 pH Units

The remaining analysis performed at ALS Environmental, 277-289 Woodpark Rd, Smithfield, NSW 2164.

Low yielding bores have been purged to dryness, otherwise bores purged to constant Electrical Conductivity

Report No: 2400-7303-11
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Samples were analysed in accordance with the following Australian Standards or equivalent:

Australian Standards	Description
AS/NZS 5667.1	Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples
IS0 5667-3	Part 3: Preservation and handling of water samples
AS/NZS 5667.11	Part 11: Guidance on sampling of ground waters