



# Analysis and Testing Report - Walker Quarries Bi Annual Groundwater & Surface Monitoring, November 2025

Report To: Wayne Chapman

Address: Lot 6 Great Western Highway,  
Wallerawang NSW 2845

Report On: Walker Quarries  
Bi Annual Groundwater & Surface  
Monitoring, November 2025

Report No: 2400-7481-11

Report Status: Final Report

Date Sampled: 18/11/2025


Unique ID of Sample(s): As per Result tab

Sampled By: C. Buck

Testing & Analysis Requirements: Client Instructions

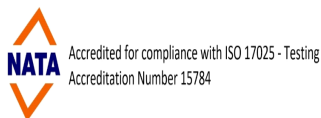
Report Prepared By: Trudie MacPhee

Date Reported: 28/11/2025

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.



ACIRL Lithgow NSW  
ABN 66 003 451 876



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|                                       | Units   |                            |                      |                      |                      |       |       |       |
|---------------------------------------|---------|----------------------------|----------------------|----------------------|----------------------|-------|-------|-------|
| Date of Sample                        |         | 18/11/2025                 |                      |                      |                      |       |       |       |
| Report No:                            |         | 2400-7481-11               |                      |                      |                      |       |       |       |
| ALS Sydney Report No.                 |         | ES2536519                  |                      |                      |                      |       |       |       |
| Site Reference                        |         | SD3 Cox River<br>Up stream | SD4 Down<br>stream   | SD1                  | SB2                  | GW1   | GW2   | GW3   |
| Sampled by                            |         | C. Buck                    |                      |                      |                      |       |       |       |
| General Comments/<br>Observations     |         | Clear / Low<br>Level       | Clear / Mod<br>Level | Clear / Mod<br>Level | Clear / Low<br>Level | Clear | Clear | Clear |
| Standing Water Level                  | m       |                            |                      |                      |                      | 43.30 | 26.38 | 14.45 |
| Total Volume Purged                   | L       |                            |                      |                      |                      |       |       |       |
| pH                                    | pH Unit | 7.3                        | 7.2                  | 7.7                  | 6.3                  | 6.6   | 6.2   | 5.5   |
| Electrical Conductivity               | µS/cm   | 592                        | 392                  | 601                  | 238                  | 737   | 586   | 241   |
| Total Suspended Solids                | mg/L    | <5                         | <5                   | 6                    | 12                   |       |       |       |
| Turbidity                             | NTU-    | 3.4                        | 2.3                  | 11.0                 | 25                   |       |       |       |
| <b>Alkalinity by PC Titrator</b>      |         |                            |                      |                      |                      |       |       |       |
| Hydroxide Alkalinity as CaCO3         | mg/L    |                            |                      |                      |                      | <1    | <1    | <1    |
| Carbonate Alkalinity as CaCO3         | mg/L    |                            |                      |                      |                      | <1    | <1    | <1    |
| Bicarbonate Alkalinity as CaCO3       | mg/L    |                            |                      |                      |                      | 330   | 257   | 50    |
| Total Alkalinity as CaCO3             | mg/L    |                            |                      |                      |                      | 330   | 257   | 50    |
| <b>Sulfate (Turbidimetric) as SO4</b> |         |                            |                      |                      |                      |       |       |       |
| Sulfate as SO4 - Turbidimetric        | mg/L    | 142                        | 92                   | 191                  | 58                   | 37    | 35    | 32    |
| <b>Chloride by Discrete Analyser</b>  |         |                            |                      |                      |                      |       |       |       |
| Chloride                              | mg/L    |                            |                      |                      |                      | 18    | 14    | 7     |
| <b>Dissolved Major Cations</b>        |         |                            |                      |                      |                      |       |       |       |
| Calcium                               | mg/L    |                            |                      |                      |                      | 91    | 90    | 10    |
| Magnesium                             | mg/L    |                            |                      |                      |                      | 18    | 6     | 3     |
| Sodium                                | mg/L    |                            |                      |                      |                      | 5     | 4     | 1     |
| Potassium                             | mg/L    |                            |                      |                      |                      | 52    | 34    | 30    |



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|                                   | Units |                                     |                         |            |            |            |            |            |
|-----------------------------------|-------|-------------------------------------|-------------------------|------------|------------|------------|------------|------------|
| Date of Sample                    |       | 18/11/2025                          |                         |            |            |            |            |            |
| Report No:                        |       | 2400-7481-11                        |                         |            |            |            |            |            |
| ALS Sydney Report No.             |       | ES2341121                           |                         |            |            |            |            |            |
| Site Reference                    |       | <b>SD3 Cox River<br/>Downstream</b> | <b>SD4<br/>Upstream</b> | <b>SD1</b> | <b>SB2</b> | <b>GW1</b> | <b>GW2</b> | <b>GW3</b> |
| <b>Dissolved Metals by ICP-MS</b> |       |                                     |                         |            |            |            |            |            |
| Arsenic                           | mg/L  | <0.001                              | <0.001                  |            |            | <0.001     | 0.001      | <0.001     |
| Cadmium                           | mg/L  | <0.0001                             | <0.0001                 |            |            | <0.0001    | <0.0001    | 0.0002     |
| Chromium                          | mg/L  | <0.001                              | <0.001                  |            |            | 0.003      | 0.003      | 0.002      |
| Copper                            | mg/L  | 0.001                               | 0.001                   |            |            | <0.001     | 0.002      | 0.002      |
| Lead                              | mg/L  | <0.001                              | <0.001                  |            |            | <0.001     | <0.001     | <0.001     |
| Nickel                            | mg/L  | 0.015                               | 0.008                   |            |            | 0.007      | 0.021      | 0.007      |
| Zinc                              | mg/L  | 0.016                               | 0.018                   |            |            | 0.008      | 0.368      | 0.057      |
| <b>Dissolved Mercury by FIMS</b>  |       |                                     |                         |            |            |            |            |            |
| Mercury                           | mg/L  | <0.0001                             | <0.0001                 |            |            | <0.0001    | <0.0001    | <0.0001    |
| <b>EN055: Ionic Balance</b>       |       |                                     |                         |            |            |            |            |            |
| Total Anions                      | meq/L |                                     |                         |            |            | 7.87       | 6.26       | 1.86       |
| Total Cations                     | meq/L |                                     |                         |            |            | 8.41       | 6.57       | 2.08       |
| Ionic Balance                     | %     |                                     |                         |            |            | 3.32       | 2.4        | -          |
| <b>Oil and Grease (O&amp;G)</b>   |       |                                     |                         |            |            |            |            |            |
| 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

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ALS Sydney Report No. ES2536519

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 |
| ISO 5667-3           | Part 3: Preservation and handling of water samples  |
| AS/NZS 5667.11       | Part 11: Guidance on sampling of ground waters  |