# Lake Macdonald Dam Improvement Project

## Quarterly Compliance and Monitoring Summary Report for the Coordinator-General

Document Number: LMDIP-10000-GNL-ENV-REP-00003 LMDIP Quarterly Compliance Monitoring Report for the Coordinator General

Reporting period: 1 December 2025 – 28 February 2026

**Revision 01| March 2026**

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| Name | Position |
|---|---|
| Luke Anderson | Client's Representative |
| Andy O'Driscoll | Project Manager |
| As determined by the Project Manager | Project Control Group |
| As required | Project Personnel |

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| **Rev** | **Date** | **Prepared By** | **Reviewed By** | **Approved By** | **Remarks** |
| 1 | 20/03/2026 | S. Orchard | N. Carruthers | S. Grogan | |

# 1. Executive Summary

This Quarterly Compliance and Monitoring Summary Report has been produced for Project Works undertaken on site for 1 December 2025 to 28 February 2026 for the Lake Macdonald Dam Improvement Project (LMDIP). The report addresses the obligations outlined in the Coordinator-General's change report – Construction (April 2025) and the Office of the Coordinator-General (OCG) approved Project's Site Environmental Management Plan (SEMP).

This report in line with the Coordinator-General's Imposed Condition 6 for quarterly monitoring and reporting. A summary of the monitoring obligation compliance is provided, with the detailed data and analysis of the results contained in Appendix A.

# 2. Definition and Abbreviations

Definitions and abbreviations to be applied to the Quarterly Compliance and Monitoring Summary Report for the Coordinator-General are listed below in Table 1.

**Table 1. Definitions and Abbreviations**

| Term/Abbreviation | Definition |
|---|---|
| **AMP** | Adaptive Management Plan |
| **Client (Principal)** | The party to whom John Holland is contracted for a Project. For this project the Client is Seqwater |
| **Client's Representative** | The person appointed by the Client to perform the duties of the "Superintendent" as defined in the contract. For this project the Client Representative is Luke Anderson. |
| **EMP** | Environmental Management Plan |
| **Environmental Management Subplan** | Aspect-specific Subplan to the EMP |
| **ESCP** | Erosion & Sediment Control Plan |
| **JH** | John Holland as the organisation responsible for the total performance of the works under the Contract. |
| **LMDIP** | Lake Macdonald Dam Improvement Project |
| **NCR** | Non-Conformance Report |
| **Plan** | A document setting out the specific practices, resources, activities and responsibilities relevant to a particular project or contract. |
| **SEMP** | Site Environmental Management Plan |
| **Soteria** | Soteria is John Holland's primary HSC event and activity platform which is used to record and manage inspections, actions and incidents. |
| **Subcontractor** | Any company, body or person who is contracted to John Holland for the purpose of supplying plant and/or services. Categories such as manufacturer, fabricator and supplier are considered Subcontractors. |
| **SQP** | Suitably Qualified Professional |

# 3. Introduction

## 3.1. Background

Lake Macdonald Dam is one of several dams across Southeast Queensland to be upgraded as part of Seqwater's Dam Improvement Program. Seqwater is responsible for the ongoing safety of the dam and with a growing population downstream, there are more people at risk in the extremely unlikely event of a dam failure.

The Lake Macdonald Dam Improvement Project will be the first major upgrade of the dam since it was built in 1965, and the walls were raised in 1980. The upgrade is a critical project in Seqwater's Dam Improvement Program and must result in a dam structure compliant with the legislative requirements of the Water Supply (Safety and Reliability) Act 2018 and the Queensland Dam Safety Guidelines.

While the upgrade will demolish the existing dam, delivering a new dam in its place, critical to its success will be the effective management of creek inflows, sensitive aquatic fauna and the interfacing local community. This important upgrade and spillway and embankment reconstruction will not only provide essential earthquake and flood protection but improve water supply certainty for the entire Sunshine Coast regional network.

The Coordinator-General has imposed conditions on the Project that apply throughout the design, construction, commissioning and operation phases. These are referred to as the Imposed Conditions. In addition, the Coordinator-General has approved the Project's CEMP which outlines the environmental management framework for the Project. The CEMP includes environmental outcomes and performance criteria which must be achieved for the Project.

### 3.1.1. Scope of this report

Imposed condition 6 requires the proponent (Seqwater) to report on compliance with the approved management plans on a quarterly basis. Seqwater has delegated this requirement to the John Holland (JH) as the contractor. This report is intended to satisfy this requirement. Condition 6 is provided below for reference.

> ***Condition 6. Monitoring and reporting***
>
> *The proponent must prepare a report every 3 months that summarises compliance and monitoring results for project activities and complaints.*
>
> *(a) The reports must include the following for the reporting period:*
> - *(i) an evaluation of compliance with the SEMP*
> - *(ii) monitoring data required by the imposed conditions included in Appendix A for the period and an interpretation of the results*
> - *(iii) details of any exceedances, environmental incident/s during the reporting period, including a description of the incident, resulting effects, corrective actions (including site remediation activities), revised activity practices (including updates to the SEMP) to prevent a recurrence, responsibility and timing*
> - *(iv) details of complaints received and outcomes of complaints resolution process, including:*
>   *(A) corrective actions or additional controls taken as a result of the complaint and*
>   *(B) the effectiveness of these corrective actions or additional controls.*
>
> *The reports must be provided to the Coordinator-General for information and also be made available on the project website within 20 business days of the end of the three-month period to which the report relates and continue to be available on the project website for the duration of the project.*

## 3.2. Reporting Period

This report covers the construction period from ***1 December 2025 to 28 February 2026.*** The project activities undertaken in the reporting period and associated timelines are highlighted below in Table 2. It is noted that during the monitoring period site shutdown occurred from 19 December 2025 until 5 January 2026 with no construction activities occurring during this time.

**Table 2: Activities Summary**

| Project Component | Project Works | Affected Period |
|---|---|---|

| | | |
|---|---|---|
| General Site Operations | • General earth works<br>• Topsoil stripping and stockpile operations<br>• Rock bag filling<br>• Import rock fill<br>• Export unsuitable material | 1 December to 28 February |
| Construction of Cofferdam | • Sheet piling, whaler and tie bar installation<br>• Sheet piling (vibratory and hammer driving)<br>• Rock bag delivery to Left Hand Embankment<br>• Rock placement<br>• Rock bag installation<br>• Stilling basin dewatering | 1 December to 28 February |
| Siphon operation | • Maintaining dam levels at ~RL92.5-92.8<br>• Operation of new environmental flow | 1 December to 28 February |
| Site Christmas Shutdown | • Closure of site for holiday period<br>• Some monitoring equipment offline for site closure<br>• Stilling basin lab/probe water samples collected<br>• Aeration of stilling basin via pumps<br>• Weekly inspection of stilling basin and checks for fauna | 19 December to 5 January |

# 4. Previous Period Evaluation of Compliance with the SEMP

As per Schedule 2 - Condition 7 of the CGCR 2025 a third-party audit of the SEMP is to be carried out within 3 months from the commencement of project activities. This audit was completed in August 2025 and all actions have since been closed out. These audits will now revert to an annual timeframe with the next SEMP Compliance Audit scheduled for August 2026. During this monitoring and reporting period, previously identified SEMP audit non-conformances have been tracked through the corrective actions register and closed out.

# 5. Summary of Monitoring Data

Monitoring was undertaken during the audit period in accordance with the requirements of the SEMP for obligations within the Adaptive Management Plan and the following LMDIP Sub plans:

1. Stormwater Management
2. Flora and Fauna (Dewatering)
3. Flora and Fauna (Terrestrial)
4. Noise and Vibration
5. Dust and Air Quality
6. Hazardous Substances
7. Waste Resource Use
8. Weed Management

These LMDIP monitoring obligations are summarised in Table 3 below, outlining the compliance results with each requirement and where additional information can be found in the report. Additional data and analysis of monitoring and compliance for each obligation are detailed further in Appendix A of this report.

**Table 3: Summary of project monitoring requirements**

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| **LMDIP-05829-GNL-ENV-MPL-00002 - Stormwater Management Plan** | | | | |
| Prior to discharge of any water to Six Mile Creek, testing of the water to be discharged, DS01, and I1 is required. Water to be discharged to meet discharge criteria | Y | Y | Dewatering of the stilling basin and tailwater spillway pool has occurred with all water tested and discharged under a permit to dewater within discharge criteria only. | NA |
| Water quality within the lake and downstream of the construction site will be undertaken and analysed for the parameters defined in *Appendix A Impoundment and Downstream Water Quality Monitoring* | Y | Y | Monitoring completed as per the schedule outlined in Appendix A of the Stormwater Management Plan.<br>Refer to Appendix A – Section 1.2 of this report for further details | |
| Weekly inspection of erosion and stormwater diversion controls will be undertaken and documented visual inspections of the construction site during and after rainfall to ensure that mitigation measures are in place and stormwater diversion control measures are in working order | Y | Y | Weekly site inspections as well as pre and post rainfall event inspections occurring.<br>ESCs across the site are as per the approved ESCP performing as intended. | |
| The volume of discharges from the site via pumps, siphons or gravity will be recorded | Y | Y | Seqwater operations keep records of how many siphons are running and the duration of operation. | |
| Levels in the borrow pit and treatment tanks are to be monitored | Y | Y | Borrow pit not yet operational and used for material storage only. | No water to monitor in this area. |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| Monitoring of turbidity at monitoring locations DS01 and PP01 | Y | Y | DS01 live monitor installed and collecting data.<br>PP01 daily water quality checks and weekly lab samples collected<br>Refer to Appendix A - Monitoring & Compliance Summary – Section 1.2.2 (Table 9) of this report for further details | |
| **LMDIP-05327-GNL-ENV-MPL-00003 - Flora and Fauna (Dewatering) Management Plan** | | | | |
| ***Water Quality in Lake Macdonald - During drawdown and construction:*** | | | | |
| Conduct monitoring at least daily of temperature, pH, dissolved oxygen, EC, and turbidity at or near monitoring location I1 | Y | Y | I1 live monitor installed and collecting data.<br>Refer to Appendix A – - Monitoring & Compliance Summary - Section 1.2.1 of this report for further details | |
| Daily visual observations for oil slicks in the lake immediately upstream of the works | Y | Y | No instances of oil slicks on the water<br>Monitoring included in the daily checklist. | |
| Daily monitoring of water quality for pH, dissolved oxygen and turbidity in the stilling basin (once constructed). | N/A | Y | PP01 daily water quality checks and weekly lab samples collected. Refer to Table 9 | |
| Fortnightly monitoring of COD, suspended solids, nitrate, ammonia, total phosphorus and total recoverable hydrocarbons (laboratory analysed) | Y | Y | Monitoring completed as per the schedule outlined in LMDIP-05327-GNL-ENV-MPL-00003. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| | | | Refer to Appendix A – Monitoring & Compliance Summary - Section 1.2 Table 6 incorporates any exceedances from this testing | |
| Weekly monitoring of COD, suspended solids, nitrate, ammonia, total phosphorus and total recoverable hydrocarbons (laboratory analysed) within the stilling basin. | Y | Y | PP01 daily water sampling and weekly lab samples collected | Monitor water quality results. |
| ***Water Quality in Six Mile Creek - During drawdown and construction:*** | | | | |
| Real-time monitoring of temperature, pH, dissolved oxygen, EC, and turbidity at downstream monitoring site DS02. Where real-time monitoring is unavailable (due to system failures or similar) daily required monitoring to supplement until such time that real-time monitoring can be brought back online | Y | Y | Refer to Appendix A – - Monitoring & Compliance Summary - Section 1.2.2 of this report for further details | When low DO% is detected send fresh flushes of water downstream using the siphon whenever lake capacity allows. |
| Monthly monitoring of nutrients (nitrate, ammonia and total phosphorus), suspended solids, and visual observations for oil slicks, at the downstream monitoring sites DS01, DS02 and DS04 | Y | Y | Monitoring completed as per the schedule outlined in LMDIP-05327-GNL-ENV-MPL-00003.<br>Refer to Appendix A – - Monitoring & Compliance Summary - Section 1.2 Table 6 incorporates any exceedances from this testing. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| Weekly monitoring of temperature, pH, dissolved oxygen, EC, and turbidity at the downstream sites DS01 and DS04 | Y | Y | Monitoring completed as per the schedule outlined in LMDIP-05327-GNL-ENV-MPL-00003.<br>Refer to Appendix A – Section 1.2.2 of this report for further details | |
| Weekly monitoring of temperature, pH, dissolved oxygen, EC, and turbidity at the upstream control sites SMCUS01 and CU02 | N | N | Monitoring at these sites currently cannot be conducted due to landowner/access issues and lack of water due to lake lowering. Locations I4 and I5 are close enough to indicate water quality at these sites | Propose updating management plans to amend these monitoring locations |
| Monthly monitoring of nutrients (nitrate, ammonia and total phosphorus), suspended solids, temperature, pH, dissolved oxygen, EC and turbidity, and visual observations for oil slicks at the upstream control sites SMCUS01 and CU02. | N | N | Monitoring at these sites currently cannot be conducted due to landowner/access issues and lack of water due to lake lowering. Locations I4 and I5 are close to indicate water quality at these sites | Propose updating management plans to amend these monitoring locations |
| ***Erosion & Sediment Control in Lake Macdonald*** | | | | |
| Weekly inspection of sediment and erosion control structures and measures. | Y | Y | Occurring weekly through Environmental Site Inspections | |
| Daily monitoring of turbidity in Lake Macdonald | Y | Y | Via live readings from monitor at I1.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 1.2.1 of this report for further details | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| Quarterly visual monitoring of any potential erosion & sediment issues occurring throughout the lake edges. These inspections would be incorporated into the monthly fauna inspections. This could be substituted by drone LiDAR surveys. The first survey represents the baseline. | Y | Y | Baseline drone survey assessment was carried out in June 2025 directly after lake drawdown.<br>Being conducted through the quarterly aquatic habitat survey and erosion assessments.<br>Monthly lake perimeter inspections conducted by Seqwater Rangers.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 3.8 of this report for further details | |
| ***Erosion & Sediment Control in Six Mile Creek*** | | | | |
| Undertake construction phase monitoring at the downstream monitoring sites and upstream control sites, as outlined in Appendix F Habitat Monitoring Program (AMP) | Y | Y | Being conducted through the aquatic habitat survey assessments.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 3.6 to 3.10 of this report for further details | |
| ***Aquatic Flora & Fauna in Lake Macdonald (Siphon Operation)*** | | | | |
| Daily visual inspection of intake screens – ensure screens are functional, water approach velocity is at or below the limit noted as a mitigation, and no aquatic fauna are trapped against the screens. This will be conducted daily when the siphons are operating until 30th September 2025. If consistent results are found with minimal blockages and no | Y | Y | Daily monitoring to 30 Sept 2025 completed with no evidence of blockages or increased intake velocities.<br>Inspections have since reverted to monthly using the underwater drone and then physically inspected quarterly by underwater divers. The screens were unable to be cleaned this quarter due to the siphons being operated after a rain event, the nets were inspected and cleaned at the end of | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| fauna entrapment these inspections can be scaled back to monthly | | | February 2026. Intake screens will be reinspected and cleaned when accessible in May 2026. | |
| Divers or underwater drone will perform an inspection of the intake exclusion device. Initially this will be performed monthly. Cleaning is to be conducted by divers on an as needed basis. If weed build up and fauna entanglement is found to be negligible / insignificant then this activity may be scaled back in consultation with the project aquatic ecology expert. | Y | Y | After multiple monthly inspections confirmed insignificant buildup of weed / debris on the intake screens the aquatic ecologist agreed that the project should scale back inspections to quarterly. Intake screens now are inspected and cleaned quarterly by divers. The intake screens were unable to be cleaned this quarter due to the siphons being operated after a rain event, the outer nets were inspected and cleaned at the end of February 2026. Intake screens will be reinspected and cleaned when accessible in May 2026. | |
| ***Aquatic Flora & Fauna in Lake Macdonald (During Construction)*** | | | | |
| Camera trap survey of platypus in upper dam reaches (continuous), and eDNA surveys quarterly | Y | Y | Being undertaken by SQP.<br>Platypus detections (camera) was lower than previous periods, however eDNA sampling were found to be similar to previous quarter results.<br>Refer to Appendix A - Monitoring & Compliance Summary – Section 3.4 of this report for further details | |
| Monthly visual monitoring of fauna in the lake to assess potential for fauna stress and need for adaptive management | Y | Y | Being undertaken through the quarterly aquatic habitat survey and assessments.<br>No issues of stressed fauna have been identified throughout the monitoring period. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| | | | Refer to Appendix A – Monitoring & Compliance Summary - Section 3 of this report for further details | |
| Daily visual monitoring of fauna in the stilling basin to assess potential for fauna stress | N/A | N/A | Completed daily. Two catfish were observed deceased in the stilling basin in the days after fish salvage of this area, likely died as a result of electrofishing activities. | |
| Bi-annual turtle monitoring during September to April for the duration of the project construction period of turtle condition in lake using length weight measurements compared to baseline and evaluation survey data. | Y | Y | Being undertaken through the habitat survey and assessments. Previous monitoring event was conducted in October 2025 and more recently in February 2026.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 3.3 of this report for further details | Ongoing in lake turtle health surveys |
| Monthly visual monitoring and water quality measured in situ (dissolved oxygen) of the relocation sites six months after relocations efforts have finished | Y | N/A | Fish from Lake Macdonald were translocated to Cooloolabin Dam in July 2025. Since more than 6 months has lapsed monitoring of Cooloolabin Dam by LMDIP ceased in January 2026. However, Seqwater rangers continue their monthly inspections of Cooloolabin and would alert the project of any potential issues. | No longer required as more than 6 months has passed since the fish relocation. Monitoring will cease going forward. |
| Quarterly monitoring of fish condition in the lake, using length weight measurements compared to baseline and evaluation survey data | Y | Y | Undertaken in January 2026 through the quarterly habitat survey and assessments by the SQP.<br>Monitoring of small-bodied fish communities show that this group of fish are highly abundant within Lake Macdonald.<br>Catches of large-bodied fish during the monitoring events has been variable and is likely a result of the general | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| | | | distribution of the different fish species within the lake at the time of the survey.<br>Fish condition scores were calculated for selected large-bodied fish species. The condition of most species increased during this monitoring period and have returned to baseline condition.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 3.2 of this report for further details | |
| ***Aquatic Flora & Fauna in Six Mile Creek (During Construction)*** | | | | |
| Quarterly aquatic habitat monitoring | Y | Y | Undertaken in January 2026 through the quarterly habitat survey and assessments by the SQP.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 3.6 to 3.10 of this report for further details | |
| ***Aquatic Habitat in Lake Macdonald*** | | | | |
| Quarterly assessment of aquatic habitat at the lake monitoring site (450 m upstream of the dam) during the construction phase, and quarterly for one year post construction | Y | Y | Being undertaken through the habitat survey and assessments by the SQP. | |
| If practical, aerial drone surveys will be used to monitoring of the upper reaches of Lake Macdonald before, during and after the drawdown to document the rate of exposure and assess the location, variety | Y | Y | Baseline drone survey assessment was carried out in June 2025 directly after lake drawdown. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| and abundance of fish habitats across various water levels and seasons. Surveys should encompass a range of fish habitats, including (but not limited to) macrophyte beds, boulders, riffles, woody debris, and identifiable breeding sites, such as eel-tailed catfish (*Tandanus tandanus*) nests | | | There is little value in continuing these surveys as all the exposed lowered embankments are covered in dense grasses.<br>Seqwater rangers continue to undertake monthly lake perimeter inspections. No issues have been raised throughout the monitoring period. | |
| ***Aquatic Habitat in Six Mile Creek*** | | | | |
| Undertake construction phase monitoring of habitat condition at the three downstream monitoring sites and two control sites | Y | Y | Being undertaken through the habitat survey and assessments by the SQP.<br>An analysis of the habitat monitoring data against the habitat trigger values found that no trigger values were exceeded during the quarterly monitoring period.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 2 of this report for further details | |
| Daily flow volume recorded at State Government gauging station at Cooran compared to long-term flow percentiles; flow data accessed and assessed monthly | Y | Y | Daily flows being monitored and recorded.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 1.1 of this report for further details | |
| ***Biosecurity - Pests*** | | | | |
| ***Lake Macdonald:*** During construction, monitor presence of pest species in the lake as part of quarterly fish and turtle monitoring | Y | Y | Being undertaken by the SQP through the habitat survey and assessments | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| | | | Identified pest species can be seen in Table 12 | |
| ***Six Mile Creek:*** During construction, monitor presence of pest species as part of quarterly fish and turtle monitoring | Y | Y | Being undertaken through the habitat survey and assessments<br>Identified pest species can be seen in Table 12 | |
| ***Relocation Sites:*** During salvage and relocation, record the number of pest species observed and euthanised (e.g. in a register) during relocation activities. | Y | Y | Refer to Appendix A – Monitoring & Compliance Summary Table 17 | |
| ***Biosecurity - Weeds*** | | | | |
| ***Lake Macdonald:*** Spot checks of weed hygiene certifications and inspection and wash down records. | Y | Y | Regular compliance checks occurring.<br>All aquatic vessels coming onto the lake are fully inspected by Seqwater Rangers. | |
| Monthly monitoring of the lake (and lake margins) for outbreaks of not previously established restricted aquatic or semi-aquatic plants | Y | Y | Seqwater rangers continue to undertake monthly lake perimeter inspections. No issues have been raised throughout the monitoring period. | |
| ***Six Mile Creek Downstream***: Record visual observations of aquatic and semi-aquatic weed species as part of aquatic habitat monitoring | Y | Y | Being undertaken through the habitat survey and assessments by the SQP. No cabomba observed in downstream Sim-Mile Creek.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 3.6 of this report for further details | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| ***Relocation Sites:*** Record visual observations of aquatic and semi-aquatic weed species as part of relocation site monitoring | Y | Y | Seqwater rangers undertaking monthly visual inspections in Cooloolabin Dam. No instances of new biosecurity issues have been reported. | Monitoring of Cooloolabin Dam by LMDIP ceased in January 2026. Seqwater rangers continue their monthly inspections. |
| **LMDIP-05829-GNL-ENV-MPL-00003 - Flora & Fauna (Terrestrial) Management Plan** | | | | |
| All exclusion barriers, no-go zones, excavations which could contain trapped fauna shall be inspected daily and maintained as required. Any resulting actions arising shall be raised in site register/records and through weekly inspections | Y | Y | Being completed through the site inspection process.<br>Potential for fauna entrapment to occur in the sediment basins. These are inspected multiple times daily. | Fauna spotter catcher to be called to deal with any entrapment issues. |
| Inspection of exclusion/buffer zones to occur during weekly inspections and any actions arising recorded in site register. | Y | Y | Being completed through the site inspection process. | |
| Establish a series of photo monitoring points within areas of direct and indirect impact to monitor impacts associated with construction. This includes identifying sites, taking preconstruction photos and recording GPS location, photo direction (north, east, etc.) at each point. Once prior to construction, monthly throughout lowering and construction, and | Y | Y | Photo monitoring points have been established at 9 locations. These photos are being taken in the same direction with timestamp and GPS location recorded. They are being stored in an electronic filing system and being reviewed to determine if any impacts are visible.<br>No evidence of indirect offsite impacts have been detected. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| quarterly until the lake has refilled and vegetation communities are re-established. | | | | |
| **LMDIP-05829-GNL-ENV-MPL-00005 - Noise and Vibration Management Plan** | | | | |
| Monitoring of the meteorological conditions | Y | Y | Refer to Appendix A – Monitoring & Compliance Summary - Section 7 of this report for further details | |
| Ongoing unattended noise monitoring at the 2 locations shown will be undertaken | Y | Y | Unattended noise monitoring undertaken at the two specified locations.<br>Results regularly exceeded noise objectives however the majority of exceedances are not attributed to construction activities. Exceedances of noise objective criteria are regularly breached on occasions when no works are happening (i.e. nights & weekends).<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 4 Figures 10 to 13 of this report for further details. | Continue attended monitoring. |
| Undertake attended noise monitoring at a location to be determined following receipt of a complaint or identification of an exceedance.<br>Precise monitoring locations must be determined in consultation with an appropriately qualified person (AQP) | Refer to Appendix A | Refer to Appendix A | One noise complaint received during the monitoring period in December for November works. Unable to respond with attended monitoring as this complaint was received a month after the works occurred. Regular attended monitoring is ongoing.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 4 – Table 16 of this report for further details. | Increase attended monitoring. |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| Unattended vibration monitoring at a location deemed suitable to monitor vibration impacts. Precise monitoring locations must be determined in consultation with an AQP | Y | Y | During the monitoring period there was one vibration monitoring exceedance recorded directly related to construction activities.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 4.2 of this report for further details. | |
| Regular inspection of noise and vibration controls shall be undertaken using the Weekly Environmental Management Inspection Checklist | Y | Y | Through the environmental inspection process. | |
| **LMDIP-05829-GNL-ENV-MPL-00006 Dust and Air Quality Management Plan** | | | | |
| $PM_{10}$ concentrations will be continuously monitored | Y | Y | No exceedances of objective criteria to report.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 5.2 Figure 15 of this report for further details. | |
| Dust deposition gauges will be installed and monitored at four locations (DDG01 to DDG04), as shown in Figure 14 | Y | Y | No exceedances of objective criteria to report.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 5.1 Table 18 of this report for further details. | |
| $PM_{10}$ and dust deposition monitoring at additional specific locations | Y | Y | No complaints this period. | |
| Visual inspection of airborne dust and dust deposition shall be undertaken as part of the weekly environmental inspection. | Y | Y | Through the environmental inspection process. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| Vehicles, plant, equipment and machinery shall be regularly inspected to ensure good working order. | Y | Y | Conducted both prior to receiving onsite and daily through plant pre-start | |
| **LMDIP-05829-GNL-ENV-MPL-00007 - Hazardous Substances Management Plan** | | | | |
| Regular equipment checks by operators for evidence of leaks and fitness of hydraulic hoses and seals | Y | Y | Conducted both prior to receiving onsite and daily through a plant pre-start | |
| Inspection of hazardous substances management and storage areas, and spill kits to be undertaken as part of a weekly environment management inspection checklist. | Y | Y | Completed through the environmental inspections. Compliant throughout this period. | |
| Handling and storage of hazardous substances will be monitored daily, with observations documented in site diaries | Y | Y | Inspected via the daily checklist process. Compliant throughout this period. | |
| **LMDIP-05829-GNL-ENV-MPL-00008 Waste Resource Use** | | | | |
| Waste management will be inspected as part of a weekly environment or HSE site inspection. | Y | Y | Through the environmental inspection process. | |
| Keep and audit records of any regulated/trackable waste removed from the site, including name and license number of waste transporters, volume and description of waste transported, destination of waste, and license number of the waste treatment | Y | Y | No waste related issues to report through the monitoring period.<br>Refer to Appendix A – Monitoring & Compliance Summary - Section 6 of this report for further details. | |

| Monitoring obligation | Previous quarter compliance met (Y/N) | Compliance met (Y/N) | Comments / Evidence of compliance | Ongoing Actions |
|---|---|---|---|---|
| operator. Registers and manifests maintained to track waste material | | | | |
| Discharges from site associated with waste management shall be monitored in accordance with the requirements of the relevant EMP sub-plan (e.g. Water for release to water, noise and vibration for noise, air quality etc). | Y | Y | No discharges from waste sources have been observed throughout the monitoring period. | |
| **LMDIP-05829-GNL-ENV-MPL-00009 Weed and Pest Management Plan** | | | | |
| Vehicles, plant, equipment and machinery shall be inspected for cleanliness daily during pre-start | Y | Y | Daily Pre-Start check | |
| Visual inspection of weed and pest matters (including inspection of any weed hygiene records) shall be undertaken as part of weekly environmental inspections | Y | Y | Completed through the environmental inspections. Compliant throughout this period. | |
| Monthly audits of weed hygiene records (as part of the Monthly Environment Report) and written assurance of material received | Y | Y | Weed Hygiene records for vehicles and marine vessels when they arrive onsite are assessed/audited by JH and Seqwater | |

# 6. Weather

A weather monitoring station has been established at the project site since before early works began in November 2024. The following section summarises the data collected over this reporting period.

## 6.1. Rainfall

Rainfall observed on site was varied for the monitoring period. December saw well above average rainfall, with January onsite rainfall much less than the BOM long term average. February rainfall onsite was again above the BOM long term average. Refer to Figure 1. During the quarterly period of December to February rainfall varied significantly. The month of December saw almost twice the BOM long term average. While January was significantly lower followed by a higher-than-average February. A significant rainfall event 16th December with a rain rate of over 80mm/hr, caused the site controls to overtop their designed capacity and was recorded as an environmental incident, (Refer to section 8).

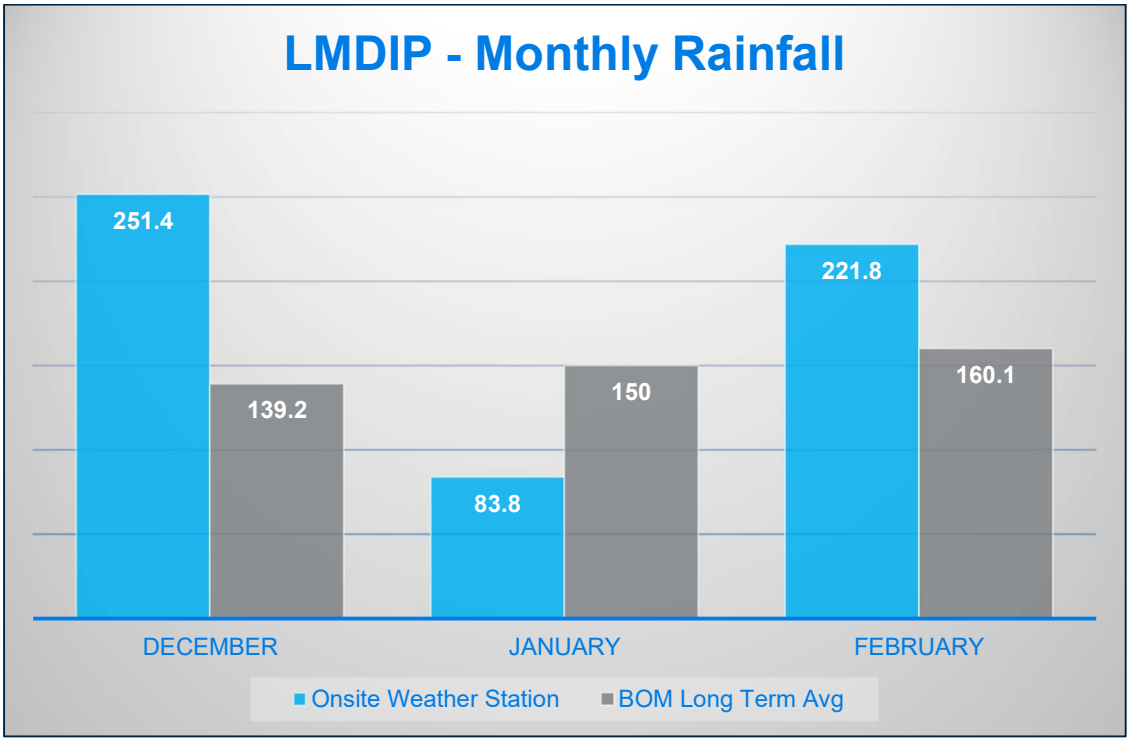



**Figure 1: LMDIP Monthly Rainfall compared to the Tewantin long term average.**

## 6.2. Temperature

Temperatures (daily maximum and minimum) recorded during the period ranged between:

- December – 16ºC - 34ºC
- January – 18ºC - 36ºC
- February –18 ºC - 35 ºC

A weekly temperature trace is provided in Figure 2.

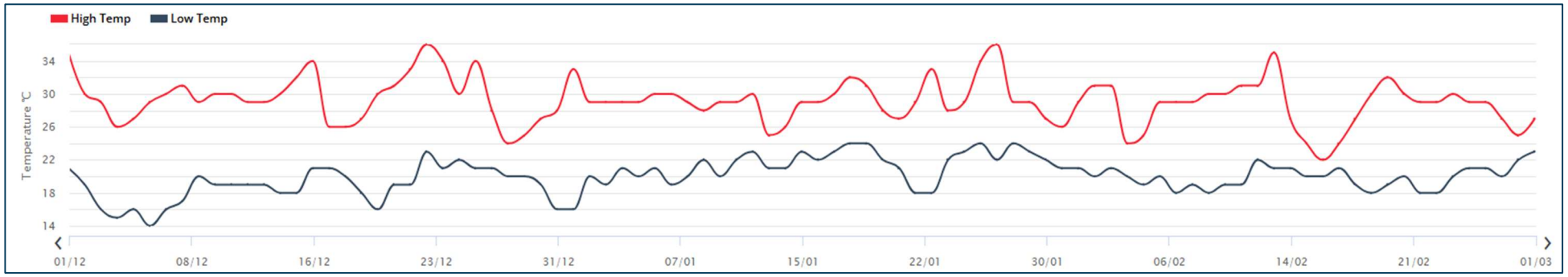
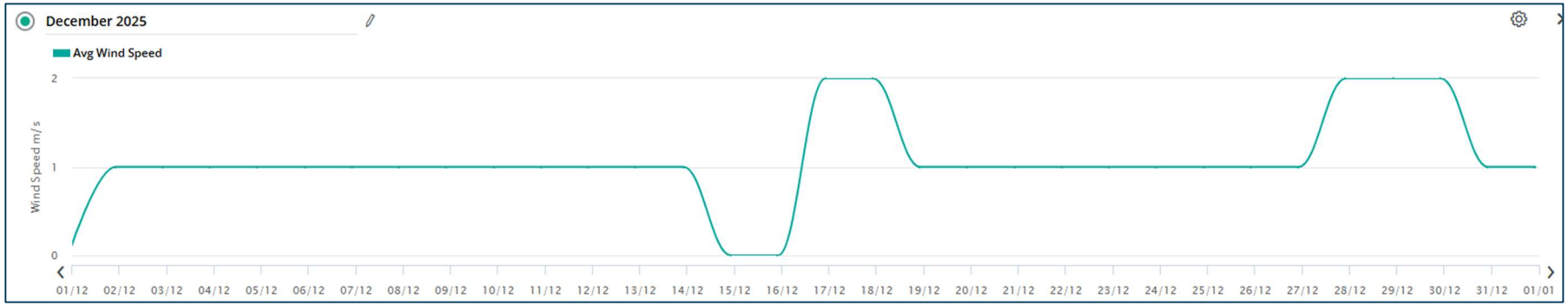



**Figure 2: LMDIP Weekly Temperature Trace results**

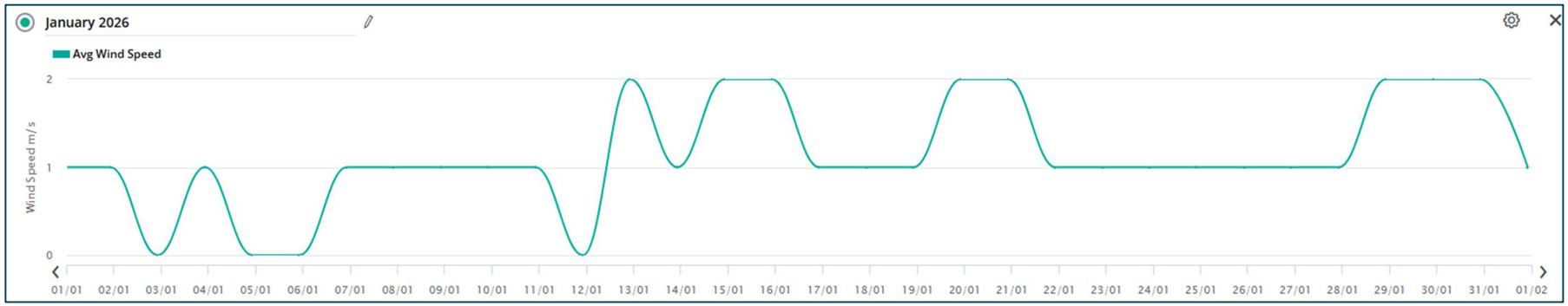
## 6.3. Windspeed & Wind direction

Windspeed and direction recorded during the period continued to be unremarkable with average daily windspeeds ranging between 1-5m/s with a predominant West North Westerly direction. Refer to Figure 3 for average wind speed and Figure 4 for direction.

### December




### January



## February

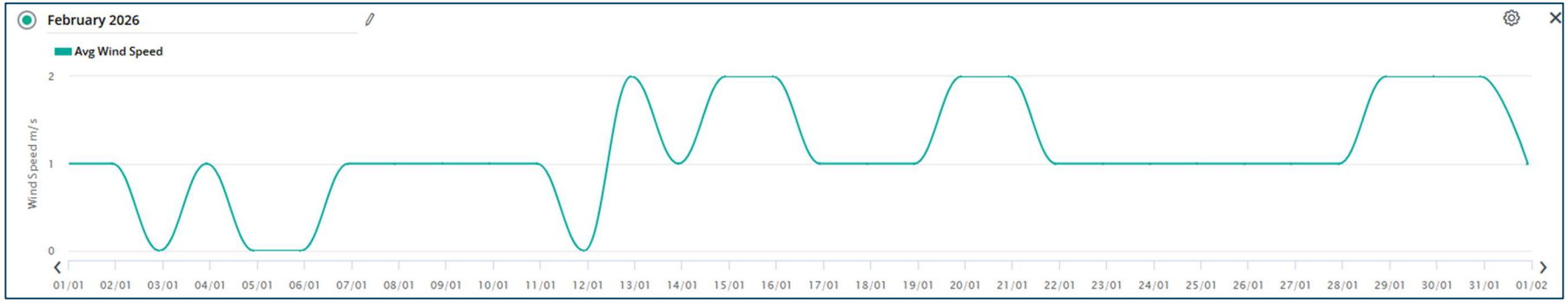



**Figure 3: LMDIP Average Wind Speed**

## 6.4. Wind direction

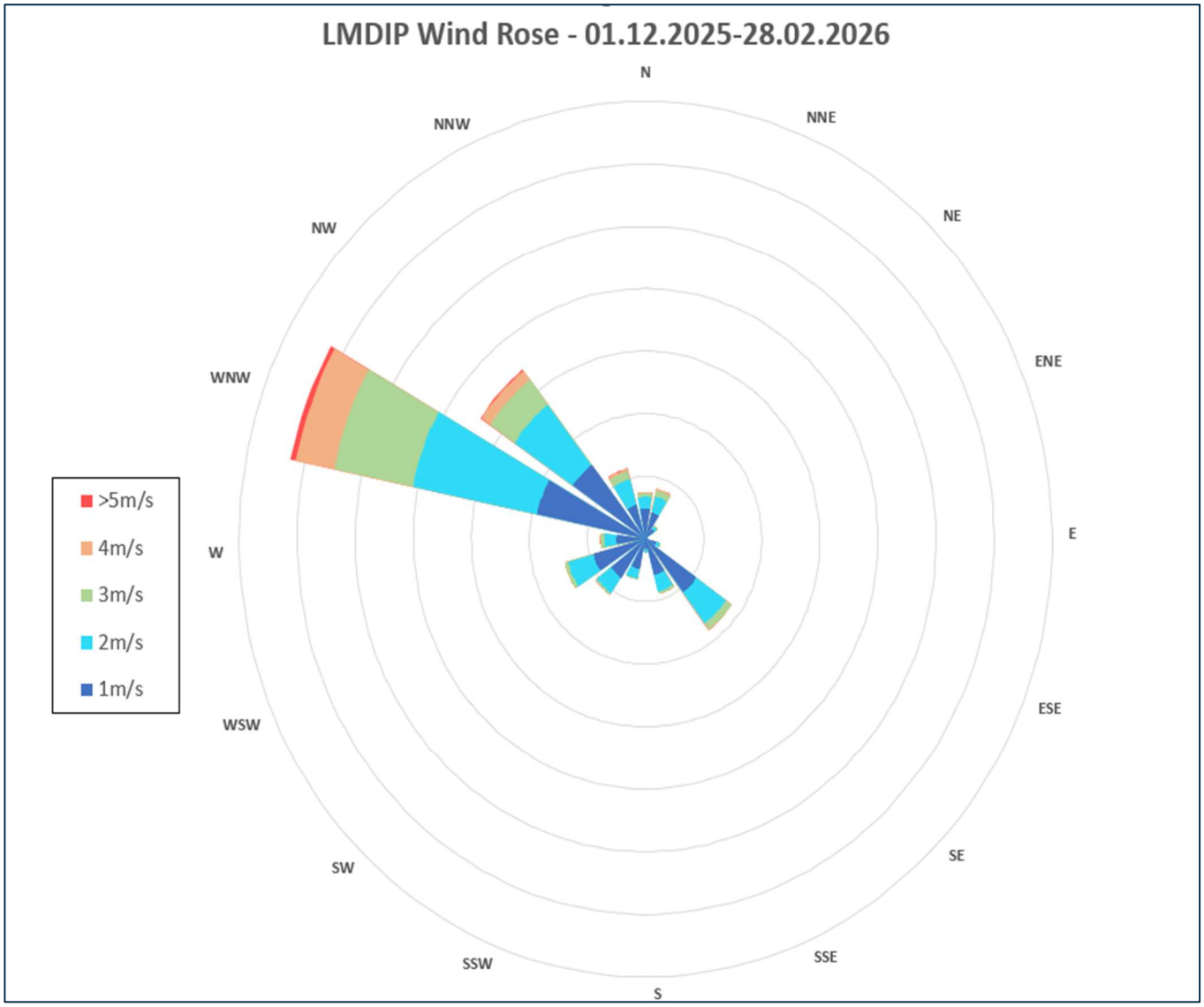



**Figure 4: Wind Rose – 01/12/2025 to 28/02/2026**

# 7. Cultural Heritage

There was no works requiring Cultural Heritage Monitoring to be conducted onsite by the Kabi Kabi Cultural First Nations people during this monitoring report period.

# 8. Incidents

There were three environmental incidents during the monitoring report period detailed in Table 4.

**Table 4: LMDIP Incident summary**

| Date | Incident | Description of Consequence | Closed out (Y/N) |
|---|---|---|---|
| 18/02/2026 | 2 dead catfish were found in the stilling basin post fish salvage. | Water quality was checked and found to be within project criteria. Likely fish died as a reaction to electrofishing activities that had recently occurred during salvage. | Yes |
| 16/12/2025 | Above design intense rain event with 218mm received onsite in 6 hours. | An intense rainfall event above design criteria, with a rain intensity of over 80mm/h, has overtopped the site controls, causing dirty water to leave site. | Yes |
| 4/12/2025 | Potential turbid water discharge downstream of spillway. | Seqwater water quality team noticed a smell and discoloration to the water being released from the environmental flow pipe. Upon further inspection it was determined that the placement of rock bags was stirring up the sediment at the bottom of the stilling basin. This material was becoming mobile and flowing through the environmental flow pipe at the base of the spillway. Downstream water quality did not exceed the monitoring criteria outlined in Table 8. Enviro flow was closed for the remainder of works. No further issues. | Yes |

# 9. Complaints

During the monitoring period, three complaints were recorded. One related to noise (from piling work in November), one related to truck safety compliance and one related to traffic sign placement.

Consultation during the reporting period has focused primarily on demolition works and has been undertaken thoroughly to ensure stakeholders remain well informed and supported. The project team has maintained close and proactive communication with local residents to provide timely updates on upcoming activities and address community queries and concerns promptly.

As part of these efforts, a community “Coffee in the Park” event was held at Lake Macdonald Park on 21 February, which was attended by approximately 70 local residents. The event provided an opportunity for stakeholders to ask questions, engage directly with the project team, and receive updates on current and upcoming project works

A summary of complaints received during the compliance monitoring period, along with the resolution process, corrective actions, and the effectiveness of these measures, is outlined below in Table 5.

**Table 5: LMDIP Complaint Summary**

| Date | Complaint | Response and Actions Taken |
|---|---|---|
| 05/01/2026 | Traffic sign placement | Complaint received about placement of traffic sign and line of sight issues when leaving driveway. Sign moved, complaint closed out. |
| 17/12/2025 | Truck safety compliance | Local resident reported truck believed to be speeding in local area. Photos provided and sent to subcontractor. Compliance data checked, complaint closed out with company and truck driver. |
| 15/12/2025 | Noise complaint from piling on 22 November | Complaint received 15/12 regarding noise from piling on 22/11. Complaint had been investigated in November and closed out. |

# 10. Summary & Conclusion

Monitoring has been completed for all aspects outlined in the approved Management Plans. This monitoring was conducted continuously throughout the extended monitoring period from 1 December 2025 to 28 February 2026.

Water quality monitoring continues to show exceedances of some high-risk threshold criteria due to the narrow nature of these thresholds, however none of these exceedances are directly attributed to construction-related activities. While minor low-level exceedances continue to still also be recorded, there is a continued improvement compared to the previous monitoring quarter.

Noise monitoring compliance remains challenging as target levels are set below recorded baseline levels. Current noise monitoring indicates only moderate exceedances of daily averages above both objectives' criteria and baseline data, primarily attributable to increased traffic noise unrelated to construction activities.

Vibration had only one minor exceedance above the human comfort target, directly linked to construction works for a period of 30 seconds.

Dust and air quality had no exceedances of the target criteria recorded.

Aquatic habitat and fauna monitoring remains stable, with a general increase in fish communities over time to baseline levels within the lake with no immediate intervention or action recommended.

The next monitoring compliance summary report will cover the period from 1 March 2026 to 31 May 2026.

# Appendix A - Monitoring & Compliance Summary

## 1. Water

### 1.1. Water Quantity

LMDIP regularly monitor the gauging station along Six Mile Creek at Cooran (138107B) to ensure flow regimes remain comparable to what's considered normal. Figure 5 shows the average monthly flows throughout the project timeline compared to the 10yr average. Environmental flows are always maintained as per the Lake Macdonald Water License.

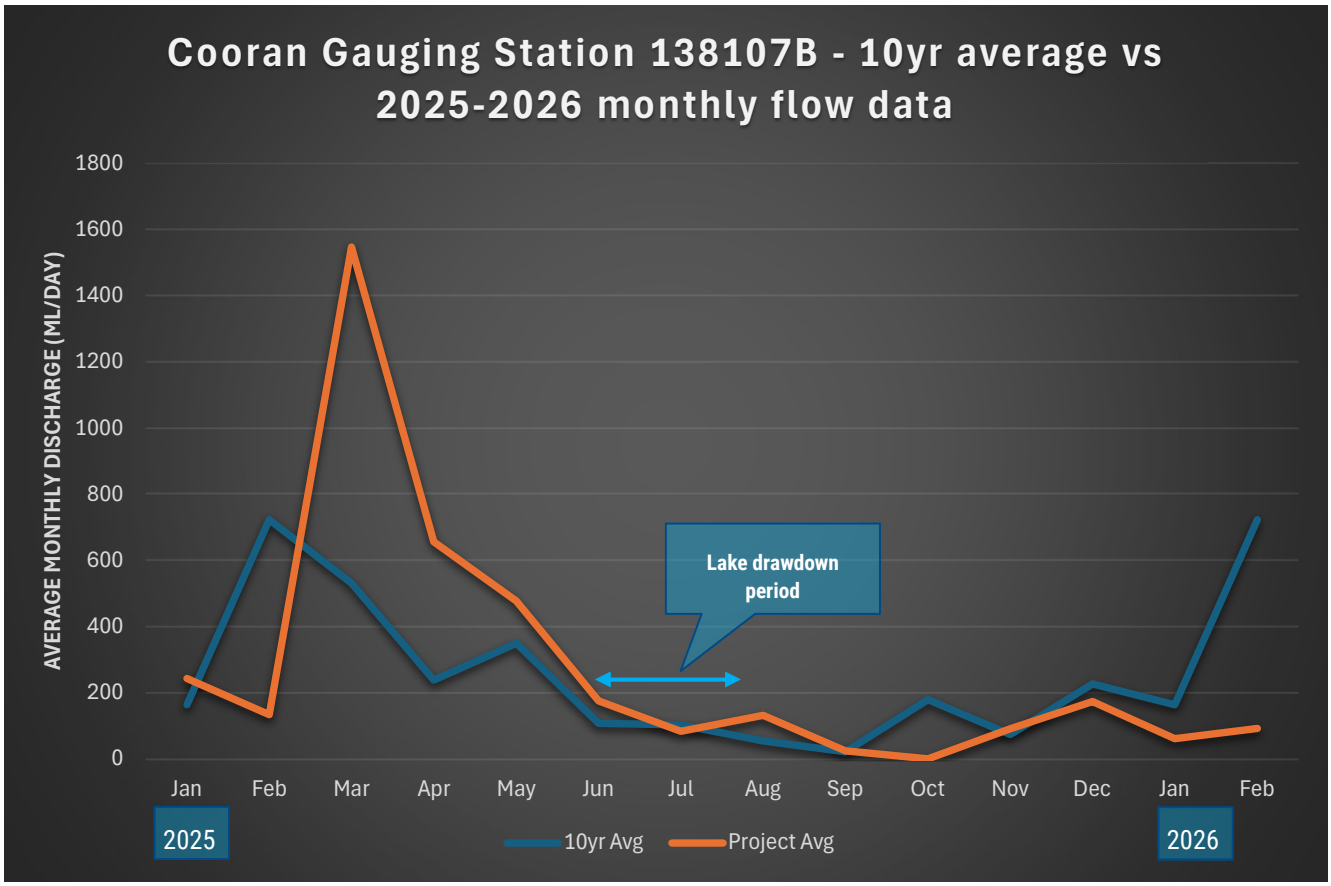



**Figure 5: Comparing monthly average flows against the 10yr average – Cooran Gauging Station 138107B**

The following graph gives an estimation of ML/day discharged downstream through the siphon system throughout the reporting period. This is based on an average of 62ML/day passing through each siphon pipe.

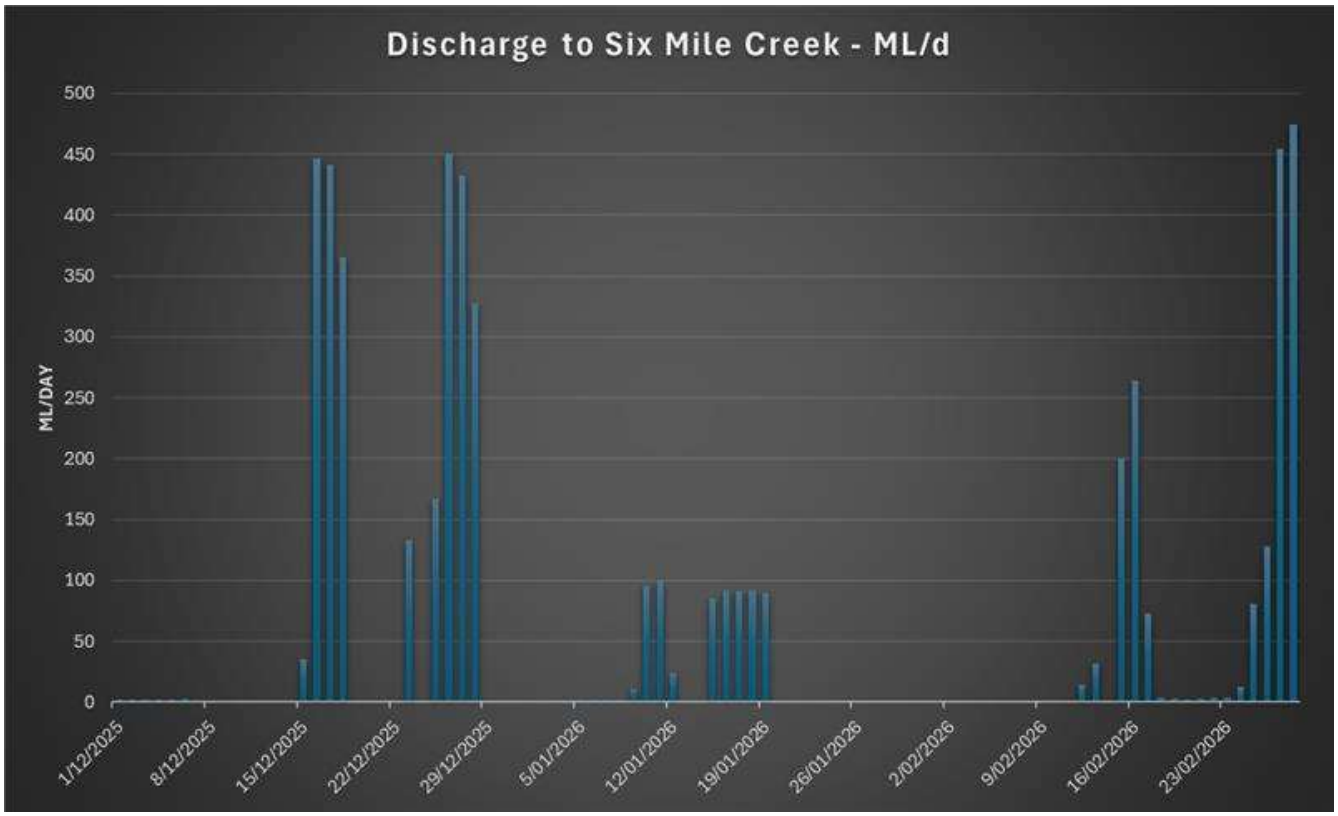



**Figure 6: Discharge to Six Mile Creek (Siphons and Environmental Flows).**

## 1.2. Water Quality

Water quality monitoring is being conducted with a combination of real-time loggers, hand-held multi-parameter probe testing and laboratory analysis at the locations shown in Figure 6. Monitoring results were compared against the nominated target criteria in the approved management plans.

Water quality results will continue to be monitored over time as further data becomes available, and the natural systems are better understood.

Water quality thresholds are described in:

- Adaptive Management Plan v15 (post 18 August 2025)

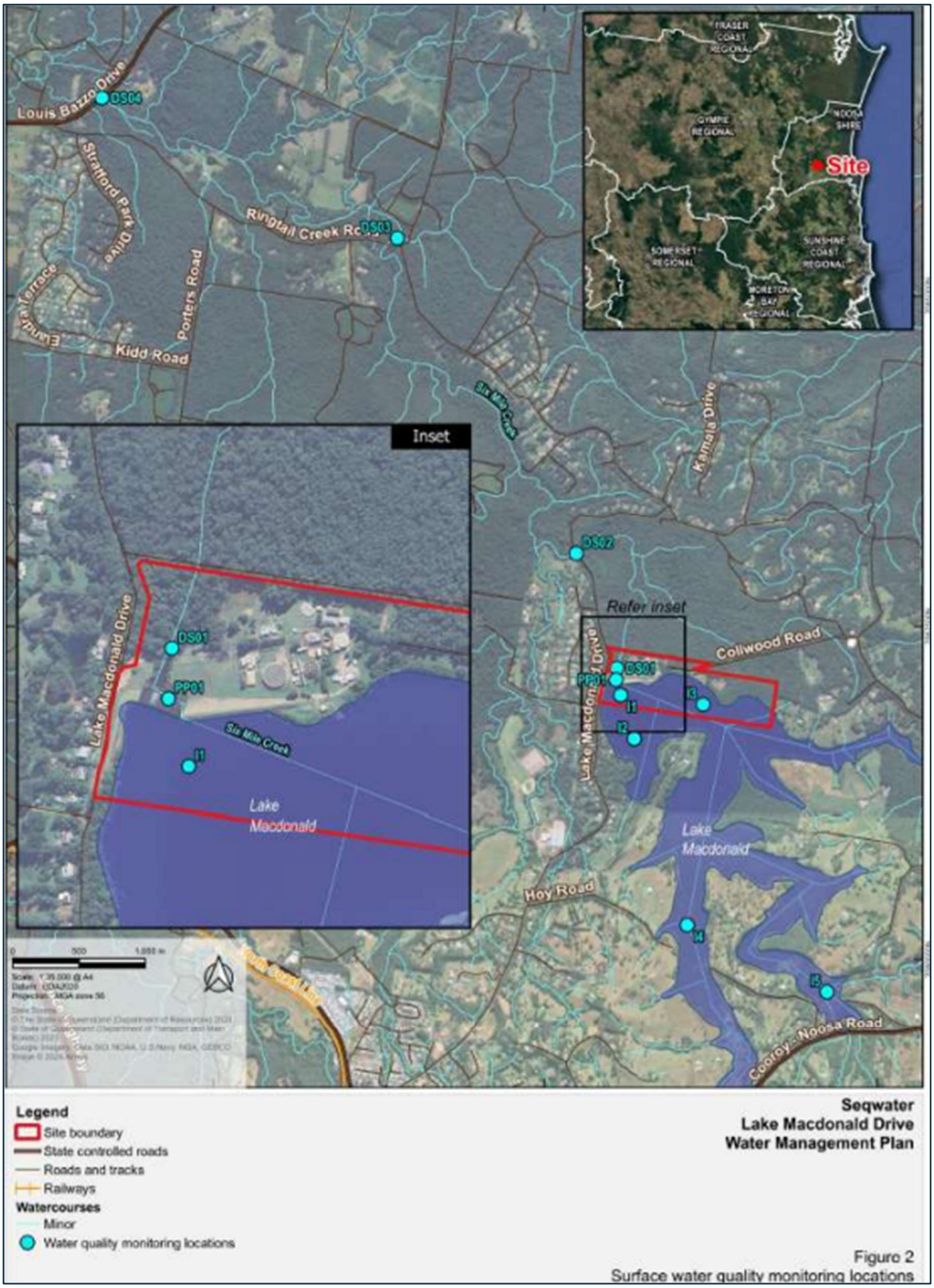



**Figure 7: Water Quality Monitoring Locations**

### 1.2.1. Upstream Monitoring

In situ water monitoring was conducted on 55 occasions across the reporting period as well as lab samples collected on 19 occasions, targeting surface sampling at locations I1 to I5 on a weekly, fortnightly and monthly basis at locations shown in Figure 6. The monitor located at DS01 is a real time continuous water quality metre which relays readings to a web-based platform every hour. The monitor relays a recording to the web-based platform hourly. This section summarises the data for the upper reaches and the main body of the impoundment.

It is important to note that upstream water quality is representative of water flowing into the lake. The project has no direct impact on the upstream water quality; however indirect effects associated with drawdown of the lake may be observed. The majority of exceedances are found to occur in the upper reaches, likely attributed to the shallower depths and inputs from upstream sources. Table 6 shows how often the project water quality objectives were exceeded in the main body of the lake and Table 7 shows how often the project water quality objectives were exceeded in the upper reaches.

**Table 6: Upstream Water Quality Summary (Sites I1 – I3: Main body of the impoundment)**

| Parameter | | DO% | NTU | pH | Ammonia (mg/L) | Nitrate (mg/L) | TP (mg/L) | TSS (mg/L) |
|---|---|---|---|---|---|---|---|---|
| **Criteria** | Low | 33 - 20 | 18.9 - 25 | 6.1-6.9 | 0.053 – 0.11 | 0.0142 – 0.02 | 0.034 – 0.048 | 5 - 9 |
| | high | <20 | >25 | 6.1.-8.0 | >0.11 | >0.02 | >0.048 | >9 |
| **Non-conform – low trigger** | Count | 0 | 5 | 9 | 3 | 1 | 3 | 4 |
| | % | 0% | 15% | 27% | 23% | 8% | 23% | 31% |
| **Non-conform – high trigger** | count | 0 | 21 | 1 | 3 | 2 | 7 | 9 |
| | % | 0% | 64% | 3% | 23% | 15% | 54% | 69% |

**Table 7: Upstream Water Quality Summary (Sites I4 – I5: Upper reaches of the lake arms)**

| Parameter | | DO% | NTU | pH | Ammonia (mg/L) | Nitrate (mg/L) | TP (mg/L) | TSS (mg/L) |
|---|---|---|---|---|---|---|---|---|
| Criteria | Low | 33 - 20 | 18.9 - 25 | 6.1-6.9 | 0.053 – 0.11 | 0.0142 – 0.02 | 0.034 – 0.048 | 5 - 9 |
| | high | <20 | >25 | 6.1.-8.0 | >0.11 | >0.02 | >0.048 | >9 |
| Non-conform – low trigger | Count | 0 | 3 | 12 | 0 | 0 | 0 | 1 |
| | % | 0% | 14% | 55% | 0% | 0% | 0% | 17% |
| Non-conform – high trigger | count | 0 | 16 | 1 | 6 | 2 | 4 | 4 |
| | % | 0% | 73% | 5% | 100% | 33% | 67% | 67% |

The data collected indicates that:

- ***Dissolved Oxygen (DO):*** DO remained in an acceptable range with no exceedances during the monitoring period across both sites.
- ***Turbidity:*** Turbidity showed an increase of the exceedances of the high-risk trigger in both the main body of the impoundment and the upper reaches of the lake compared to the previous quarter. No significant activity has been occurring within the lake adjacent to or at these sites. These two upstream sites are particularly low in water, particularly I5 which could be resulting in turbid samples being collected. The increases can likely be attributed to the increased rainfall received throughout the monitoring period.
- ***pH***: pH showed a moderate increase of the low-risk non-conformance trigger across both sites which is likely to due to the high nutrients and shallow water at these sampling locations.
- ***Nutrients:*** All nutrients (ammonia, nitrate and phosphorous) continued to show exceedances of the high-risk trigger values however at I4 and I5, ammonia increased from 82% to 100% of exceedances. The main body of the impoundment remained consistent for both low and high-risk triggers with 23% of ammonia exceedances.
- ***TP-*** Total Phosphate exceedances remained fairly consistent with the last quarter but did slightly decrease exceedances across both trigger values at both sites.
- ***TSS –*** Total suspended solids high and low risk exceedances remained consistent with minimal change to the last monitoring quarter across both sites.
- ***SPC/EC*** is being monitored at all sites. There are no specific WQ objectives for EC however all sampling events show EC to low and well within normal ranges for freshwater systems.

It is important to note that while the lake volume is significantly reduced from FSL, the lake is still receiving the same amount of nutrient inputs from the catchment during rainfall events. This results in a lower dilution rate across the waterbody.

### 1.2.2. Downstream Monitoring

Downstream water monitoring was conducted on 44 occasions across the reporting period targeting surface sampling at locations DS01 to DS04 on a weekly, fortnightly and monthly basis at locations shown in Figure 6 as well as 16 lab samples collected. The monitor located at DS01 is a real time continuous water quality metre which relays readings to a web-based platform every hour. Table 8 represents project water quality objectives exceedances for the downstream samples and Table 9 represents the water quality exceedances for the stilling basin.

Owing to completion of the coffer dam construction in December water quality sampling as per section 3.2 of the AMP water quality monitoring commenced in December and consisted of daily probe water samples and weekly laboratory samples.

The stilling basin was visually monitored and water samples collected over the Christmas shutdown with fish salvage of this area commencing in January 2026. Once fish salvage was complete dewatering of the stilling basin commenced in January.

The continuous logger normally at I1 was also moved into the stilling basin over the Christmas shutdown period to continuously monitor water quality whilst no site works were occurring as an additional precautionary measure.

During this reporting period, Seqwater also trialled the use of an in house built solar generated aerator system which was used in the tailwater pool, (immediately downstream of the spillway) to increase oxygen. It is noted that although an excellent initiative the effects were only localised to the area immediately adjacent to the aerators and not observed further downstream such as at DS01.

**Table 8: Downstream Water Quality Summary (DS01, DS02, DS03, DS04)**

| Parameter | | DO% | Turbidity NTU | pH |
|---|---|---|---|---|
| Criteria | low | 56 | 6.6 | 5.9-7.1 |
| | high | 36 | 50 | 5.9-8.0 |
| Non-conform – low trigger | Count | 15 | 38 | 34 |
| | % | 38% | 86% | 77% |
| Non-conform – high trigger | Count | 4 | 0 | 1 |
| | % | 10% | 0% | 2% |

- ***Dissolved Oxygen (DO):*** DO showed a minor increase in low-risk exceedances of the trigger values than the last monitoring period. With only 38% of low-risk triggers exceeded and 10% of high-risk triggers exceeded.
- ***Turbidity***: as per the previous quarter turbidity was assessed as conforming with the high trigger criteria on all occasions. There was an increase observed of the low-risk trigger criteria 86% of the time. Criteria are considered unreasonably low and as such natural conditions are expected to be frequently non-conforming with the criteria even in the absence of any project activities. Amended criteria from the AMP have been developed and implemented for this monitoring period but remain considerably lower than background making it difficult to achieve the objectives. Turbidity is not being directly impacted by construction-related activities, and any fluctuations are considered normal.
- ***pH***: pH was assessed as non-conforming with the high trigger criteria on 2% occasions but non-conforming with low trigger criteria showed a significant increase to77% of the time. The low trigger thresholds remains narrow since new criteria were developed and implemented, and such divergence is not indicative of poor performance or poor water quality, and no visual impacts have been noted. Natural factors such as rainfall, vegetation and aquatic matter and geology can also impact pH.
- **SPC/EC** is being monitored at all sites. There is no criteria for EC so there are no exceedances to monitor against.

**Table 9: Downstream water quality summary for the stilling basin (PP01)**

| Parameter | Parameter | DO% | NTU | pH | Ammonia | Nitrate | TP | TSS |
|---|---|---|---|---|---|---|---|---|
| | Low | 33 - 20 | 18.9 - 25 | 6.1-6.9 | 0.053 – 0.11 | 0.0142 – 0.02 | 0.034 – 0.048 | 5 - 9 |
| Criteria | High | <20 | >25 | 6.1.-8.0 | >0.11 | >0.02 | >0.048 | >9 |
| | Count | 0 | 6 | 3 | 2 | 0 | 2 | 1 |
| Non-conform – low trigger | % | 0% | 10% | 5% | 20% | 0% | 20% | 10% |
| | Count | 0 | 28 | 17 | 1 | 3 | 0 | 3 |
| Non-conform – high trigger | % | 0% | 46% | 28% | 10% | 30% | 0% | 30% |

- ***Dissolved Oxygen (DO):*** DO showed conformance with both low and high-risk triggers 100% of sampling events.
- ***Turbidity-*** *Turbidity was assessed as non-conforming for 10% of low-risk trigger exceedances and 46% of high-risk exceedances. During this monitoring period there was some rock bag relocation reworks within the stilling basin, so turbidity was frequently being resuspended however the area was monitored and settled quickly after works were completed.*
- ***pH***: was assessed as showing minor non-conformances with the low-risk trigger of 5% and 28% of high-risk exceedances.
- ***Ammonia –*** Ammonia remained relatively stable and showed 20% non-conformance with the low-risk trigger and a 10% exceedance for the high-risk triggers.
- ***Nitrate*** was assessed as conforming with the low-risk trigger 100% of sampling events and showed a 30% exceedance of the high-risk trigger.
- ***TP*** was assessed as non-conforming with 20% of low-risk trigger exceedances and conforming with 100% of high-risk triggers.
- ***TSS*** – was assed as non-conforming with the low-risk trigger 10% of the sampling events and showed 30% non-conformances against the high-risk trigger.
- ***SPC/EC*** is being monitored at all sites. There is no criteria for EC so there are no exceedances to monitor against.

### 1.2.3. Ammonia, Nitrate and Phosphate water quality trends over time

Figures 8, 9 and 10 display the historical inclusive water quality trends at all monitoring locations. These graphs show the number of times the high and low trigger values were exceeded each month since the project began.

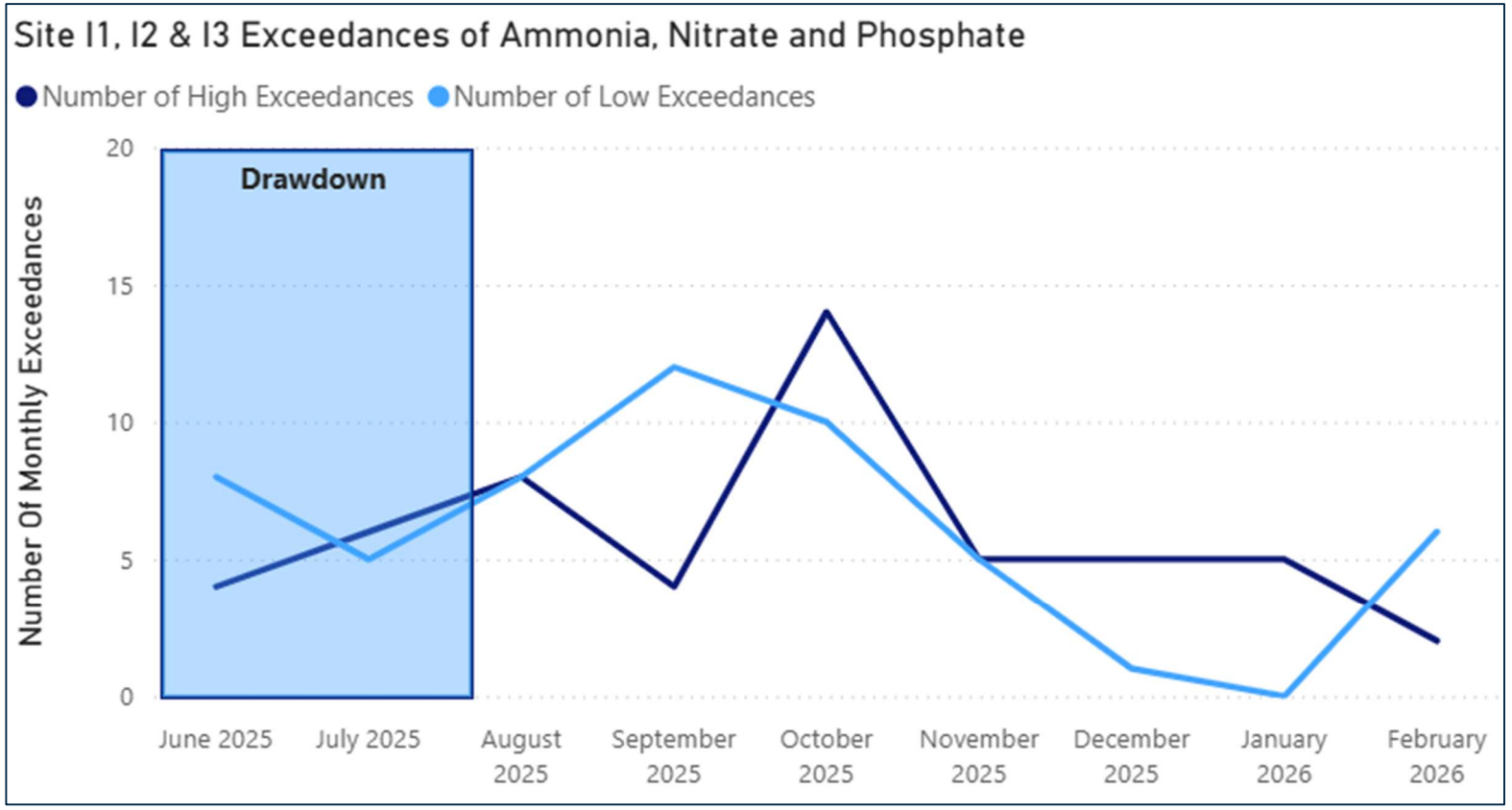



**Figure 8: Number of exceedances of ammonia, nitrate and phosphate at the main body of the impoundment of Lake Macdonald (I1, I2 and I3)**

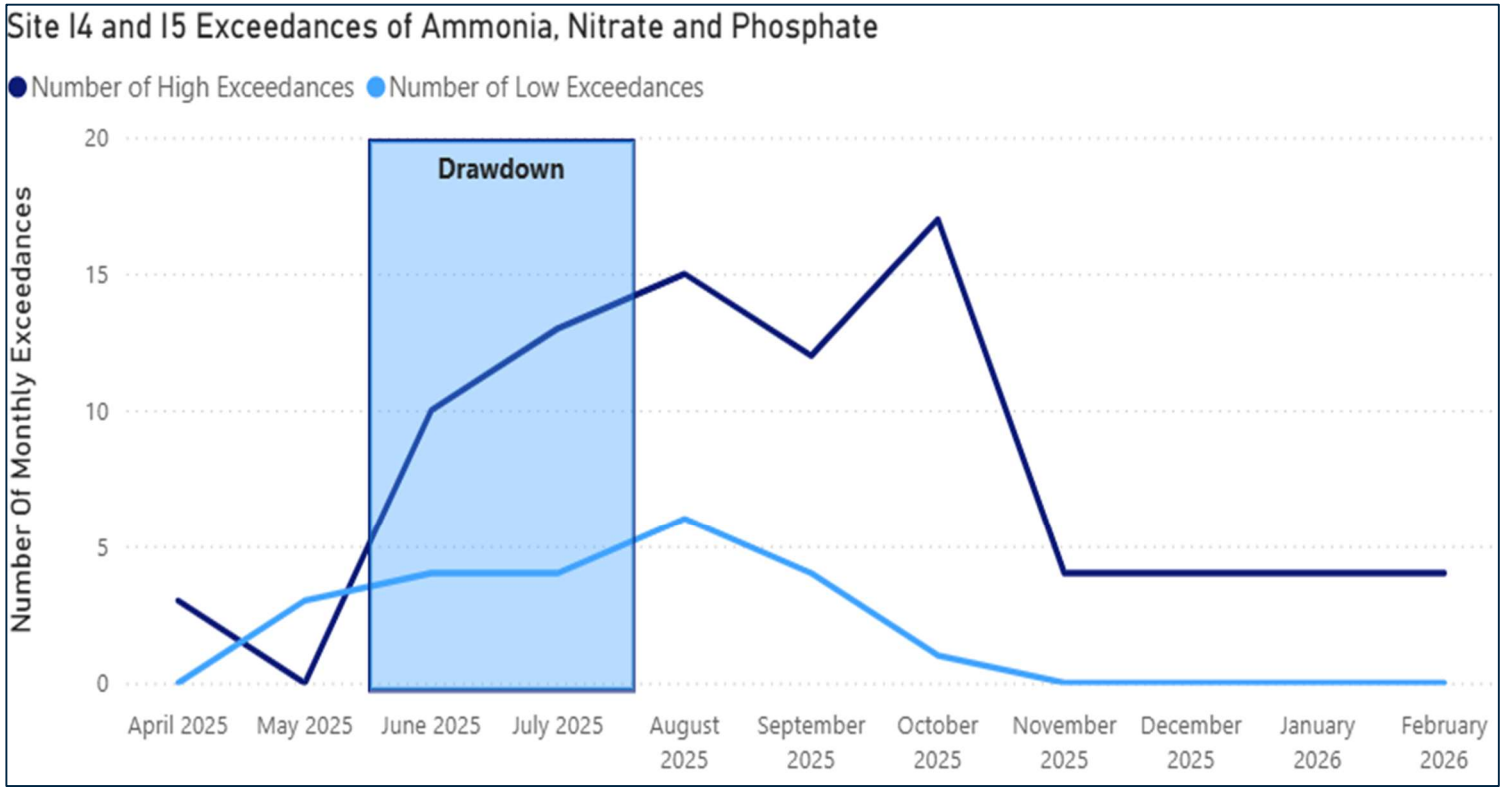



**Figure 9: Number of exceedances of ammonia, nitrate and phosphate at the upper reaches of Lake Macdonald at the sites I4 and I5**

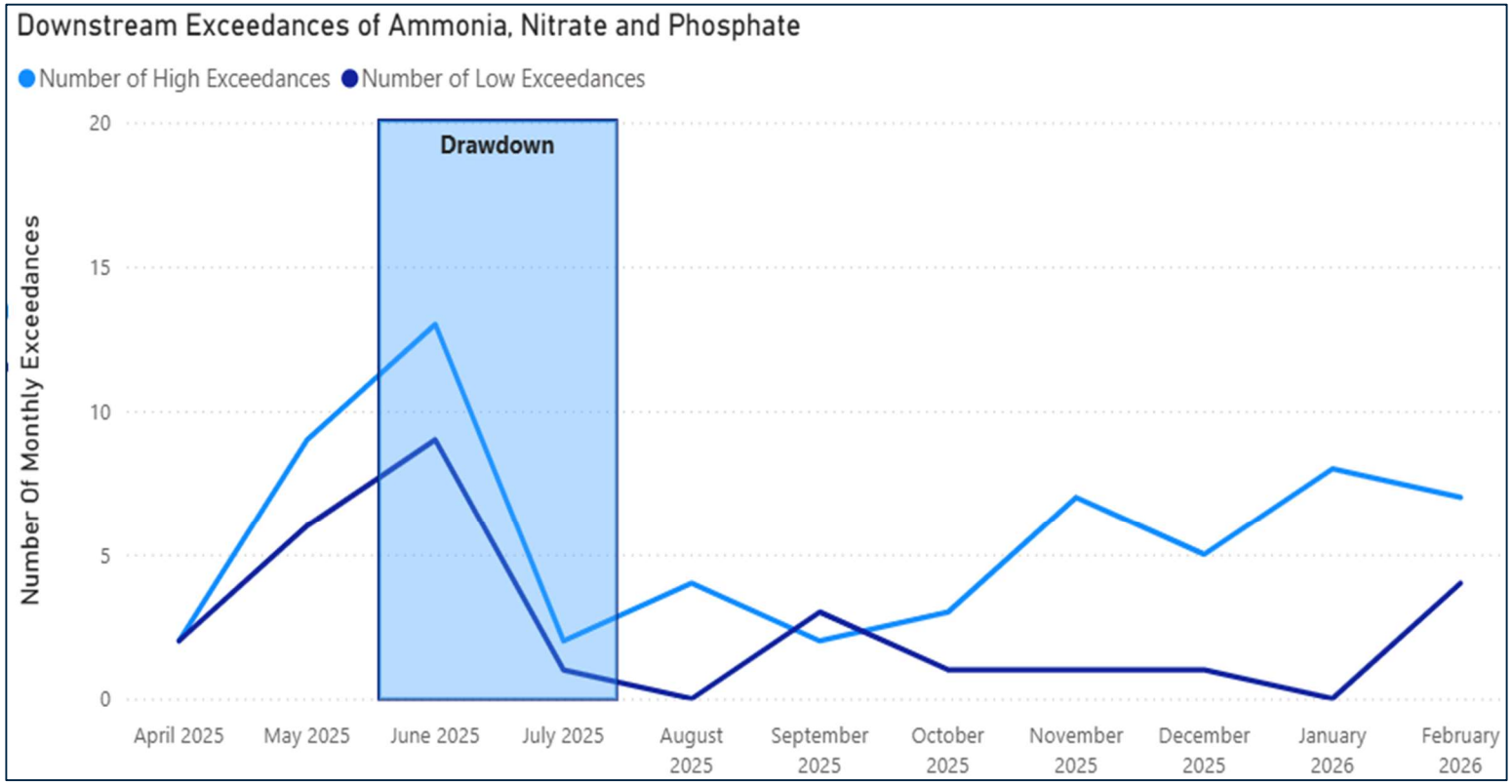



**Figure 10: Number of exceedances of ammonia, nitrate and phosphate downstream at the sites DS01, DS02, DS03 and DS04.**

The data graphed above in Figures 8, 9 and 10 indicate the trends of nutrients from baseline through drawdown until the end of this reporting period. They show not only a downward trend in the upper reaches but also a stabilisation. Impoundment numbers at I1, I2 and I3 are also showing signs of stabilisation. It is also important to note that these exceedances, are not reflected in the downstream numbers, which were clearly spiking before drawdown but are now reaching a more stabilising trend, shown in Figure 10.

# 2. SQP Habitat monitoring

In the last quarterly monitoring report increased water quality sampling by the project aquatic ecologist was implemented in response to high nutrient levels and as a result of suspending fish salvage in July 2025. Although the nutrient levels showed some high exceedances last quarter they were stabilising and the SQP was satisfied to cease increased sampling events and resume water quality sampling requirements (quarterly) as per Figure 7 and Appendix F of the AMP.

There is a total of six habitat monitoring sites. These include, three downstream sites located within Six Mile Creek (SMCDS01, SMCDSO2 and SMCDS04), two upstream control sites (SMCUS01 and CU02) and a single lake site. Within each site data is collected along a 200m long section of creek.

**Figure 11: SQP Quarterly Habitat survey locations including water quality**

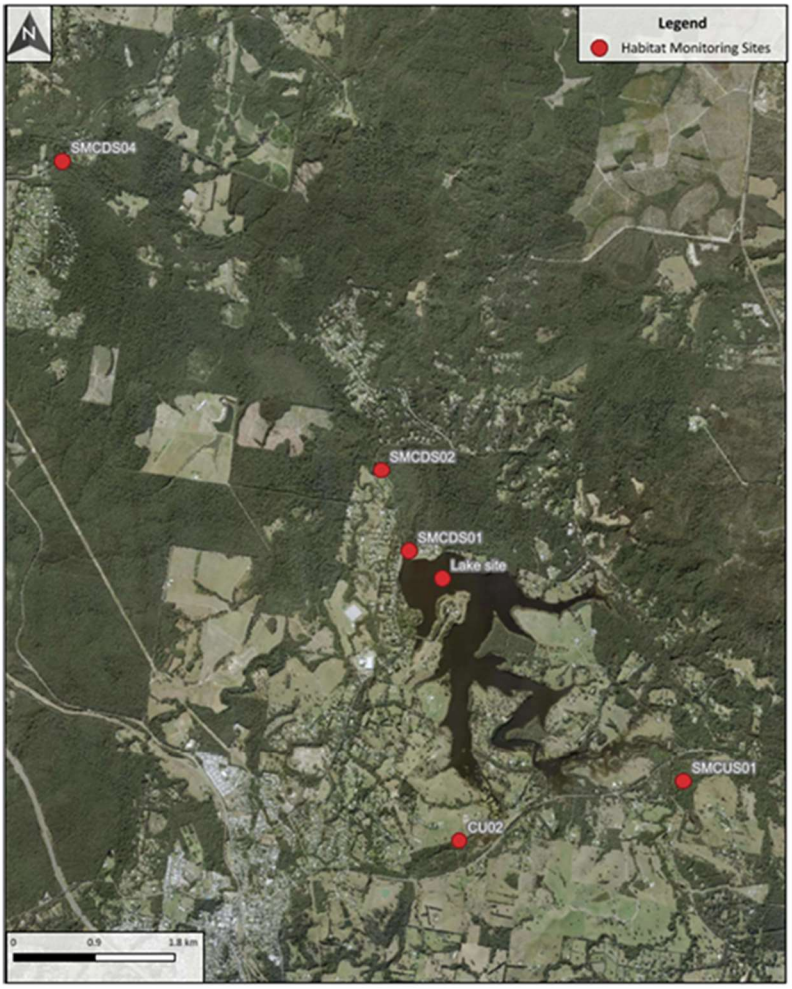


**Table 10: Mean Water Quality results from each habitat site (low readings are highlighted in red)**

| Location | Electrical conductivity (µS/cm) | Temperature (°C) | DO (% saturation) | DO (mg/L) | Turbidity (NTU) | pH |
|---|---|---|---|---|---|---|
| **SMCD01 - Six Mile Creek** | | | | | | |
| January | 73.7 | 25.5 | 13.4 | 1.47 | 8 | 6.7 |
| **SMCD02 - Six Mile Creek** | | | | | | |
| January | 98.2 | 24.2 | 20.2 | 1.65 | 12 | 5.84 |
| **SMCD04 – Six Mile Creek** | | | | | | |
| January | 93.3 | 24.7 | 40.3 | 3.3 | 8.8 | 6.22 |
| **SMCUS01 - Six Mile Creek upstream of Lake Macdonald (control)** | | | | | | |
| January | 63.9 | 25.8 | 61.2 | 5.21 | 10 | 6.52 |
| **CU02 – Cooroy Creek upstream of Lake Macdonald (control)** | | | | | | |
| January | 66.4 | 24.7 | 62.7 | 4.33 | 10 | 6.35 |

Water quality results collected by the SQP showed the following trends:

- Recorded conductivity (µS/cm) was low within all sites. This is likely to be a regional influence on water quality and is not concerning.
- In January dissolved oxygen (% saturation) concentrations were low within all sites below Lake Macdonald (Sites SMCD01, SMCD02 and SMCD04). Dissolved oxygen concentrations improved with further distance from the dam from sites SMCD01 to SMCD04.
- Low dissolved oxygen, immediately below the dam, with improvements further downstream (as tributary inflows increase), may indicate that water being released from Lake Macdonald has high biological oxygen demand (BOD). This may be related to high nutrient levels within the lake and associated algal blooms. Testing of BOD would assist in determining the cause of the low dissolved oxygen readings, these samples will be collected in consultation with the SQP advice and reported on in the next quarterly monitoring report.

During the baseline survey, indicator pegs were installed to monitor bank height for the duration of the monitoring period. Water levels in reference to the bank heights can be compared across the site photos and within cross sectional depth profiles. At no time during the site visits did the water level exceed the bank height of the survey sites.

An analysis of profiles found the following trends:

1. SMCD01 (site immediately below dam) showed minor bed scour and deposition in all profile locations.

2. SMCD02 (site located approximately 1.5 km downstream of dam). Middle and lower transect showed some deposition within inside bend. The profile of the eroding outside bend has changed slightly in both the middle and lower transect locations.
3. SMCD04 (site located approximately 7km downstream of dam). Profiles indicate that some minor scour and deposition have occurred over time.
4. CU02 (control site located in Corroy Creek upstream of dam). Profiles indicate that some minor scour and deposition have occurred over time.
5. SMCUS01 (control site located above the dam in Six Mile Creek) – Stream profiles indicate that minor deposition and scour have occurred within all transect locations.

Comparisons of the profile data from below and above the dam show that minor scour and deposition occurred to bed and banks in both locations over time. Therefore, it is likely that the observed bed and bank scour and deposition was occurring naturally within the monitoring period and was not a result of drawdown or any recent siphon release activity.

The AMP lists habitat triggers relevant to each of the habitat monitoring elements. An analysis of the habitat monitoring data against the habitat trigger values found that no trigger values were exceeded during this quarterly monitoring period.

# 3. Flora and Fauna (Aquatic)

Ongoing aquatic fauna, habitat and biomass assessments, water quality, platypus E-DNA sampling and camera trapping and fish salvage works occurred throughout the monitoring period by the project SQP. The activities completed are summarised in Table 11.

**Table 11: Aquatic Fauna and Salvage Program of Works Summary**

| Timing | Activity | AMP Requirement | Duration | Notes |
|---|---|---|---|---|
| January | Habitat site assessments upstream control sites (SMCUS01 and CU02) downstream Six Mile Creek sites (SMCDS01, SMCDS02, SMCDS04) and lake site | Section 6.3 (Table 6.1) | Quarterly | Reporting within this quarterly report |
| December | Download of platypus camera traps | Section 5.5.3 | Quarterly | |
| Various | Camera trap analysis from last quarter | Section 5 Table 5.2 | Quarterly | Last quarter data presented within this quarterly report |
| January | eDNA platypus sampling | Section 5 | Quarterly | Presented within this quarterly report |
| January – February | Fish salvage and relocation undertaken within coffer dam | Section 5 | As required | Presented within this quarterly report |

| Timing | Activity | AMP Requirement | Duration | Notes |
|---|---|---|---|---|
| January | Fish condition within lake | Section 5<br>Table 5.2 | Quarterly | Reporting within this quarterly report |

## 3.1. Fish community monitoring

During the current monitoring event a total of 15,867 fish representing 11 fish species were recorded (caught and observed) (Table 3.1). This fish catch data is represented by 8 native fish species, a single pest fish species (Mosquito fish, Gambusia holbrooki) and two native fish species that are described as translocated outside their natural range. This included Southern saratoga (*Scleropages leichardti*) and barred grunter (*Amniataba percoides*).

All fish captured during the two surveys are considered common in southeastern QLD (Pursey et al. 2004) and no threatened or listed fish species were captured. During the survey incidental catches of 29 turtles occurred within the small mesh fyke nets, these included 27 Kreft's turtles and 2 broad shell turtles.

### 3.1.1. *Small bodied fish communities*

Small-bodied fish species are a group of smaller fish that obtain maximum sized of under approximately 80mm in size. A total of 3,425 small-bodied fish species representing four species were captured during the two monitoring events.

Fly specked hardyhead (*Craterochalus stercusmuscarum fulvus*) and western carp gudgeon (Hypseleotris klunzingeri) were the most abundant representing 81% of all small-bodied fish captured. Glassfish (Ambassis agassizii) were also abundant, while crimson spotted rainbowfish (*Melanotaenia duboulayi)* were rare.

### 3.1.2. *Large bodied fish communities*

A total of 12,435 large-bodied fish species representing six species were recorded during the monitoring event (Table 3.2). Large- bodied fish species captured included bony bream (*Nematalosa erebi),* banded grunter (Amniataba percoides), freshwater catfish (Tandanus tandanus), long finned eels (Anguilla reinhardtii), Australian bass (*Percalates novemaculeata*) and saratoga (*Scleropages leichardti*).

Large-bodied fish communities were dominated by bony bream with this species accounting for 98% of all large-bodied fish caught during the two surveys. The current survey recorded higher abundances of bony bream than any of the previous surveys (including baseline sampling) (Table 3.3). Large numbers were recorded within the main basin of the lake. Large numbers of juvenile fish were present from recent spawning events. Bony bream produce large numbers of eggs (33,000-880,000) spawn in late spring to summer (Goman and Bray, 2021).

**Table 12: Fish community results from the current monitoring event**

| **FAMILY**<br>*Species* | **Common name** | **Total** |
|---|---|---|
| ***Small bodied fish species*** | | |
| **AMBASSIDAE** | | |
| *Ambassis agassizii* | Glassfish | 629 |
| **ATHERINIDAE** | | |
| *Craterochalus stercusmuscarum* | Flyspecked hardyhead | 1163 |
| **ELETRONIDAE** | | |

| FAMILY<br>*Species* | Common name | Total |
|---|---|---|
| *Hypseleotris klunzingeri* | Western carp gudgeon | 1633 |
| **MELANOTAENIIDAE** | | |
| *Melanotaenia duboulayi* | Crimson spotted rainbowfish | 7 |
| ***Large bodied fish species*** | | |
| **ANGUILLIDAE** | | |
| *Anguilla reinhardtii* | Long finned eel | 36 |
| **CLUPEIDAE** | | |
| *Nematalosa erebi* | Boney bream | 12,211 |
| **OSTEOGLOSSIDAE** | | |
| *Scleropages leichardti* | Saratoga | 12 |
| **PERCICHTHYIDAE** | | |
| *Macquaria novemaculeata* | Australian bass | 30 |
| **PLOTOSIDAE** | | |
| *Tandanus tandanus* | Freshwater catfish | 24 |
| **TERAPONTIDAE** | | |
| *Amniataba percoides* | Barred grunter | 122 |
| ***Pest fish species*** | | |
| **POECILIIDAE** | | |
| *Gambusia holbrooki* | Mosquito fish (not included) | 7 |
| ***Turtles*** | | |
| **CHELIDAE** | | |
| *Chelodina expansa* | Broad shell turtle | 2 |
| *Emydura Krefftii* | Krefft's turtle | 27 |
| Total fish catch | | 15,867 |
| Small-bodied fish | | 3,425 |
| Large-bodied fish (excluding bony bream) | | 224 |
| Turtle catch | | 29 |

### 3.1.3. *Fish communities over time*

A summary of fish communities recorded over time is presented in Table 12 A total of 17 fish species have been recorded in Lake Macdonald during all surveys and fish salvage events. This has included 13 native fish species, one translocated native fish species and two pest fish species.

During all four monitoring events a total of 51,857 fish were recorded (caught and observed). The catch data from each survey has been standardised and converted to catch per unit effort for both electrofishing and fyke netting. This data indicates the following:

- Small-bodied fish communities (as indicated by the small mesh fyke net catches) are highly abundant within lake Macdonald. Catches of small-bodied fish have been variable over time but have generally increased since drawdown.
- Monitoring indicates that flathead gudgeons and rainbowfish populations have declined since the lake drawdown. While other fish species have increased in numbers (including fly-specked hardyhead, carp gudgeons and glassfish). Lake habitats have changed from being macrophyte dominant (combomba) to

where aquatic plants are predominantly absent. This would have implications for fish species such as rainbowfish that rely mostly on aquatic plants to for egg laying and reproduction (Goman and Bray, 2022).

During the current survey high abundances of bony bream, Australian bass and saratoga were recorded.

A total of 15,874 fish representing 12 fish species were recorded during the monitoring event using boat electrofishing and fyke netting.

Monitoring of small-bodied fish communities has shown that numbers of this group of fish have dropped this quarter. However this group of fish are still highly abundant within Lake Macdonald and the current data is not a concerning trend.

Over time catches of large-bodied fish has been variable, recorded abundance of bony bream have increased while the other species have been variable between surveys.

Fish condition scores were calculated for selected large-bodied fish species. The condition of most species increased during this monitoring period and have returned to baseline condition.

Table 13 displays a summary of electrofishing and fyke net data collected during baseline and all monitoring events. (T) indicates translocated fish species. A single Mary River cod was recorded in fish salvage data and included in this table. A single lungfish was captured (and released at the capture location) during the turtle survey and included in data summary. For context lake drawdown and changes to lake habitats occurred in June 2025.

**Table 13: Fish Communities Capture - summary to date**

| Fish species | Baseline December 24 | Survey 1 August 25 | Survey 2 November 25 | Survey 3 January 26 | Total |
|---|---|---|---|---|---|
| ***Small-bodied fish species*** | | | | | |
| Carp gudgeon | 976 | 3,616 | 1,360 | 1633 | 7585 |
| Crimson spotted rainbowfish | 51 | 0 | 5 | 7 | 63 |
| Flathead gudgeon | 7 | 0 | 0 | 0 | 7 |
| Flyspecked hardyhead | 2,732 | 4,106 | 2,326 | 1163 | 10,327 |
| Glassfish | 2,660 | 600 | 1,276 | 629 | 5,165 |
| Purple spotted gudgeon | 2 | 0 | 0 | 0 | 2 |
| ***Large-bodied fish species*** | | | | | |
| Australian bass | 3 | 15 | 13 | 30 | 61 |
| Banded grunter | 223 | 257 | 42 | 122 | 644 |
| Boney bream | 3,886 | 453 | 10,509 | 12,211 | 27,059 |
| Freshwater catfish | 57 | 26 | 8 | 24 | 115 |
| Long finned eel | 104 | 26 | 31 | 36 | 197 |
| Lungfish | 0 | 0 | 0 | 1 | 0 |
| Mary River cod (T) | 1 | 0 | 0 | 0 | 1 |
| Southern saratoga | 13 | 2 | 3 | 12 | 30 |
| Spangled perch | 0 | 0 | 2 | 0 | 2 |
| ***Pest fish species*** | | | | | |
| Mosquitofish | 529 | 0 | 23 | 7 | 559 |
| Platy | 71 | 0 | 0 | 0 | 71 |
| **Total catch (EF and fyke)** | **11,243** | **9,102** | **15,609** | **15,903** | **51,857** |
| Fish per 100 EF seconds | 35 | 67 | 134 | 196 | 108 |
| Fish per fyke net | 383 | 717 | 692 | 325 | 529 |
| Recorded native diversity | 12 | 9 | 11 | 9 | 13 |

## 3.2. Fish Condition

Length and weight data for four large bodied species are presented within Table 14. The fish species used in this analysis represent a variety of trophic levels within the lake. For example, both bass and saratoga are euryphagic carnivores, bony bream are detritivore / algivores and banded grunter are benthic omnivores (Pusey et al., 2004). Having a variety of trophic levels in this analysis is relevant to assessing the overall health and condition of the lake fish community.

Length and weight data for four large bodied species as well as the Fulton's condition factor (K) (Fulton's Condition Factor (K) is a numerical value that indicates the health and wellbeing of fish, providing insights into it fat reserves and overall condition). The results are presented within Table 14. Higher condition scores (>1.2) indicate that fish are in better condition with higher energy reserves, as a result of a good food supply, suitable water quality and environmental conditions. Lower values (<0.8) may indicate poor growth conditions, stress or that the fish is in a post spawning condition. A value of 1.0 generally represents normal fish condition.

Results in Table 14 include the baseline data and the results of each subsequent monitoring event. So that fish condition can be assessed over time. The Fulton condition factor data scores and length weight analysis showed the following trends:

- Bass have a relatively restricted size range within Lake Macdonald, as they have not been stocked since 2018 and the bass in the lake are individuals leftover from when stocking was active. The condition of bass has generally increased since lake drawdown, although condition dropped during the current monitoring period. Despite this, visual observations indicate that bass were healthy and still in good condition.
- A relatively small sample size was available for saratoga with mostly larger fish being present in the catch data. The condition of saratoga improved during this monitoring period. Large number of bony bream and small bodied fish are present in the dam providing abundant prey for saratoga.
- A large range of bony bream sizes were presented within the catch data. The condition of Bony bream has increased from the previous monitoring period and returned to baseline conditions.
- Relatively small sample sizes of banded grunter were available during this monitoring period. The condition of banded grunter has increased from the previous monitoring period and returned to baseline conditions.

**Table 14: Mean, standard error (S.E.), minimum (min.) and maximum (max) length, weight and condition of fish captured from Lake Macdonald. Weight data on bony bream focussed on larger fish >100mm.**

| Species | Sample size | Length (mm) | | Weight (g) | | Fulton's condition factor |
|---|---|---|---|---|---|---|
| | | Mean (±S.E.) | Min. - Max. | Mean (±S.E.) | Min. - Max. | |
| *Baseline data* | | | | | | |
| *Australian bass* | 35 | 375 (±5) | 300-460 | 1,039 (± 41) | 735-1112 | 1.91 (±0.14) |
| *Saratoga* | 9 | 625 (±24) | 400-725 | 2645 (±363) | 1040-4648 | 0.98 (±0.1) |
| *Bony bream* | 339 | 137 (±3) | 32-390 | 72 (±7) | 0.5-1055 | 1.67 (±0.33) |
| *Banded grunter* | 79 | 115 (±2) | 16-166 | 33 (±2) | 8-100 | 1.96 (±0.31) |
| *Monitoring event 1* | | | | | | |
| *Australian bass* | 25 | 416 (±7) | 340-494 | 1500 (±85) | 786-2760 | 2.03 (±0.15) |
| *Saratoga* | 0 | - | - | - | - | - |

| Species | Sample size | Length (mm) | | Weight (g) | | Fulton's condition factor |
|---|---|---|---|---|---|---|
| | | Mean (±S.E.) | Min. - Max. | Mean (±S.E.) | Min. - Max. | |
| *Bony bream* | 180 | 143 (±4) | 65-410 | 87 (±11) | 6-1350 | 1.86 (0.33) |
| *Banded grunter* | 20 | 128 (±5) | 85-165 | 44 (±5) | 10-85 | 1.92 (0.17) |
| *Monitoring event 2* | | | | | | |
| *Australian bass* | 12 | 427(±11) | 352-494 | 1590 (±146) | 770-2760 | 1.98 (±0.15) |
| *Saratoga* | 19 | 634 (±15) | 504-740 | 2820 (±285) | 1210-4020 | 1.06 (±0.23) |
| *Bony bream* | 266 | 107 (±3) | 28-305 | 31 (±4) | 0.5-440 | 1.59 (0.32) |
| *Banded grunter* | 31 | 117 (±4) | 71-151 | 31 (±3) | 8-60 | 1.75 (±0.26) |
| *Monitoring event 3* | | | | | | |
| *Australian bass* | 25 | 400(±5) | 345-445 | 1200 (±48) | 728-1705 | 1.48 (±0.02) |
| *Saratoga* | 3 | 541 (±81) | 419-696 | 1800 (±902) | 657-3582 | 2.03 (±1.1) |
| *Bony bream* | 197 | 98 (±3) | 45-292 | 26 (±4) | 3-354 | 1.74 (0.02) |
| *Banded grunter* | 15 | 106 (±5) | 72-140 | 25 (±3) | 6.5-51 | 1.94 (±0.05) |

## 3.3. Turtle monitoring

Project requirements for turtle monitoring are set out in the Adaptive Management Plan (AMP) for the Lake Macdonald (Six Mile Creek) Dam Improvement Project (SMEC, 2025). One of the monitoring requirements listed within the AMP is to monitor turtle communities during the construction phase of the project. This requirement is outlined in Table 5.3 of the AMP and include:

*Bi-annual turtle monitoring of turtle condition in lake using length weight measurements compared to baseline and evaluation survey data.*

This section of the report summarises the second turtle monitoring events undertaken between 16 and 20 February 2026. Location and spatial distribution of sampling sites are shown in Figure 12.

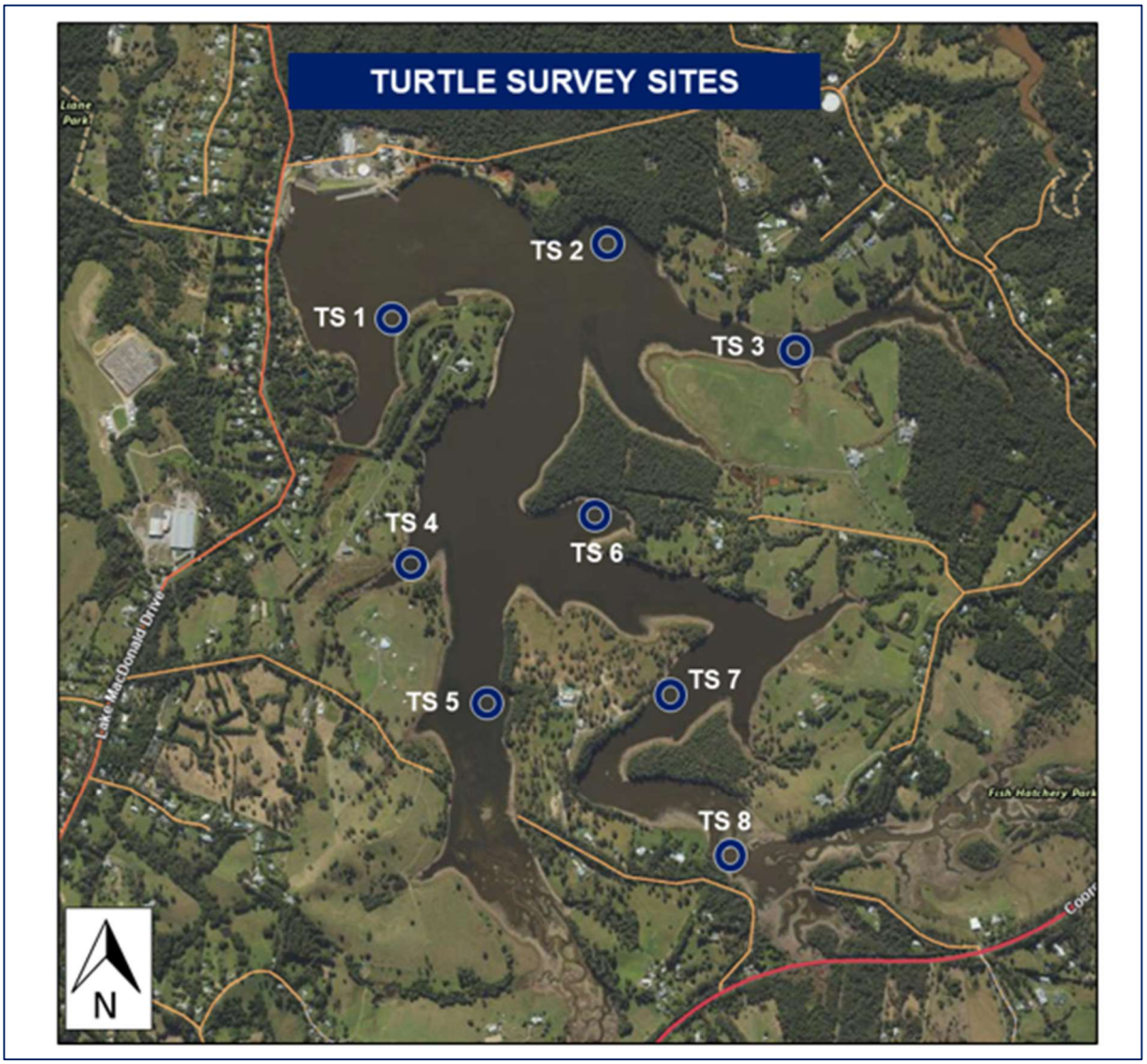



**Figure 12: Turtle monitoring location sites**

**Table 15: Turtle % total catch and species**

| Site | Habitat type | Abundance (% Total Catch) | | | Total |
|---|---|---|---|---|---|
| | | *E. m. krefftii* | *C. expansa* | *W. latisternum* | |
| 1 | Main basin | 39(9) | 11(8) | 0 | 50 |
| 2 | Main basin | 34(8) | 9(7) | 0 | 43 |
| 3 | Backwater | 27(6) | 7(5) | 0 | 34 |
| 4 | Backwater | 66(15) | 15(11) | 0 | 81 |
| 5 | Backwater | 49(11) | 32(23) | 0 | 81 |
| 6 | Backwater | 55(13) | 20(15) | 0 | 75 |
| 7 | Flooded tributary | 103(24) | 30(22) | 2(66) | 135 |
| 8 | Flooded tributary | 55(13) | 13(9) | 1(33) | 69 |
| Turtles / site | | 54 | 9 | 0.4 | 71 |
| **Totals** | | **428 (75)** | **137(24)** | **3(1)** | **568** |

During the 5-day survey a total of 568 turtles (142 turtles / overnight fyke net set) were recorded. This is the highest turtle abundance that has been recorded during previous surveys within the dam. For example:

- During this current 5-day survey a total of 568 turtles were captured at a rate of 8.9 turtles per individual fyke net set.
- During the previous monitoring quarter 4-day survey in October 2025 survey a total of 232 turtles were captured at a rate of 4.8 turtles per individual fyke net set.
- During the 5-day baseline event a total of 432 turtles were captured at a rate of 6.8 turtles per individual fyke net set.

The turtle catch data was represented by three turtle species, of these *Emydura macquarii krefftii* (Krefft's river turtle) were the most abundant species captured (428 individuals). Kreft turtles were captured within all habitat types but were most abundant within the backwater and flooded tributary habitats Broad-shelled River turtle (*Chelodina expansa*) were common with 137 individuals captured. *C. Expansa* were captured within all habitat types but were most abundant within the backwater habitats.

In comparison, saw-shelled turtles (*Wollumbinia latisternum*) were relatively rare with only three individuals being captured. These were caught in the upper flooded tributary sites. No threatened turtle species were recorded during this survey.

Table 16 shows the Fulton's condition factor that has been calculated for to each of the turtle species. The condition of both Kreft and broad shell turtles was very similar between the previous two survey events. Suggesting that environmental conditions within the lake have provided suitably favourable conditions for turtles. Low numbers of saw shell turtles were captured during all the survey events preventing accurate condition factor to be calculated and monitored.

**Table 16: Mean, standard error (S.E.), minimum (min.) and maximum (max) length, weight of turtles captured from Lake Macdonald.**

| Species | Count | Length (mm) | | Weight (g) | | Condition |
|---|---|---|---|---|---|---|
| | | Mean (±S.E.) | Range | Mean (±S.E.) | Range | |
| ***Baseline condition - November 2024*** | | | | | | |
| **Kreft** | 395 | 199 (±2) | 81 – 275 | 1031 (±25) | 80 – 2345 | 1.19 (±0.2) |
| **Broad shell** | 94 | 259 (±4) | 105 – 316 | 2137 (±73) | 120 – 3950 | 1.17 (±0.1) |
| **Saw shell** | 1 | 241 | - | 1860 | - | - |
| ***Monitoring event 1 - October 2025*** | | | | | | |
| **Kreft** | 395 | 186 (±4) | 81 – 275 | 704 (±39) | 80 – 2345 | 0.92 (±0.1) |
| **Broad shell** | 94 | 275 (±6) | 88 – 346 | 2037 (±73) | 70 –3490 | 0.90 (±0.1) |
| **Saw shell** | 10 | 141 (±23) | 54 - 268 | 1860 | 30 - 1910 | 1.16 (±0.1) |
| ***Monitoring event 2 - February 2026*** | | | | | | |
| **Kreft** | 428 | 187 (±2) | 75 – 270 | 697 (±21) | 66 –2182 | 0.93 (±0.1) |
| **Broad shell** | 137 | 266 (±5) | 106 – 374 | 1839 (±76) | 166 –4387 | 0.89 (±0.1) |
| **Saw shell** | 3 | 183 (±33) | 145 - 250 | 744 | 275 - 1614 | - |

Turtle condition scores were calculated for the two most common turtle species. The condition of broad shell and Kreft turtles has not changed since the previous monitoring event.

Previous concerns over a loss of turtle body condition were likely due to differences in the measurements taken between the baseline survey and the most recent surveys. Data validation will be undertaken to verify the differences during the next monitoring event in November 2026.

*Note ** In the previous quarterly monitoring report concerns were raised regarding the health of turtles and a deterioration of turtle condition between the baseline survey event and monitoring event 1. Examination of field techniques between these events has revealed that different carapace measurements were used. During baseline surveys straight carapace measurement (SCM) was used. During the last two monitoring events curved carapace measurement was used (CCM). This is likely to be the reason for the differences in data between the two events. During the next monitoring event in November 2026 both measuring techniques will be used to verify previously collected data on turtle health.*

## 3.4. Platypus monitoring

The AMP sets out the project requirements to undertake platypus surveys during the construction phase of the project.

The baseline platypus surveys determined the known and likely locations of platypus burrows and platypus activity within the lake and tributaries. The baseline surveys were undertaken to assist with management of this species, during the dewatering and construction phases of the project.

At the time of previous monitoring report, the initial dewatering phase of the project has been completed, occurring over four-week period in June 2025. At this time there were no observable signs of impacts to platypus, their habitat or their behaviour. As the project has entered into the construction phase, the quarterly platypus monitoring has commenced.

### 3.4.1. *eDNA sampling and analysis*

Environmental DNA (eDNA) methods are being used routinely to monitor aquatic animals including fish, amphibians and mammals across waterways, estuaries and wetlands throughout Australian catchments. eDNA surveys can be a highly sensitive and cost-effective technique for determining the presence of aquatic species (and those species around an aquatic environment) by detecting species-specific DNA in the water. eDNA surveys can be used to detect a variety of targeted species using a qPCR approach. This method has been repeatedly demonstrated to be more sensitive than traditional methods, particularly for sparse, elusive, or cryptic species, including platypuses (Lugg et al. 2018). EnviroDNA from Victoria have been chosen as a project partner for undertaking eDNA lab work for the project.

Water samples were collected on 19 January 2026 following the sampling protocol provided by EnviroDNA.

A total of 66 samples at the 22 sites were sampled for platypus DNA. Out of the 66 samples analysed for the presence of platypus DNA, four (4) samples returned a positive result (2-3 positive qPCRs), and an additional 13 samples returned an equivocal result (1 positive qPCR). No platypus DNA was detected in the remaining 49 samples.

There appears to be no significant change to the distribution of the detections, which again were mostly clustered in two upstream tributaries of Lake Macdonald with no detections in the lake zone. Results for this period are similar to previous results with platypus occurrence contracted to the more upstream sites surveyed. This may be due to seasonal behaviour – with platypus being less mobile after the breeding season (EnviroDNA 2025).

Figure 13 shows the locations of the sites that returned positive or equivocal DNA results for the platypus during this quarterly monitoring period with a heat map of the results indicating hotspots for platypus detections.

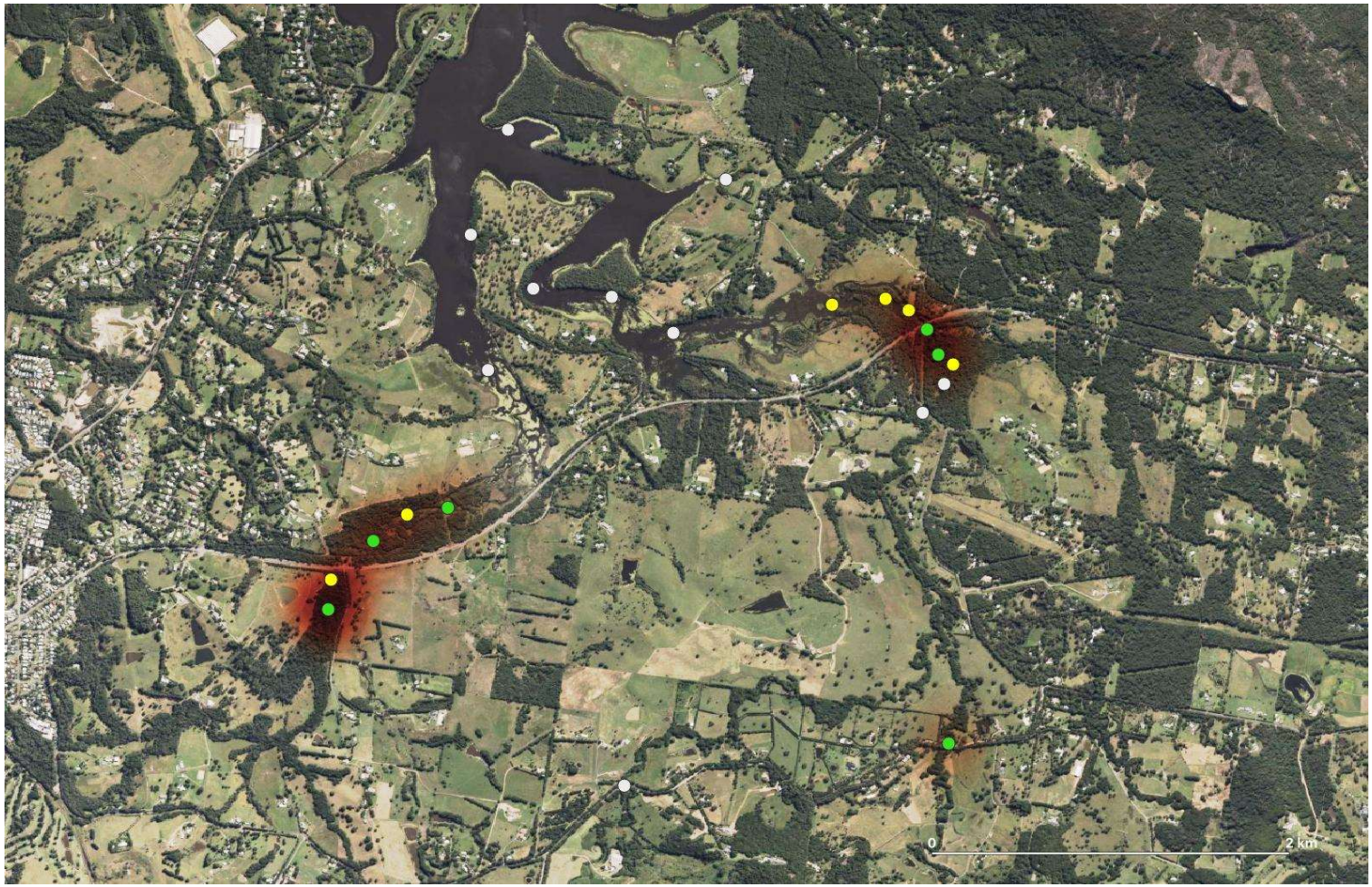



**Figure 13: Map of sites sampled in January 2026 and analysed for platypus DNA around Lake MacDonald, QLD, with the results reflected by colour (white = negative, yellow = equivocal, green = positive)**

### 3.4.2. *Active platypus burrow searches*

No active platypus or burrow searches were conducted for this monitoring period. This will be undertaken in response to detected changes in activity or presence following camera trap and eDNA analysis.

While no active searches were undertaken it is relevant to note that no confirmed platypus burrow sightings have been made during any of the eDNA or camera trapping activities

### 3.4.3. *Camera trapping*

Eight camera traps (Browning DCL Pro Nano) were installed in September and retrieved in December 2025. This included:

- A review of 63 time lapse videos ( A representative sample of 32% of the total video captured was viewed)
- 14022 motion trigger images (32% of the motion trigger images captured).

These were analysed and three platypus were recorded during this period.

*Note** Platypus camera trap data review and reporting is delayed and reviewed one quarter behind due to the length of time taken to review thousands of videos and photos from all cameras and get it into the current reporting period.*

During the previous quarter, when the camera trap data was collected low flows were prevalent and no significant flow events (i.e. above bank) occurred during the monitoring period. However, small baseflows have been observed in both Six Mile and Cooroy Creek during the camera trap inspections.

Over the previous quarter, three camera traps across both systems detected platypus activity, with the most detections in Cooroy Creek. Overall, the number of platypus detections is lower than previous periods. This may be due to the number of camera traps actively capturing images being reduced through faults or less activity during the period. This will be reviewed in the coming monitoring period (Table 5.2).

Total detections for Cooroy Creek during the previous quarter was one (1), which is notably less that the quarter before fourteen (14). A total of two (2) detections were made in Six Mile Creek over the same period, again this is less than the last period seventeen (17).

It is relevant to note that during the previous quarter, Camera 7 has been stolen and not yet replaced and Cameras 3 and 10 suffered faults or loss of charge that meant no images were saved.

Notwithstanding the above, the monitoring results obtained by the cameras suggest platypus activity in both systems is lower during this period September to October.

The camera trap results indicate that there may be some reduction in platypus movements within both creek systems. It is possible that this is related to the time of year, with less longitudinal movement occurring outside of the breeding season.

This monitoring period covers the fourth eDNA survey, in the upper tributaries. The eDNA results indicate that it is likely that a low-density population of platypus occur in the study area and most of this activity is now concentrated in the upper reaches. The eDNA results don't seem to suggest any significant change in the trends of where platypus DNA is being detected, nor the number of positive or equivocal results.

The results of the eDNA analysis and the camera trapping whilst can't be directly compared given the different survey periods, indicate that platypus continues to occupy similar parts of the waterways between baseline and construction periods. The eDNA results indicate that there is a possible upstream movement of the species. However, further baseline monitoring would have been required to help determine pre construction patterns and if

this natural variability in platypus movement and occurrence in these systems, is natural or is a result of lake drawdown.

Further review and analysis of results will be undertaken in the next period to assess the level of activity detected by camera trapping. Additionally, there will be at least one targeted visual assessment conducted to search for platypus activity in both systems.

## 3.5. Fish salvage

One fish salvage event occurred during this monitoring quarter within the stilling basin area over 6 days in January 2026.

Three techniques were used for the capture of fish and turtles from the stilling basin. These included boat electrofishing, fyke netting (large mesh and small mesh) and turtle trapping. Boat electrofishing is a technique that uses pulsed direct current (DC) to stun and capture fish. Boat electrofishing is undertaken using a purpose-built vessel that contains a generator powered Grassl electrofishing unit (EL65 II).

### 3.5.1. *Stilling Basin Fish Salvage*

A fish salvage was undertaken in the coffer dam area over a six-day period between 22 January 2026 and 11 February 2026, Refer to table 17. The construction of the sheet pile coffer dam above the dam spillway has created an enclosed body of water that had isolated fish and turtles that were present in this area. Fish salvage was required for the next stage of works in this area to progress and to remove the isolated fish and turtles.

During the salvage operation fyke nets and turtle traps were set during the day and checked the following morning prior to electrofishing activities. Nets contained polystyrene floats to assist any air breathing fauna captured. During the salvage operation all captured fish and turtles were immediately transferred to a live well located on the electrofishing vessel. Aquatic fauna were then regularly transferred into a 1000 litre container and lifted via crane onto the coffer dam wall, counted and released upstream into Lake Macdonald.

A total of 10,023 fish and 39 turtles were captured during the fish salvage operation within the stilling basin in January 2026. The capture total included 5,748 small-bodied fish, 4,274 large-bodied fish and a single pest fish (Refer to Table 17) The fish salvage event was effective, and fish were released in a healthy condition. No threatened fish or turtles were captured during the event. Two deceased catfish were observed deceased in the stilling basin in the days following the salvage event and was likely as a result from electrofishing stress.

**Table 17: Summary of fish salvage from stilling basin**

| **FAMILY**<br>*Fish species* | **Common name** | **Total** |
|---|---|---|
| ***Small-bodied fish species*** | | |
| **AMBASSIDAE** | | |
| *Ambassis agassizii* | Olive perchlet | 3,331 |
| **ATHERINIDAE** | | |
| *Craterochalus stercusmuscarum fulvus* | Flyspecked hardyhead | 1,864 |
| **ELETRONIDAE** | | |
| *Philynodon macrostomas* | Dwarf flathead gudgeon | 1 |
| *Mogurnda adspersa* | Purple spotted gudgeon | 1 |
| *Hypseleotris sp.* | Carp gudgeon | 527 |

| | | |
|---|---|---|
| **MELANOTAENIIDAE** | | |
| *Melanotaenia duboulayi* | Rainbowfish | 24 |
| ***Large-bodied fish species relocatable*** | | |
| **ANGUILLIDAE** | | |
| *Anguilla reinhardtii* | Long finned eel | 77 |
| **CLUPEIDAE** | | |
| *Nematalosa erebi* | Boney bream | 3,869 |
| **PERCICHTHYIDAE** | | |
| *Macquaria novemaculeata* | Bass | 2 |
| **PLOTOSIDAE** | | |
| *Tandanus tandanus* | Freshwater catfish | 84 |
| **TERAPONTIDAE** | | |
| *Amniataba percoides* | Banded grunter | 242 |
| **Turtles** | | |
| *Emydura macquarii krefftii* | *Kreft turtle* | 36 |
| *Chelodina expansa* | *Long neck turtle* | 3 |
| ***Pest fish species*** | | |
| **POECILIIDAE** | | |
| *Xiphophorus maculatus* | Platy | 1 |
| Total fish | | **10,023** |
| Total turtles | | 39 |

## 3.6. Aquatic plant cover

As per baseline data and data collected during initial project surveys (FRC environmental, 2018), low abundances of submerged aquatic macrophytes were found within the riverine survey sites. Some submergent aquatic plants were recorded during the quarterly monitoring period. These included:

- Water lilies (Nymphiodes sp.) with 1% cover were recorded within SMCD01.
- No cabomba was observed within the downstream Six Mile Creek sites. The abundance of cabomba has greatly reduced within the main area of the lake, reducing the downstream travel of this plant into Six Mile Creek.
- Since the last monitoring event the dam edges have been rapidly colonised by native aquatic plants and terrestrial grass weeds. The native emergent plants were observed that included Persicaria spp, Cyperacia spp, frogsmouth (Philydrum lanuginosum), and water primrose (Ludwidia peploides).

Mat rush (*Lomandra sp.*) was still common within all creek habitat sites and remained the same as last monitoring quarter with 23% bank coverage to 60% coverage. No change to the abundance of this plant was observed during monitoring. The mat rush is common emergent terrestrial riparian plant that form a valuable component of the riparian zones of many rivers, stabilising soils and banks and preventing erosion.

## 3.7. Riffle habitats

There has been no significant change to these habitats during this monitoring period.

## 3.8. Bank erosion

Bank erosion was observed during the baseline survey within two of the survey sites including SMCD01 and SMCD02. During this monitoring period no new areas of erosion were observed within any of the monitoring sites.

## 3.9. Instream wood habitat

To document instream wood habitat (IWH) the volume ($m^2$) the length (m), diameter (m) and complexity of individual timber pieces were recorded. The results from the baseline and lake drawdown wood calculations found that sites located within Six Mile Creek below lake Macdonald had the greatest timber loadings (SMCD04, SMCD02 and SMCD01), while less timber was found above the dam in the control sites (SMCUS01 and CU02).

The latest monitoring event documented no obvious changes to IWD habitats within the monitoring sites. As per previous events timber loads within the creek appear stable and highly imbedded within bed and banks of the creek.

## 3.10. Bed substrata

No change was observed during this monitoring period

# 4. Flora & Fauna (terrestrial)

No vegetation clearing was completed in this monitoring period. No interactions with rare or threatened species were noted and no animal breeding places were tampered with or disturbed during this reporting period also.

Two days of weed survey and treatment was undertaken by the project ecologist. No EVNT or Category 1 weeds were observed during these surveys.

There were no incidents with terrestrial fauna throughout the reporting period.

# 5. Noise & Vibration

Noise and Vibration is monitored at the locations shown in Figure 9.


**Figure 14: Noise and Vibration Monitoring Locations**

## 5.1. Noise

Noise monitoring has been conducted in order to assess compliance against the acoustic quality objectives (Table 18). Noise and Vibration is monitored at the locations shown in Figure 9.

As per the Environmental Protection (Noise) Policy 2019, Data is measured against the $LA_{eq}$ objectives of: $LA_{eq}$,adj,1hr.

$LA_{eq}$ stands for A -weighted equivalent continuous sound level. It represents the constant noise level that would produce the same total sound energy as the fluctuation noise levels measured over a specified time period. In simpler terms, $LA_{eq}$ provides an average noise level expressed in decibels (dB) that accounts for varying noise intensity over times.

The vibration monitor and noise loggers were placed at a residential property on Lake Macdonald Drive, the vibration monitor was placed at a property boundary adjacent to Lake Macdonald Drive. The two noise loggers were placed on another residential property with one placed inside the property and another on the property façade (Refer to Figure 14).

Data collected from the project noise loggers during the monitoring period continues to show exceedance of the acoustic quality objectives throughout the construction workdays as well as weekends when no construction activities are occurring. The Average $LA_{eq}$ shows a pattern of dropping to its lowest recorded point generally in the early morning which is when road and external traffic is thought to be the lowest.

Table 18 below shows the acoustic quality objects. These objectives are directly from the Environmental Protection (Noise) Policy 2019 (Environmental Protection Act Qld 1994). They are not representative of the surrounding environment and do not take into consideration any existing noise, such as traffic.

**Table 18: Acoustic Quality Objectives**

| Sensitive Receptors | Time of Day | Acoustic Quality Objective (dB(A)) | | | Environmental Value |
|---|---|---|---|---|---|
| | | $LA_{eq}$,adj,1hr | $LA_{10}$,adj,1hr | $LA_{1}$,adj,1hr | |
| Residence (for outdoors) | Daytime and evening | 50 | 55 | 65 | Health and well-being |
| Residence (for indoors) | Daytime and evening | 35 | 40 | 45 | Health and well-being |
| | Night-time | 30 | 35 | 40 | Health and wellbeing, in relation to the ability to sleep |

Attended monitoring was conducted across the reporting period to collect data from different project activities which can be found in Table 16. During each attended monitoring sample, the noise attendant takes continuous notes of what activities are occurring throughout the 15-minute recording period and the table breaks this down as a % of time across the monitoring period. Attended monitoring is measured in 15-minute intervals. While piling works did increase the LAeq during the period when it occurred, these activities were typically short in duration, usually occurring for short intervales of 1-3 minutes at a time followed by 5-10 minutes of respite. Attended monitoring was often scheduled to coincide with piling events to monitor the noise contributed by both the impact and vibration hammer. While trucks produced noticeably elevated noise levels periodically, their contribution was less frequent than residential traffic, noise emissions from passing cars, particularly larger 4wd's or vehicles with trailers that were travelling at or above the 60km/h speed limit often reached high dBA's similar to those produced by project related trucks. The project baseline of 55dBA was measured in 15-minute intervals in 2018 and is therefore a better metric to compare against rather than the objectives outlined in Table 19.

Attended noise monitoring should be conducted whenever a confirmed noise complaint is received. Although noise has been raised as an issue from local residents, no noise complaints have been able to be confirmed with the corresponding noise data and scheduled project activities.

**Table 19: Attended noise monitoring results**

| Date | Location | Construction Event | Main traffic Sources | % of time active | $LA_{eq}$ 15minutes) (dBA) | Project Baseline (dBA) | Comments | No. of Project Vehicles | No. of non-project vehicles (residential traffic) |
|---|---|---|---|---|---|---|---|---|---|
| 5/12/2025 10:04am | Location 2 | Rock bag placement using a crane, and truck movement to the LHE. Lake Macdonald Residential Traffic | Crane on LHE | 10 | 49.9 | 55 | Non-site related traffic was the predominant noise source during the monitoring period. Construction noise did not have a significant contribution including truck and crane movement on site. A truck was noted from a private/residential property and was not site related. | None | 30 |
| | | | Vehicle and Crane movement on site | 15 | | | | | |
| | | | Lake Macdonald Residential traffic | 80 | | | | | |
| 9/12/2025 10:23am | Location 2 | Truck and dogs moving rock bags to the LHE and Lake Macdonald Residential Traffic | Lake Macdonald Residential traffic | 80 | 58.8 | 55 | Lake Macdonald traffic was the predominant noise source during the attended monitoring period. | 4 Light Vehicles | 38 |
| | | | Trucks transporting rock bags | 60 | | | | 12 Trucks | |
| | | | Truck idling at site entrance | 20 | | | | | |
| 10/12/2025 12:45pm | 17 Hamilton Road | Lake Macdonald and Highland Drive Residential Traffic. Road roller on cofferdam | Lake Macdonald Residential Traffic | 40 | 51.1 | 55 | Main noise source was bird song as well as traffic from lake Macdonald drive and Highlander Drive throughout the attended monitoring. A road roller was audible on occasion. | None | 20 |
| | | | Highlander drive traffic | 20 | | | | | |
| | | | Road Roller | 5 | | | | | |
| 10/12/2025 13:08pm | Location 2 | Lake Macdonald Residential Traffic Truck and Dogs carting | Roller on Cofferdam | 30 | 53.6 | 55 | Non project related Lake Macdonald traffic was the predominant noise source | 7 Trucks | 24 |
| | | | Trucks carting rock bags | 50 | | | | | |

| Date | Location | Construction Event | Main traffic Sources | % of time active | $LA_{eq}$ 15minutes) (dBA) | Project Baseline (dBA) | Comments | No. of Project Vehicles | No. of non-project vehicles (residential traffic) |
|---|---|---|---|---|---|---|---|---|---|
| | | rock bags<br>Roller on Cofferdam | Lake Macdonald Residential traffic | 80 | | | throughout the monitoring period. | | |
| 10/12/2025 14:21pm | Location 2 | Lake Macdonald Residential Traffic<br>Tipper trucks transporting rock bags.<br>Piling activity using impact hammer | Lake Macdonald Residential traffic | 80 | 61.8 | 55 | Impact hammer used on Right Hand Embankment for short periods with respite in between. During the attended monitoring the piling occurred for 3 minutes followed by 5 minutes respite, followed by a further 2 minutes of piling before finishing. Lake Macdonald traffic a significant noise source even when impact hammering is occurring. | 1 Light vehicles | 24 |
| | | | LMDIP trucks carting rock bags | 30 | | | | 11 Trucks | |
| | | | Piling activity - impact hammer | 50 | | | | | |
| 16/01/2026 13:56pm | Location 2 | Lake Macdonald Residential Traffic<br>LMDIP RHE site work<br>Drilling for inclinometer | Piling - Impact Hammer | 20 | 55.4 | 55 | Piling was noted but was quieter as it was on the opposite side of the cofferdam on the Right Hand Embankment. Lake Macdonald Residential traffic had the largest noise contribution during the attended noise monitoring period | None | 40 |
| | | | Machinery / Excavator | 10 | | | | | |
| | | | Lake Macdonald Residential Traffic | 80 | | | | | |
| | | | Cicadas | 20 | | | | | |
| 16/01/2026 14:13pm | Location 2 | Lake Macdonald traffic<br>LMDIP RHE site work<br>Inclinometer installation | Lake Macdonald Residential Traffic | 80 | 56.9 | 55 | Noise contribution from construction was minimal, Piling occurred using an impact hammer, with the sound being | 2 Light vehicles | 37 |
| | | | Cicadas | 30 | | | | | |

| Date | Location | Construction Event | Main traffic Sources | % of time active | $LA_{eq}$ 15minutes) (dBA) | Project Baseline (dBA) | Comments | No. of Project Vehicles | No. of non-project vehicles (residential traffic) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Drilling - Installation of inclinometers | 10 | | | higher pitched and louder at the start of the piling sheet which decreased as the pile was installed. Drilling was noted which may be due to the installation of inclinometers. Lake Macdonald Traffic was still had the highest contribution of noise | | |
| | | | Piling - Impact Hammer on RHE | 5 | | | | | |
| 19/01/2026 11:16am | Location 2 | Lake Macdonald traffic (~6m) Piling - Impact Hammer RHE (40m) Cicada (~5m) | Lake Macdonald Residential Traffic | 80 | 57.5 | 55 | Piling on RHE was louder at the beginning of each pile. dBA varied from 60-75 due to the sound variation. Reverse alarm noted, from a nearby rubbish truck. Lake Macdonald residential traffic had the highest noise contribution during the attended monitoring period | None | 24 |
| | | | Piling - Impact Hammer on RHE | 40 | | | | | |
| | | | Cicadas | 50 | | | | | |
| 21/01/2026 8:10am | Location 2 | Piling using a vibe hammer, use of excavator on LHE Lake Macdonald Residential Traffic | Piling - Vibe Hammer | 50 | 46.8 | 55 | Attended noise monitoring time period was selected to coincide with the piling. Piling occurred on the RHE so the sound wasn't as audible as when piling occurred on the LHE Lake Mac residential traffic was the predominant source of noise during the monitoring period. | None | 28 |
| | | | Excavator | 10 | | | | | |
| | | | Crane | 10 | | | | | |
| | | | Lake Macdonald Residential Traffic | 80 | | | | | |

| Date | Location | Construction Event | Main traffic Sources | % of time active | $LA_{eq}$ 15minutes) (dBA) | Project Baseline (dBA) | Comments | No. of Project Vehicles | No. of non-project vehicles (residential traffic) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | The Vibe Hammer was used twice for a total of 6min and 20sec. Each for about 3 minutes. | | |
| 28/01/2026 13:08pm | 411 Lake MacDonald Drive | Pump Generator in use, Crane Moving rock bags and trucks carting rock bags to the LHE Lake Macdonald Residential Traffic | Permanent Pump Generator | 100 | 55.5 | 55 | Attended noise monitoring of recently installed generator for the permanent pump. Noise was hard to distinguish unless surrounding construction work has ceased. Right hand embankment was blocking most of the noise travelling to sensitive receivers | 4 Light vehicles | 19 |
| | | | Crane | 15 | | | | | |
| | | | Trucks Carrying Rock Bags | 10 | | | | | |
| | | | Lake Macdonald Residential traffic | 50 | | | | | |
| 19/02/2026 12:15pm | Location 2 | Pump Generator with sound blankets attached crane placing rock bags in stilling basin and piling using the vibe hammer on the RHE Lake Macdonald Residential Traffic | Rock bag import (flatbed semi) | 20 | 59.7 | 55 | Piling was used intermittently. Truck and dog were consistently moving as well as flat beds importing rock bags. use of exhaust breaks was noted on one vehicle. Lake Mac residential traffic was a considerable contribution during the attended monitoring period, however this was reduced when compared to other monitoring periods due to the speed limit of 40km/h being imposed compared to 60km/h | 5 Light Vehicles | 23 |
| | | | Watercart washing road | 5 | | | | 7 Trucks | |
| | | | Truck and dogs inbound/outbound | 30 | | | | 1 Water cart | |
| | | | Crane unloading rock bags | 40 | | | | | |
| | | | Vibe Piling - short intervals | 30 | | | | | |
| | | | Lake Macdonald Residential Traffic | 70 | | | | | |

| Date | Location | Construction Event | Main traffic Sources | % of time active | $LA_{eq}$ 15minutes) (dBA) | Project Baseline (dBA) | Comments | No. of Project Vehicles | No. of non-project vehicles (residential traffic) |
|---|---|---|---|---|---|---|---|---|---|
| 20/02/2026 10:22am | Location 2 | Excavator placing rock near spillway, carting rock bags to the LHE, truck and dog movement from site. Lake Macdonald Residential Traffic | Rock push by excavator | 30 | 59.8 | 55 | Impact of car traffic reduced due to lowered speed limit (60-40km/h). Trucks were constantly inbound/outbound from site. Rock push below spillway was noted | 2 Light vehicles | 26 |
| | | | Rock bag transport on truck with flat bed | 45 | | | | 5 Trucks | |
| | | | Truck and dogs inbound/outbound | 30 | | | | | |
| | | | Lake Macdonald Traffic (40km/h) | 60 | | | | | |
| 25/02/2026 10:18am | Location 2 | Piling using the impact hammer, truck and dog movement inbound and outbound from site, Crane placing rock bags in the stilling basin. Lake Macdonald Residential Traffic | Piling – Impact hammer (right hand embankment) | 70 | 63.2 | 55 | Piling was the predominant noise source during the attended monitoring period. truck movement could be heard when exiting/entering site. Residential traffic remained a predominant noise source throughout the monitoring period. Piling occurred for a majority of the monitoring period (12m 30s). | 8 Trucks | 27 |
| | | | Crane placing rock bags | 50 | | | | 2 Light vehicles | |
| | | | Truck and dogs inbound/outbound | 50 | | | | | |
| | | | Lake Macdonald Traffic (40km/h) | 60 | | | | | |
| 25/02/2026 10:37am | Location 2 | Piling using the impact hammer, truck and dog movement, carting of rock bags to the LHE. Lake Macdonald Residential Traffic | Piling (Impact Hammer) | 100 | 64.9 | 55 | Piling using an impact hammer occurred for the entire duration of the attended monitoring period (15 minutes). Noise contributed by traffic was reduced as the speed limit was lowered from 60-40km/h | 10 Trucks | 23 |
| | | | Truck and dog movement (Inbound/Outbound) | 30 | | | | | |
| | | | Rock bag transport | 20 | | | | | |

| Date | Location | Construction Event | Main traffic Sources | % of time active | $LA_{eq}$ 15minutes) (dBA) | Project Baseline (dBA) | Comments | No. of Project Vehicles | No. of non-project vehicles (residential traffic) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lake Macdonald Traffic | 50 | | | | | |
| 25/02/2026 11:27am | 48 Highland Drive & 42 Highland Drive | Piling using the Impact Hammer, truck movement inbound and outbound from site, excavator moving rock on site<br>Highland Drive Traffic | Piling - Impact Hammer on RHE | 90 | 55.6 | 55 | Attended monitoring was conducted in Highland Drive during piling using the impact hammer, which occurred for the majority (90%) of the monitoring period. Piling could be heard from Highland Drive as well as Lake Macdonald traffic | 10 Trucks | 1 |
| | | | Truck Movement (Inbound/Outbound) | 30 | | | | | |

Figure 15 indicates that the noise throughout the day with the exception of between 2am and 5am is above the 50 dBA objectives. This includes almost 12 hours a day outside construction hours. Below in Figure 11 noise levels on average are less than 10dBA above targets and less than 5 dBA above baseline noise levels (55dBA). Attended noise monitoring has determined that a large portion of this is derived from non-project related traffic. It was noted that on average the highest noise levels (61dBA $LA_{eq}$) were recorded at 7pm when no construction activities were occurring. The reviewed audio recorded by the noise loggers highlighted that the cause of these exceedances was usually attributable to cicada's as well as the infrequent spikes caused by storm events.

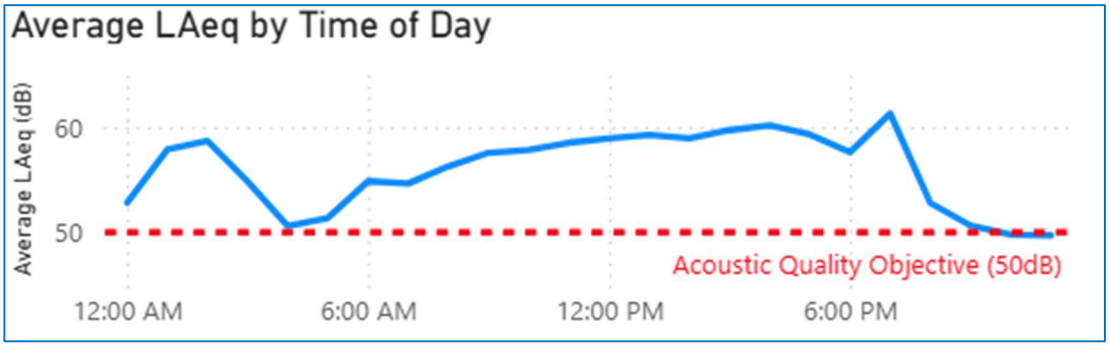



**Figure 15: Average $LA_{eq}$ - 1hr by time of day (Monday to Sunday 24-hour period)**

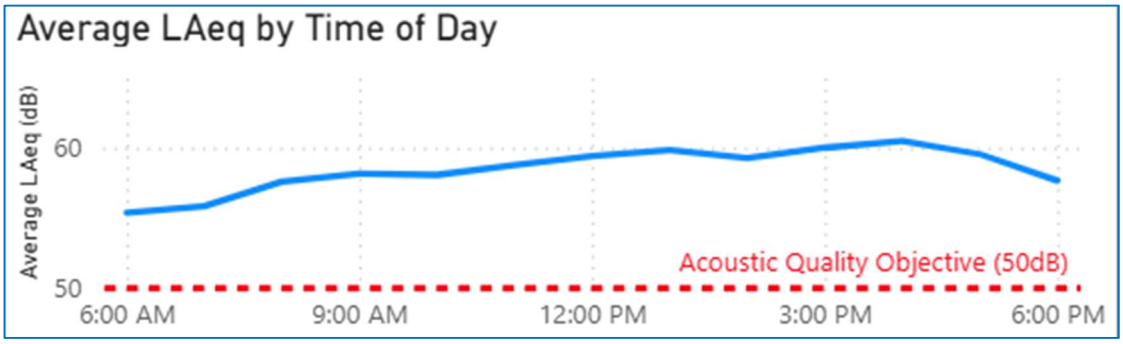



**Figure 16: Average $LA_{eq}$ - 1hr by time of day during work hours weekdays (6am-6pm Monday-Friday)**

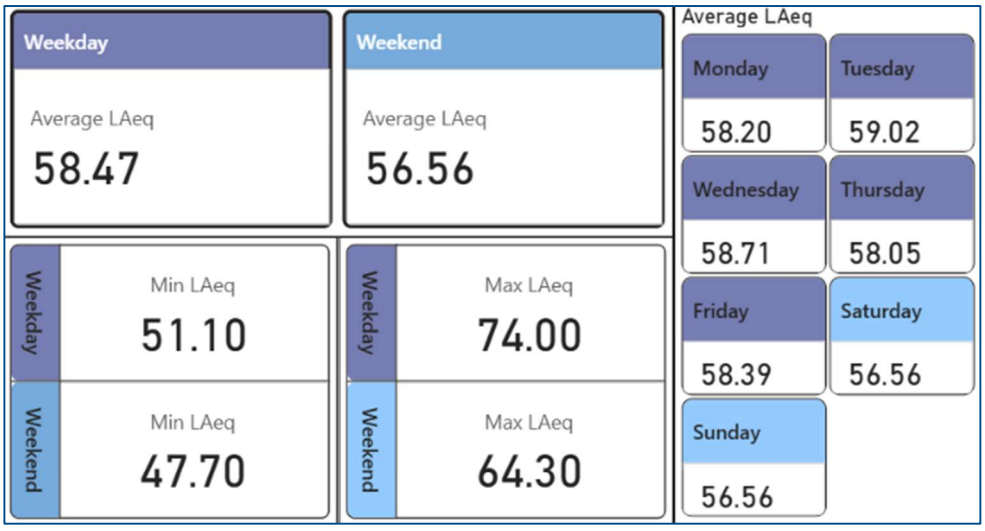



**Figure 17: Average $LA_{eq}$ - 1hr between the hours 6:30am-6:30pm**

Figure 17 shows that on average $LA_{eq}$ during construction working hours is consistently 1-10 dBA above the acoustic quality objectives including Sundays when no construction works occurred.

Figure 18 demonstrates that the target objective levels are exceeded at all times even outside of working hours.

A traffic counter is set up on Lake Macdonald Drive, directly adjacent to the project site. The counter is designed to record class 3 and above vehicles only and does not include light/short vehicles or light/short vehicles towing boats, trailers or caravans, which are considered class 1 & 2 vehicles. The Austroads vehicle classification scheme categorises vehicles based on their axle count, length and configuration.

Traffic count data for the monitoring period recorded along Lake Macdonald Drive shows that a total of 4947 class 3 and above vehicles travelled over the counter, with 1147 being directly attributed to the LMDIP project. This equates to 23.2% of all recorded vehicles for the monitoring period.

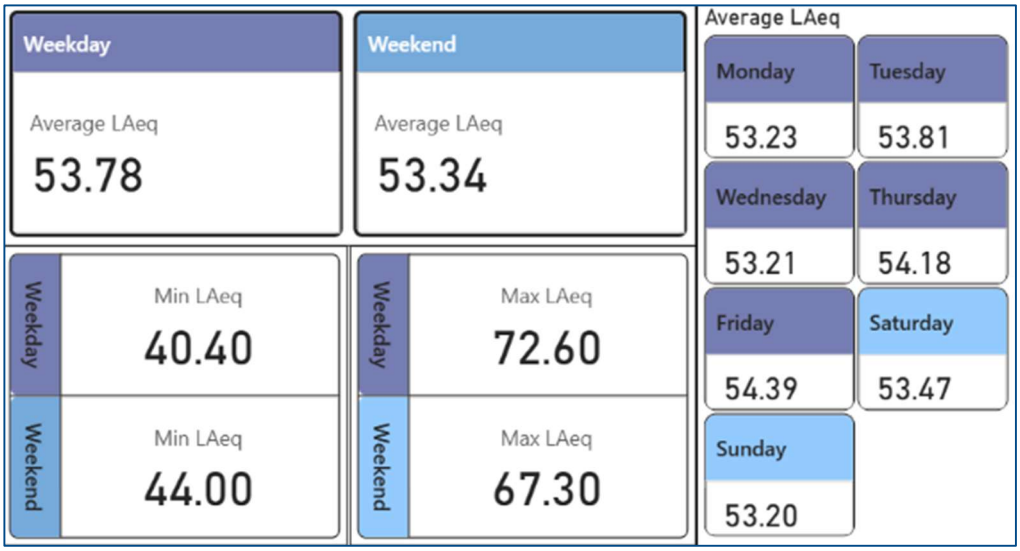



**Figure 18: Average $LA_{eq}$ across 7 days outside working hours 6:30pm - 6:30am**

## 5.2. Vibration

High vibration risk activities occurred during the monitoring period which included vibratory and hammer sheet piling on both the left- and right-hand embankment and truck and dog rock bag haulage and rock import.

Vibration is measured terms of millimetres per second or mm/s. For human comfort a target of 2mm/s is set and for structural damage of structures or dwellings 5mm/s is the target.

Location 1: Monitoring has been conducted at a residential property along Lake Macdonald Drive for the entire period of this quarter. The vibration monitor has been set up on a concrete pad which forms part of the home's slab.

During the monitoring period there was only one timeframe when a vibration exceedance was recorded. This was directly attributable to construction activities of the installation of the sheet pile. It was noted that this vibration was recorded for less than 30 seconds. This can be seen in Table 20 below.

**Table 20: Vibration results above human comfort level**

| Day | Date | Record End Time | Time [s] | VEC[mm/s] | Comments |
|---|---|---|---|---|---|
| Mon | 19/02/2026 | 15:50:11 | 2.779713 | Thursday | Installation of pile |

# 6. Dust and Air Quality

Air quality has been monitored throughout the period via dust deposition gauges and 1 real-time PM10 monitor at the locations as shown in Figure 19. During the monitoring reporting period the PM10 monitor was moved from its previous location onsite to a more representative location at a residential property adjacent to the project site. Table 21 shows the dust deposition gauge results. No exceedances were observed for this quarterly report period.


**Figure 19: Air Quality Monitoring Locations, (including PM10 Monitor)**

**Table 21: Dust Deposition gage results**

| Month / Year | Guage ID | Date Out | Date In | Insoluble solids (mg/m$^2$/day) |
|---|---|---|---|---|
| **November-December-25** | DDG1 | 13/11/2025 | 18/12/2025 | overtopped |
| | DDG2 | | | overtopped |
| | DDG3 | | | overtopped |
| | DDG4 | | | overtopped |
| **January-February-26** | DDG1 | 05/01/2026 | 05/02/2026 | 46.7 |
| | DDG2 | | | 56.7 |
| | DDG3 | | | 10.0 |
| | DDG4 | | | 46.7 |
| **February-March-26** | DDG1 | 05/02/2026 | 05/03/2026 | 10 |
| | DDG2 | | | 33.3 |
| | DDG3 | | | 13.3 |
| | DDG4 | | | 30 |

Dust deposition (monthly average) rate of **120 mg/m$^2$/day** should not be exceeded at any sensitive receptor.

'Overtopped' means the dust deposition bottle overtopped due to rainfall making any readings invalid.

## 6.1. $PM_{10}$ Monitoring

PM10 monitoring was undertaken using a Cube360 real-time analyser. The displayed data gaps within the $PM_{10}$ data are due to inconsistent mobile phone reception in the area. The monitor is being serviced and a signal booster inserted to boost signal and attempt to reduce data gaps in the monitoring.

The data collected in Figure 20, demonstrates no exceedances in this reporting period with all data captured well below the 50µg/m³ 24-hour criteria, The two spike events were during site shutdown and attributed to thunderstorm events.

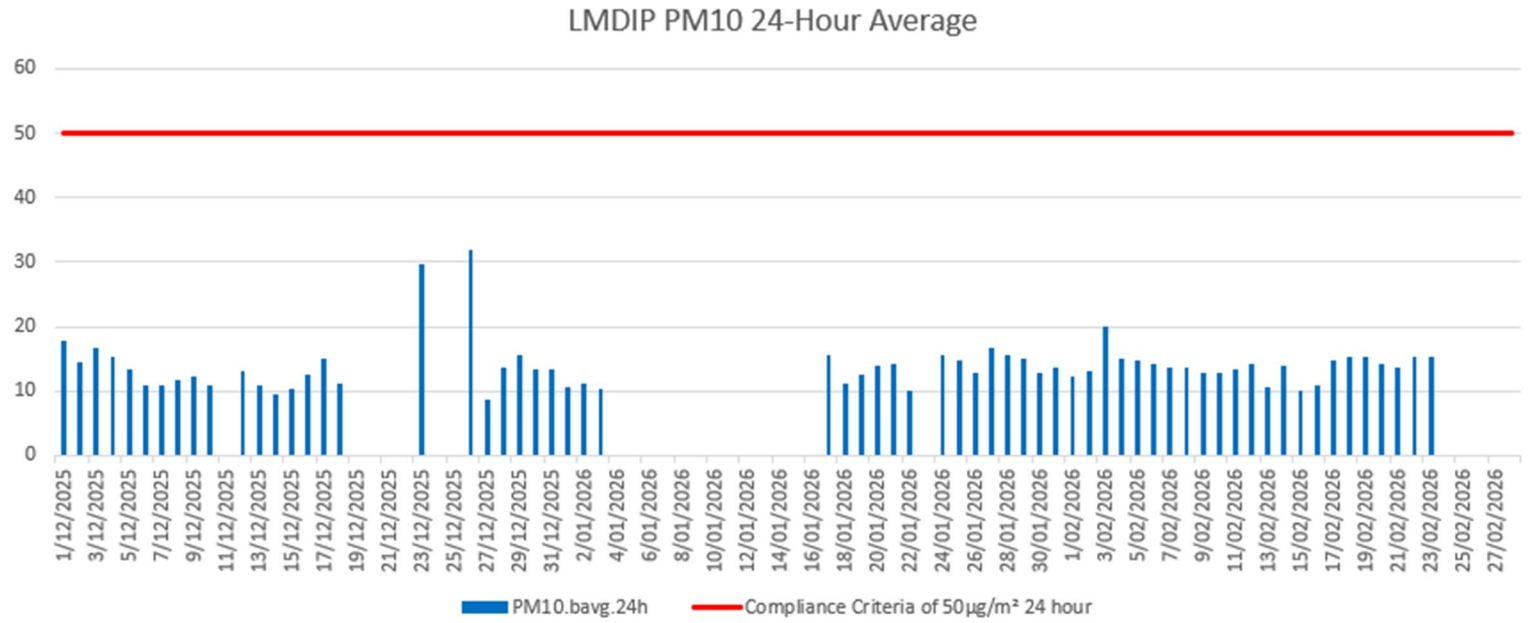



**Figure 20: LMDIP PM10 24 Hour Average**

# 7. Waste Resource Use

The majority of construction waste generated on-site is managed by a waste subcontractor who comingle and sort waste at an offsite facility. Steel offcuts and any waste from the sheet piles are also separated and recycled offsite by a subcontractor waste supplier. A summary of waste quantities and materials and outcomes are listed below in Table 22.

In summary, 16.22 tonnes of waste was generated by the project during this monitoring period.

- For the monitoring period an average of >91.62% of waste was diverted from landfill.
- 149.863 tonnes of steel waste recycled during the monitoring period.

## Table 22: Construction and Demolition Waste Summary Report

| *Reporting period from 21st to 20th of each month* | *Jan-2024 till Dec-2024* | Jan-25 | Feb-25 | Mar-25 | Apr-25 | May-25 | Jun-25 | Jul-25 | Aug-25 | Sep-25 | Oct-25 | Nov-25 | Dec-25 | Project Totals to Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Waste Diverted from Landfill Breakdown (tonnes) - Based on Material Received from Project** | | | | | | | | | | | | | | |
| **Masonry** - including asphalt, bricks, concrete, tiles and ceramics | 0.00 | 0.00 | 10.59 | 0.00 | 0.00 | 14.10 | 0.00 | 0.00 | 0.00 | 3.80 | 0.00 | 1.74 | 0.00 | **30.23** |
| **Plasterboard** | 0.09 | 0.00 | 1.23 | 0.00 | 0.00 | 0.00 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | **1.51** |
| **Metals** - ferrous and non-ferrous | 0.42 | 0.00 | 0.76 | 1.27 | 0.90 | 0.00 | 0.42 | 0.55 | 0.71 | 0.10 | 0.88 | 0.00 | 1.01 | **7.00** |
| **Organics** - including soils, fines and green waste | 0.00 | 1.30 | 0.00 | 0.00 | 0.00 | 2.54 | 0.00 | 0.14 | 0.18 | 0.24 | 3.90 | 0.17 | 1.79 | **10.26** |
| **Timber** | 0.63 | 0.36 | 2.66 | 2.46 | 1.36 | 0.15 | 1.38 | 3.91 | 0.71 | 0.80 | 7.09 | 6.08 | 1.41 | **29.01** |
| **Cardboard and Paper** | 0.47 | 0.12 | 1.06 | 2.57 | 0.40 | 0.03 | 0.23 | 0.15 | 0.56 | 0.21 | 1.71 | 0.14 | 0.78 | **8.44** |
| **Plastics (Recyclable)** | 0.08 | 0.02 | 0.00 | 2.38 | 0.15 | 0.00 | 0.00 | 0.07 | 0.57 | 0.06 | 0.48 | 0.07 | 0.62 | **4.51** |
| **Glass** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | **0.00** |
| | | | | | | | | | | | | | | |
| **Waste To Landfill Breakdown (tonnes) - Based on Material Received from Project** | | | | | | | | | | | | | | |
| **General Waste (Landfill)** - May include soft plastics, polystyrene, packaging, textiles and putrescible wastes | 0.14 | 0.09 | 0.56 | 0.94 | 0.29 | 0.42 | 0.14 | 0.23 | 0.18 | 0.31 | 0.68 | 0.65 | 0.37 | **4.99** |
| | | | | | | | | | | | | | | |
| **Summary of Reportable Construction & Demolition Waste From Project** | | | | | | | | | | | | | | |
| **Total C&D Waste Received from Project (tonnes)** | 1.83 | 1.90 | 16.86 | 9.62 | 3.10 | 17.24 | 2.35 | 5.04 | 2.91 | 5.52 | 14.73 | 8.86 | 5.98 | **95.94** |
| Total Waste Diverted from Landfill (tonnes) | 1.69 | 1.81 | 16.30 | 8.68 | 2.81 | 16.82 | 2.21 | 4.81 | 2.73 | 5.21 | 14.05 | 8.21 | 5.61 | **90.96** |
| Total Waste to Landfill (tonnes) | 0.14 | 0.09 | 0.56 | 0.94 | 0.29 | 0.42 | 0.14 | 0.23 | 0.18 | 0.31 | 0.68 | 0.65 | 0.37 | **4.99** |
| | | | | | | | | | | | | | | |
| Total C&D Waste Received from Project (cubic metre) | 12.0 | 6.0 | 40.6 | 48.0 | 14.0 | 44.0 | 6.0 | 18.0 | 12.0 | 15.0 | 66.0 | 30.0 | 30.0 | **341.60** |
| Density (tonnes/cubic metre) | 0.153 | 0.317 | 0.415 | 0.200 | 0.221 | 0.392 | 0.392 | 0.280 | 0.243 | 0.368 | 0.223 | 0.295 | 0.199 | 0.28 |
| | | | | | | | | | | | | | | |
| **Total Waste Diverted from Landfill (Percentage)** | 92.35% | 95.20% | 96.68% | 90.22% | 90.77% | 97.59% | 94.12% | 95.49% | 93.87% | 94.36% | 95.41% | 92.64% | 93.82% | 94.80% |

| *Reporting period from 21st to 20th of each month* | Jan-26 | Feb-26 | Mar-26 | Apr-26 | May-26 | Jun-26 | Jul-26 | Aug-26 | Sep-26 | Oct-26 | Nov-26 | Dec-26 | Annual Totals to Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Waste Diverted from Landfill Breakdown (tonnes) - Based on Material Received from Project** | | | | | | | | | | | | | |
| **Masonry** - including asphalt, bricks, concrete, tiles and ceramics | 0.00 | 3.26 | | | | | | | | | | | **3.26** |
| **Plasterboard** | 0.00 | 0.00 | | | | | | | | | | | **0.00** |
| **Metals** - ferrous and non-ferrous | 0.86 | 0.00 | | | | | | | | | | | **0.86** |
| **Organics** - including soils, fines and green waste | 0.00 | 1.44 | | | | | | | | | | | **1.44** |
| **Timber** - including offcuts, pallets, formwork | 0.86 | 0.82 | | | | | | | | | | | **1.67** |
| **Cardboard and Paper** | 1.43 | 0.21 | | | | | | | | | | | **1.63** |
| **Plastics (Recyclable)** | 0.11 | 0.30 | | | | | | | | | | | **0.41** |
| **Glass** | 0.00 | 0.00 | | | | | | | | | | | **0.00** |
| | | | | | | | | | | | | | |
| **Waste To Landfill (tonnes) - Based on Material Received from Project** | | | | | | | | | | | | | |
| **General Waste (Landfill)** - May include soft plastics, polystyrene, packaging, textiles and general wastes. | 0.35 | 0.61 | | | | | | | | | | | **0.96** |
| | | | | | | | | | | | | | |
| **Summary of Reportable Waste From Project** | | | | | | | | | | | | | |
| **Total Waste Received from Project (tonnes)** | 3.60 | 6.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | **10.24** |
| Total Waste Diverted from Landfill (tonnes) | 3.25 | 6.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | **9.28** |
| Total Waste to Landfill (tonnes) | 0.35 | 0.61 | | | | | | | | | | | **0.96** |
| | | | | | | | | | | | | | |
| Total Waste Received from Project (cubic metre) | 15.5 | 30.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | **46.10** |
| Density (tonnes/cubic metre) | 0.232 | 0.217 | | | | | | | | | | | 0.22 |
| | | | | | | | | | | | | | |
| **Total Waste Diverted from Landfill (Percentage)** | 90.23% | 90.81% | | | | | | | | | | | 90.60% |