Lake Macdonald Dam Improvement Project

Quarterly Compliance and Monitoring Summary Report for the Coordinator-General

Revision 02 | January 2026

seqwater
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Reviewer					
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1. Executive Summary

This Quarterly Compliance and Monitoring Summary Report has been produced for Project Works undertaken on site for 20 August 2025 to 30 November 2025 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 Group 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

The 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 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 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.

Note ** This report has been extended to include data till the end of November for ease of reporting and to ensure future reports refer to 3 full months instead of two half months.

3.2. Reporting Period

This report covers the construction period from ***20 August to 30 November 2025.*** The project activities undertaken in the reporting period and associated timelines are highlighted below in Table 2.

Table 2: Activities Summary

Project Component	Project Works	Affected Period
General Site Operations	• Hardstand and Haul Roads sealing • Topsoil stripping and stockpile operations • Sediment basin construction • Rock bag filling • Import rock fill	19 August to 30 November
Construction of Cofferdam	• Sheet piling, whaler and tie bar installation • Sheet Piling (Vibratory and hammer driving) • Rock placement • Rock bag installation at downstream berm	19 August to 30 November
Siphon operation	• Maintaining Dam levels at ~RL92.5-92.8 • Installation of environmental flow	19 August to 30 November

4. Previous Period Evaluation of Compliance with the SEMP

A third-party annual audit of the LMDIP SEMP was conducted by Virid AU on 13 August 2025, reviewing the first three months of project activities. The audit assessed 678 items across the management sub-plans, as detailed in the previous LMDIP Quarterly Compliance and Monitoring Summary Report for the Co-ordinator General (JH Document Number 7225-JHG-REP-SQ-001[1[), covering the construction period from 19 May to 19 August 2025. Of the 678 items, 31 minor and 12 major non-conformances were identified.

At the time of preparing this Quarterly Report, the majority of corrective actions from the annual LMDIP SEMP audit and the previous Quarterly report have been closed. Two major and three minor corrective actions remain outstanding. Four of these relate to non-conformance reports (NCR's) identified in the Lighting Management Plan for demolition night works, which are not scheduled to commence until March 2026. These actions will be addressed well before demolition begins. The remaining outstanding action relates to traffic and is currently being addressed.

The full previous period Quarterly report is available on the LMDIP project website. The next annual SEMP Compliance Audit is scheduled for August 2026. During this monitoring and reporting period, previously identified SEMP audit non-conformances have been tracked through a corrective actions register and progressively 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 following LMDIP Sub plans:

1. Stormwater Management
2. Flora and Fauna (Dewatering – Adaptive Management Plan)
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	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	No active dewatering discharges from construction activities have taken place.	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	Monitoring completed as per the schedule outlined in Appendix A of the Stormwater Management Plan. Monitoring during this reporting period did not identify any occurrences of construction-impacted waters affecting local water quality. 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	Weekly site inspections as well as pre and post rainfall event inspections occurring. ESCs across the site are as per the approved ESCP and found to performing as intended.	
The volume of discharges from the site via pumps, syphons or gravity will be recorded	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	Borrow pit not yet operational	Ongoing development of the borrow pit ESCP

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Monitoring of turbidity at monitoring locations DS01 and PP01	Y	DS01 live monitor installed and collecting data. PP01 not required for this monitoring period. Refer to Appendix A – Section 1.2.2 of this report for further details	Daily probe and weekly lab samples are to be taken at PP01 once established
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	I1 live monitor installed and collecting data. Refer to Appendix A – 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	No instances of oil slicks on the water except in the case of incident INC-0109366 (Refer Section 9 of this report) 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	Stilling Basin not established in this monitoring period	Daily probe and weekly lab samples are to be taken at PP01 once established
Fortnightly monitoring of COD, suspended solids, nitrate, ammonia, total phosphorus and total recoverable hydrocarbons (laboratory analysed)	Y	Monitoring completed as per the schedule outlined in LMDIP-05327-GNL-ENV-MPL-00003. Refer to Appendix A – Section 1.2 Table 6 incorporates any exceedances from this testing	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Weekly monitoring of COD, suspended solids, nitrate, ammonia, total phosphorus and total recoverable hydrocarbons (laboratory analysed) within the stilling basin.	Y	Stilling Basin not established in this monitoring period	NA
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	Live monitoring was interrupted from the 18th to the 20th of October. No data was recorded for these days DO% high-risk triggers were exceeded during 5% of monitoring events. Refer to Appendix A – 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. Arrangements for additional aeration devices to be considered.
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	Monitoring completed as per the schedule outlined in LMDIP-05327-GNL-ENV-MPL-00003. Refer to Appendix A – Section 1.2 Table 6 incorporates any exceedances from this testing.	
Weekly monitoring of temperature, pH, dissolved oxygen, EC, and turbidity at the downstream sites DS01 and DS04	Y	Monitoring completed as per the schedule outlined in LMDIP-05327-GNL-ENV-MPL-00003. Refer to Appendix A – Section 1.2.2 of this report for further details	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Weekly monitoring of temperature, pH, dissolved oxygen, EC, and turbidity at the upstream control sites SMCUS01 and CU02	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	Update 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	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	Update management plans to amend these monitoring locations
Erosion & Sediment Control in Lake Macdonald			
Weekly inspection of sediment and erosion control structures and measures.	Y	Occurring weekly through Environmental Site Inspections	
Daily monitoring of turbidity in Lake Macdonald	Y	Via live readings from monitor at I1. Refer to Appendix A – Section 1.2.1 of this report for further details	
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 1st survey would perform the baseline	Y	Being conducted through the Aquatic habitat survey and assessments. Refer to Appendix A – Section 2.2.1 of this report for further details	
Erosion & Sediment Control in Six Mile Creek			

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Undertake construction phase monitoring at the downstream monitoring sites and upstream control sites, as outlined in Appendix F Habitat Monitoring Program (AMP)	Y	Being conducted through the Aquatic habitat survey and assessments. Refer to Appendix A – Section 2.2.1 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 fauna entrapment these inspections can be scaled back to monthly	Y	Completed daily inspections no issues identified. Now being completed monthly.	
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	Completed daily inspections no issues identified. Inspection and cleaning, if required, to take place in January 2026.	
Aquatic Flora & Fauna in Lake Macdonald (During Construction)			
Camera trap survey of platypus in upper dam reaches (continuous), and eDNA surveys quarterly	Y	Being undertaken by SQP.	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
		The results of the eDNA analysis and the camera trapping review indicate that platypus continues to occupy similar parts of the waterways between baseline and construction periods. Refer to Appendix A – Section 2.6 to 2.9. 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	Being undertaken by through the habitat survey and assessments. No issues of stressed fauna have been identified throughout the monitoring period. Refer to Appendix A – Section 2.2 of this report for further details	
Daily visual monitoring of fauna in the stilling basin to assess potential for fauna stress	NA	Stilling Basin not established in this monitoring period	Monitoring program to be implemented for the stilling basin in January 2026
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	Being undertaken by through the habitat survey and assessments. The condition of all turtle species has decreased since baseline monitoring occurred however at this stage there is no immediate threat to the turtle community. Refer to Appendix A – Section 2.5 of this report for further details	Further data will be collected in February 2026 and reported in the next quarterly report to assess overall turtle community health condition and will confirm if any intervention would be required.

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Monthly visual monitoring and water quality measured in situ (dissolved oxygen) of the relocation sites six months after relocations efforts have finished	Y	Seqwater rangers undertaking monthly visual inspections and WQ monitoring in Cooloolabin Dam. WQ parameters within the dam have consistently been within acceptable parameters.	Monitoring of Cooloolabin Dam by LMDIP will cease in January 2026. Seqwater rangers will continue their monthly inspections.
Quarterly monitoring of fish condition in the lake, using length weight measurements compared to baseline and evaluation survey data	Y	Being undertaken by through the habitat survey and assessments by the SQP. Monitoring of small-bodied fish communities show that this group of fish are highly abundant within the lake and that most small-bodied fish have increased since the baseline survey. Catches of large-bodied fish during the monitoring events has been variable and is likely a result of the general distribution of the different fish species within the lake at the time of the survey. Overall fish condition has varied with the condition of the two predatory fish including Bass and Saratoga increased during the monitoring period while the condition of banded grunter has decreased since lake drawdown. Refer to Appendix A – Section 2.1 of this report for further details	
Aquatic Flora & Fauna in Six Mile Creek (During Construction)			
Quarterly aquatic habitat monitoring	Y	Being undertaken by through the habitat survey and assessments by the SQP. Refer to Appendix A – Section 2.2 of this report for further details	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
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	Being undertaken by 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 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	Y	Baseline drone survey assessment was carried out in June 2025 directly after lake drawdown. There is little value in continuing these surveys as all the exposed lowered embankments are covered in dense grasses. 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	Being undertaken by through the habitat survey and assessments by the SQP. An analysis of the habitat monitoring data against the habitat trigger values found that no trigger values were exceeded during the quarterly monitoring period. Refer to Appendix A – Section 2.2 of this report for further details	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Daily flow volume recorded at State Government gauging station at Cooran compared to long-term flow percentiles; flow data accessed and assessed monthly	Y	Daily flows being monitored and recorded. Refer to Appendix A – 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	Being undertaken by through the habitat survey and assessments Identified pest species can be seen in Appendix A Section 2.1 and Table 11	
Six Mile Creek: During construction, monitor presence of pest species as part of quarterly fish and turtle monitoring	Y	Being undertaken by through the habitat survey and assessments Identified pest species can be seen in Appendix A Section 2.1 Table 14	
Relocation Sites: During salvage and relocation, record the number of pest species observed and euthanised (e.g. in a register) during relocation activities.	Y	1 salvage event occurred at the Six-Mile Creek Tailwater during the monitoring period. A total of 3,460 fish and a single turtle were captured during the fish salvage operation. This total included 3,057 small-bodied fish, 347 large-bodied fish, a single turtle and 56 pest fish.	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
		Refer to Appendix A – Section 2.10 of this report for further details	
Biosecurity - Weeds			
Lake Macdonald: Spot checks of weed hygiene certifications and inspection and wash down records.	Y	Regular compliance checks occurring. 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	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	Being undertaken by through the habitat survey and assessments by the SQP. Refer to Appendix A – Section 2.11 of this report for further details	
Relocation Sites: Record visual observations of aquatic and semi-aquatic weed species as part of relocation site monitoring	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 will cease in January 2026. Seqwater rangers will continue their monthly inspections.
LMDIP-05829-GNL-ENV-MPL-00003 - Flora & Fauna (Terrestrial) Management Plan			

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
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	Being completed through the site inspection process. 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	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 quarterly until the lake has refilled and vegetation communities are re-established.	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. No evidence of indirect offsite impacts have been detected.	
LMDIP-05829-GNL-ENV-MPL-00005 - Noise and Vibration Management Plan			
Monitoring of the meteorological conditions	Y	Refer to Appendix A – Section 7 of this report for further details	
Ongoing unattended noise monitoring at the 2 locations (attended locations) shown will be undertaken	Y	Unattended noise monitoring regularly exceeded noise objectives however the majority of exceedances are not attributed to construction activities. Exceedances of objective criteria are regularly breached on occasions when no works are happening (i.e. nights & weekends).	Increase attended monitoring when undertaking noisy construction activities

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
		Refer to Appendix A – Section 4 Figures 10 to 13 of this report for further details.	
Undertake attended noise monitoring at a location to be determined following receipt of a complaint or identification of an exceedance. Precise monitoring locations must be determined in consultation with an appropriately qualified person (AQP)	Refer to Appendix A	No confirmed noise complaints received during the monitoring period. Refer to Appendix A – Section 4 – Table 16 of this report for further details.	Increase attended monitoring when undertaking noisy construction activities
Unattended vibration monitoring at a location deemed suitable to monitor vibration impacts. Precise monitoring locations must be determined in consultation with an AQP	Y	During the monitoring period there were 6 timeframes when the vibration monitoring recorded an exceedance. On two of these occasions was the vibration exceedance was found to be directly attributable to construction activities. Refer to Appendix A – 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	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	No exceedances of objective criteria to report. Refer to Appendix A – Section 5.2 Figure 15 of this report for further details.	

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Dust deposition gauges will be installed and monitored at four locations (DDG01 to DDG04), as shown in Figure 14	Y	No exceedances of objective criteria to report. Refer to Appendix A – Section 5.1 Table 18 of this report for further details.	
PM_{10} and dust deposition monitoring at additional specific locations	NA	No specific complaints this period. Additional monitoring has been offered to concerned residents.	
Visual inspection of airborne dust and dust deposition shall be undertaken as part of the weekly environmental inspection.	Y	Through the environmental inspection process.	
Vehicles, plant, equipment and machinery shall be regularly inspected to ensure good working order.	Y	Conducted both prior to receiving onsite and daily through a 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	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	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	Inspected via the daily checklist process. Compliant throughout this period.	
LMDIP-05829-GNL-ENV-MPL-00008 Waste Resource Use			

Monitoring obligation	Compliance met (Y/N)	Comments / Evidence of compliance	Ongoing Actions
Waste management will be inspected as part of a weekly environment or HSE site inspection.	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 operator. Registers and manifests maintained to track waste material	Y	No waste related issues to report through the monitoring period. Refer to Appendix A – Section 6 of this report for further details.	
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	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	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	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	Weed Hygiene records are only for vehicles and marine vessels when they arrive onsite. They are being assessed by JH and Seqwater	

6. Weather

6.1. Rainfall

Rainfall observed on site was below the BOM average for September and above for October and November 2025. Several storm events were experienced onsite in November, leading to intense rainfall events, however the site was well prepared and remained compliant during all events, Refer to Figure 1.

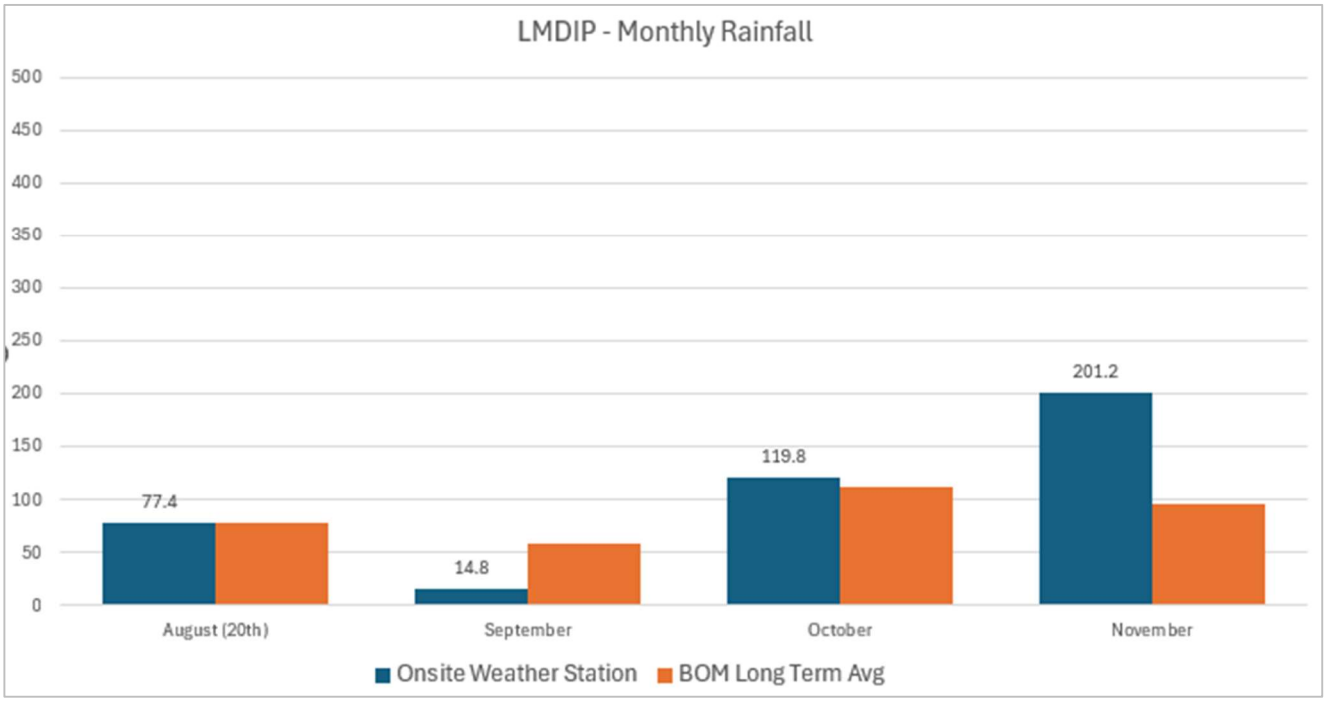


Figure 1: LMDIP Rainfall compared to the Tewantin long term average.

6.2. Temperature

Temperatures recorded during the period ranged between:

- Daily maximum: 19 to 38ºC
- Daily minimum: 7 to 23 ºC

A weekly temperature trace is provided in Figure 2

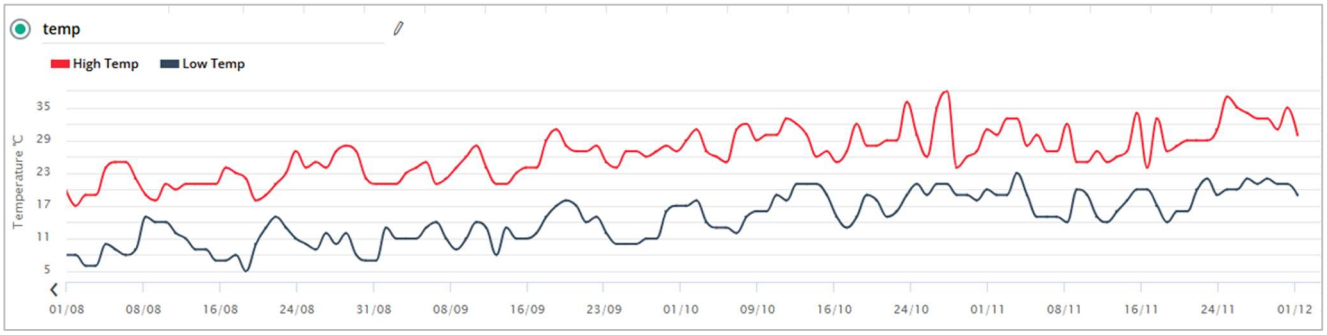
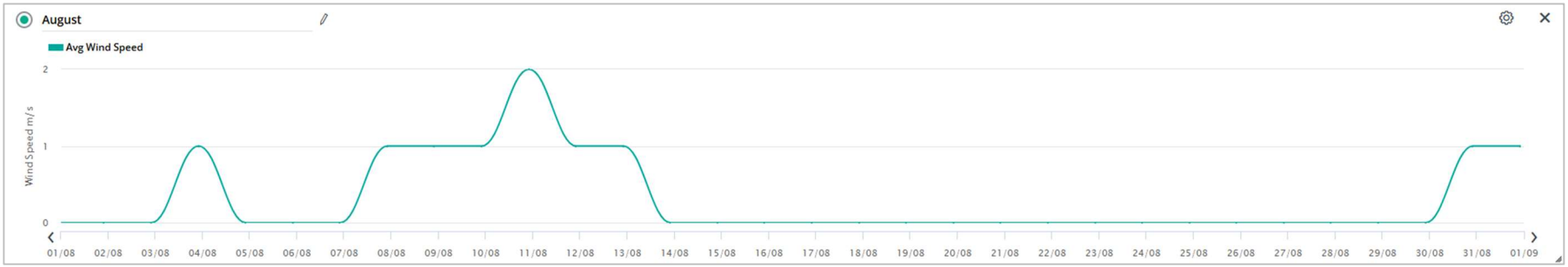


Figure 2: LMDIP weekly temperature trace results

6.3. Windspeed & Wind direction

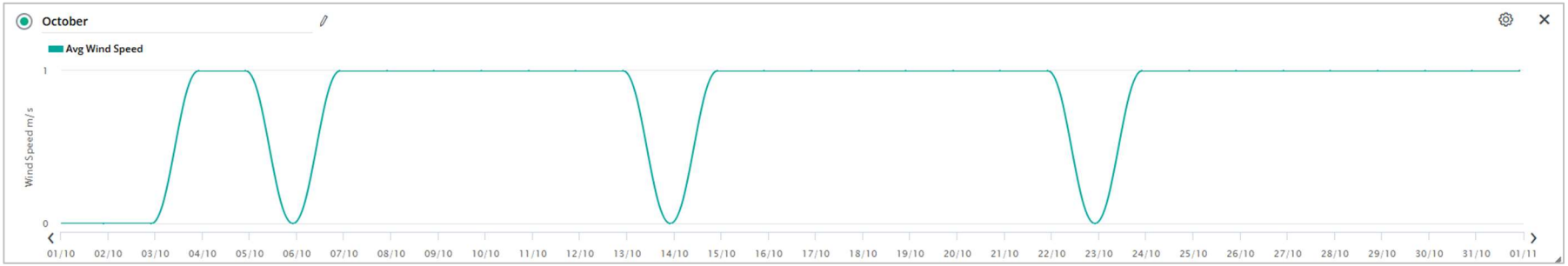
Windspeed and direction recorded during the period continued to be unremarkable with average daily windspeeds ranging between 0-2m/s with a predominant North to North-westerly direction. Refer to Figure 3 for average wind speed and Figure 4 for direction.

August:



September:

October



November

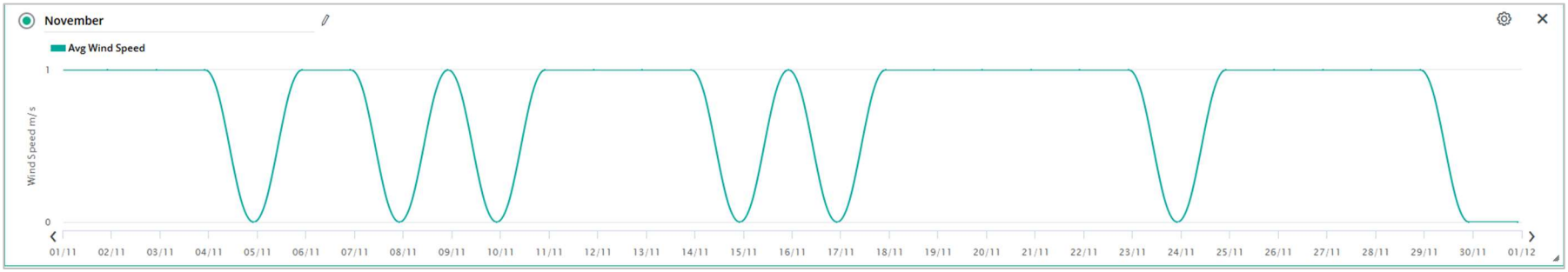


Figure 3: LMDIP average wind speed

6.4. Wind direction

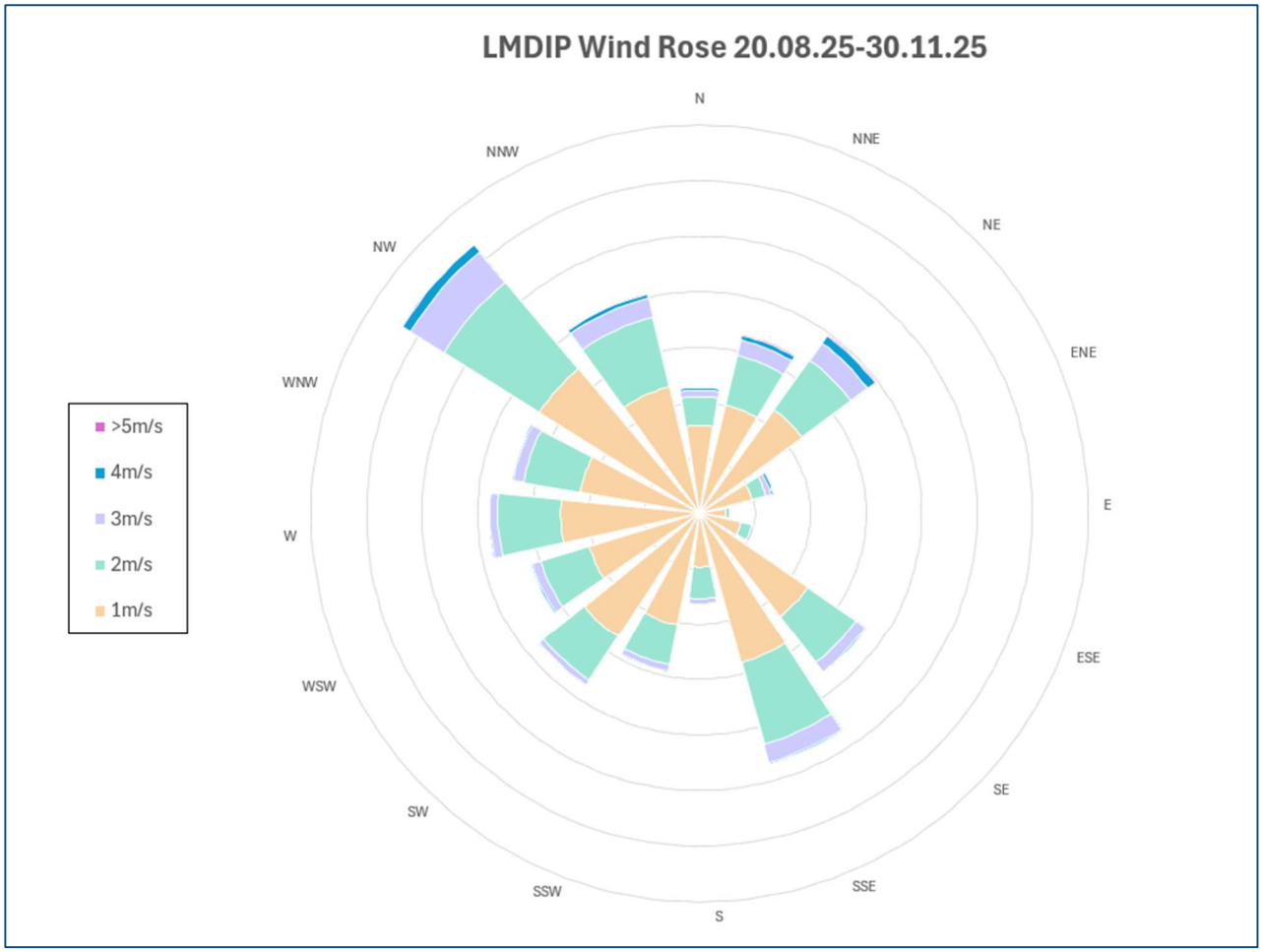


Figure 4: Wind Rose

7. Cultural Heritage

Five days of Cultural Heritage Monitoring was conducted onsite by the Kabi Kabi Cultural First Nations people during this monitoring report period, including overseeing the relocation of a recorded scar tree, on 5 September 2025, to a permanent location outside of the project boundary. The Lake Macdonald Dam Improvement Project also hosted a Kabi Kabi Elder and field Rangers for a traditional smoking ceremony in this time, which was held adjacent to the dam spillway and attended by all project staff.

8. Incidents

There were nine 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)
20/08/2025	INC-0108874	Turbid water discharged from site following a high intensity rainfall event of 81. 3mm.Downstream water quality monitor registered peak turbidity at 64.4 NTU at 8.45am, discharge criteria for the site in 50 NTU.	Y, erosion and sediment controls onsite repaired post rain event.
8/9/2025	INC-0109141	Contractor spill at left hand embankment of 2L of diesel to gravel from jerry can which had tipped over in a boat stored on land, spill was contained and cleaned up with no impact to sensitive areas.	Y, spill contained and cleaned up, toolbox delivered to crew on correct fuel storage
15/9/25	INC-0109219	Unwell pelican observed floating near left hand embankment, collected by wildlife rescue and taken to wildlife carer for rehabilitation and release.	Y- pelican taken to rescue carer and rehabilitated and released.
14/10/25	INC-0109573	During vibratory piling works there was a leak of approximately 250L of vegetable based hydraulic oil from a from loose connection on the piling hose. 3L was spilt into the lake, with the remainder captured on the barge deck. The spill was contained within silt curtains and environmentally friendly oil gone product used to clean up the spill. No impact observed downstream.	Y, hose sent away for testing and repair, sleeve tested for leaks and clear. All material collected from water and no impacts to aquatic life, water quality or downstream observed.
18/10/25	INC-0109587	23 deceased fish observed downstream of 6-mile creek after de-fishing event the previous day (approx. 3450 fish relocated downstream from isolated pond).	Y- fish removed from creek and buried onsite, no further deaths observed.
21/11/25	INC-0110125	Subcontractor crane had a hydraulic oil leak approx. .5L to asphalt, no impact to sensitive areas or run off, all material contained and cleaned up.	Y – Machine repaired, and spill cleaned up.
26/11/25	INC-0110162	3L oil spill from 4 wheeled excavator to ground, no impact to sensitive areas or run off, all material contained and cleaned up.	Y, spill contained and cleaned up no impacts to sensitive areas.

			Hydraulic hose repaired on machine.
29/09/25	INC-0109366	Spill of approximately 4L of vegetable-based oil from hammer hose has leaked onto the barge during hose change out, with approx. .5L leaking into the water. Spill was contained within silt curtain and cleaned up with biodegradable environmentally friendly product. No impact observed downstream.	Y, spill contained and cleaned up and no impact to water quality, aquatic life or downstream observed.
18/11/2025	INC-0109587	5 catfish were observed deceased under the temporary mesh covering the rock bags at the dissipation outlet after all 5 siphons had been operated after a rain event.	Y, mesh and tie wires had been tightened prior to and post rain event, followed up on permanent design for dissipation outlet to prevent further entrapment.

9. Complaints

During the monitoring period, eight complaints were recorded. Four related to noise, vibration, and dust, while five were associated with traffic issues. Some complaints were multi-faceted and originated from a single complainant. Details are provided in Table 5.

Community engagement with stakeholders has been ongoing since project commencement through multiple channels, including door knocks, text messages, emails to the established distribution list, phone calls, and in-person meetings. The project team remains in close contact with local residents and strives to proactively communicate about upcoming works.

As part of these efforts, several engagement activities were held:

- A **Community "coffee in the park" event** at the Noosa Botanical Gardens in November, attended by approximately 30 local residents. This event provided an opportunity for stakeholders to ask questions and receive updates on project works.
- A **Community Reference Group site tour** occurred on **19 November**, which allowed members to view progress firsthand, discuss project milestones, and raise any concerns directly with the project team.

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

Table 5: LMDIP complaint summary

Date	Complaint	Response and Actions Taken
22/11/25	Noise from work starting at 7:30am on Saturday.	Work began at 7:30am but was not noisy work, piling started after 10am (approved work hours on Saturday are 6:30am to 4pm). The team reviewed site diaries, spoke with the supervisor and crew, checked noise monitoring data and cameras. No evidence of noisy work at 7:30am. A brief noise spike occurred at 8am, but the complaint was lodged earlier at 7:54am.
29/10/25	Trucks speeding (possibly unrelated to project).	Asked the resident for dates/times to confirm if trucks were project related. No response received. Spot checks and audits showed no speeding by project trucks. Other developments nearby were operating trucks at the time. Council and QPS were informed.
22/10/25	Rocks on road and nature strip.	Requested review of rock-check procedures with site managers. Crews reminded during pre-start to check wheel wells and undercarriages before leaving site and to remove rocks from roads and nature strips.
17/10/25	Noise, vibration, and dust concerns.	Monitoring results showed no exceedances during reported times. Increased water truck trips and trimmed tree branches near dust gauges as requested.
26/09/25	Truck speeding – confirmed not project-related.	Investigated reported times and locations using satellite data; no project trucks involved. Other developments were active in the area. Council and QPS notified.
18/09/25	Vibration – concern about house foundations.	Monitoring showed no exceedances at the property (500m away). Offered additional vibration monitor (declined). Explained property condition surveys and monitoring measures in place to prevent damage.
10/09/25	Surveyor's car parked on nature strip.	Explained the car was briefly parked for essential survey work and safety reasons on council verge. Reminded crews to respect community sensitivities during pre-start. Posted fact sheets about nature strip parking rules on notice boards.
27/08/25	Noise, dust, vibration, and traffic sign location.	Moved traffic sign further from driveway. Monitoring showed no exceedances. Offered additional monitoring at property (declined).

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 20 August to 30 November 2025.

Water quality monitoring continued to show exceedances of some high-risk threshold criteria however none of these exceedances would be directly attributed to construction-related activities. The data has been reviewed, and new exceedance criteria were implemented following consultation with third party external experts/SQP's, which have been adopted for this monitoring report. While minor low-level exceedances continue to be recorded, there is a demonstrable improvement compared to the previous 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 two minor instances exceeded the human comfort target, both directly linked to construction works.

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

Aquatic habitat and fauna monitoring within the lake indicates the reduced water levels have caused minor changes to some flora and fauna populations however overall, the lake is still supporting a thriving and healthy ecosystem with no immediate intervention or action recommended.

The next monitoring compliance summary report will cover the period from 1 December 2025 to 28 February 2026.

Appendix A

1. Water

1.1. Water Quality

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 2025 compared to the 10yr average. A lack of rain in October resulted in minimal flows being available to send downstream. Environmental flows are always maintained as per the Lake Macdonald Water License.

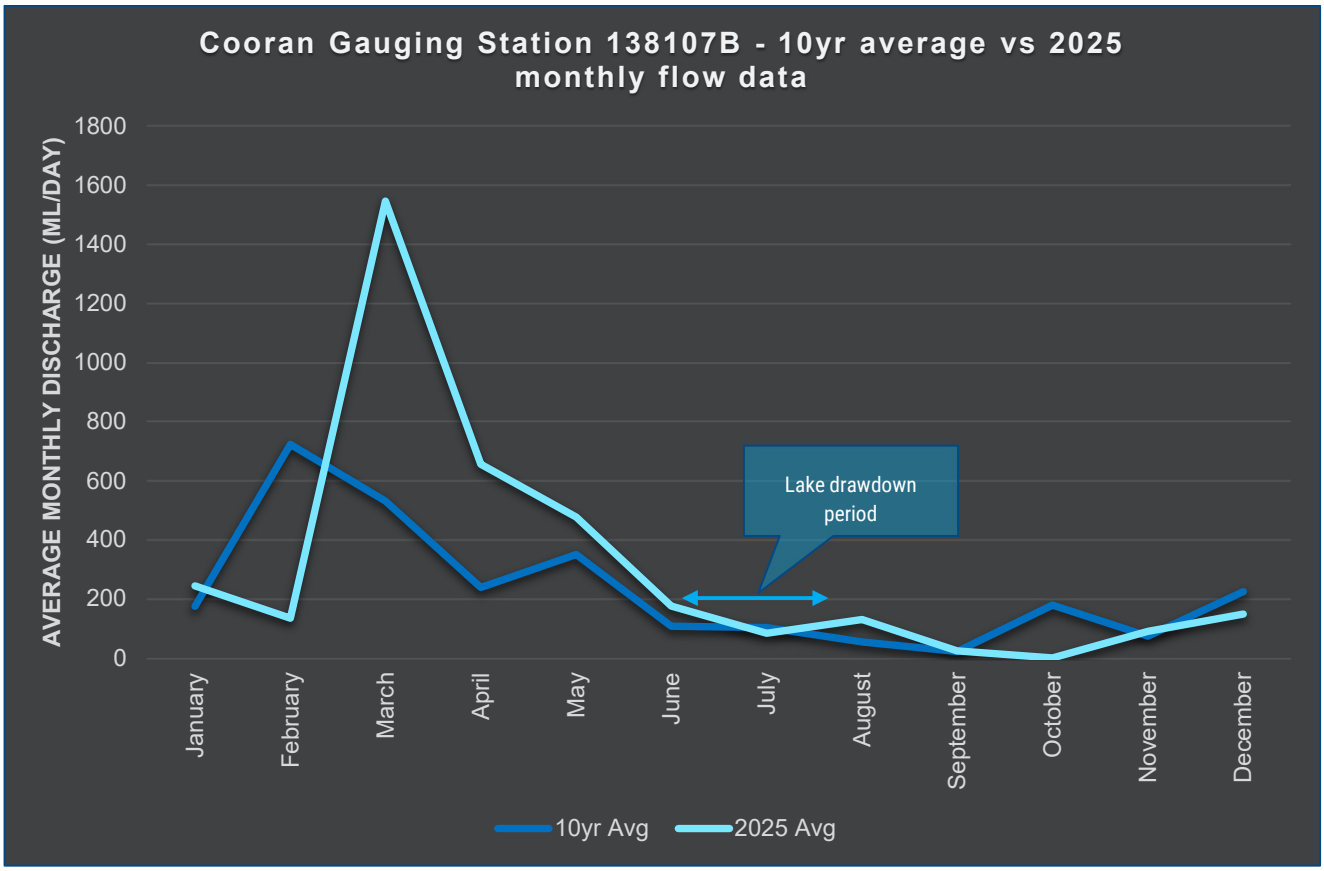


Figure 5: Comparing monthly average flows against the 10yr average

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 and may change again in the future 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)

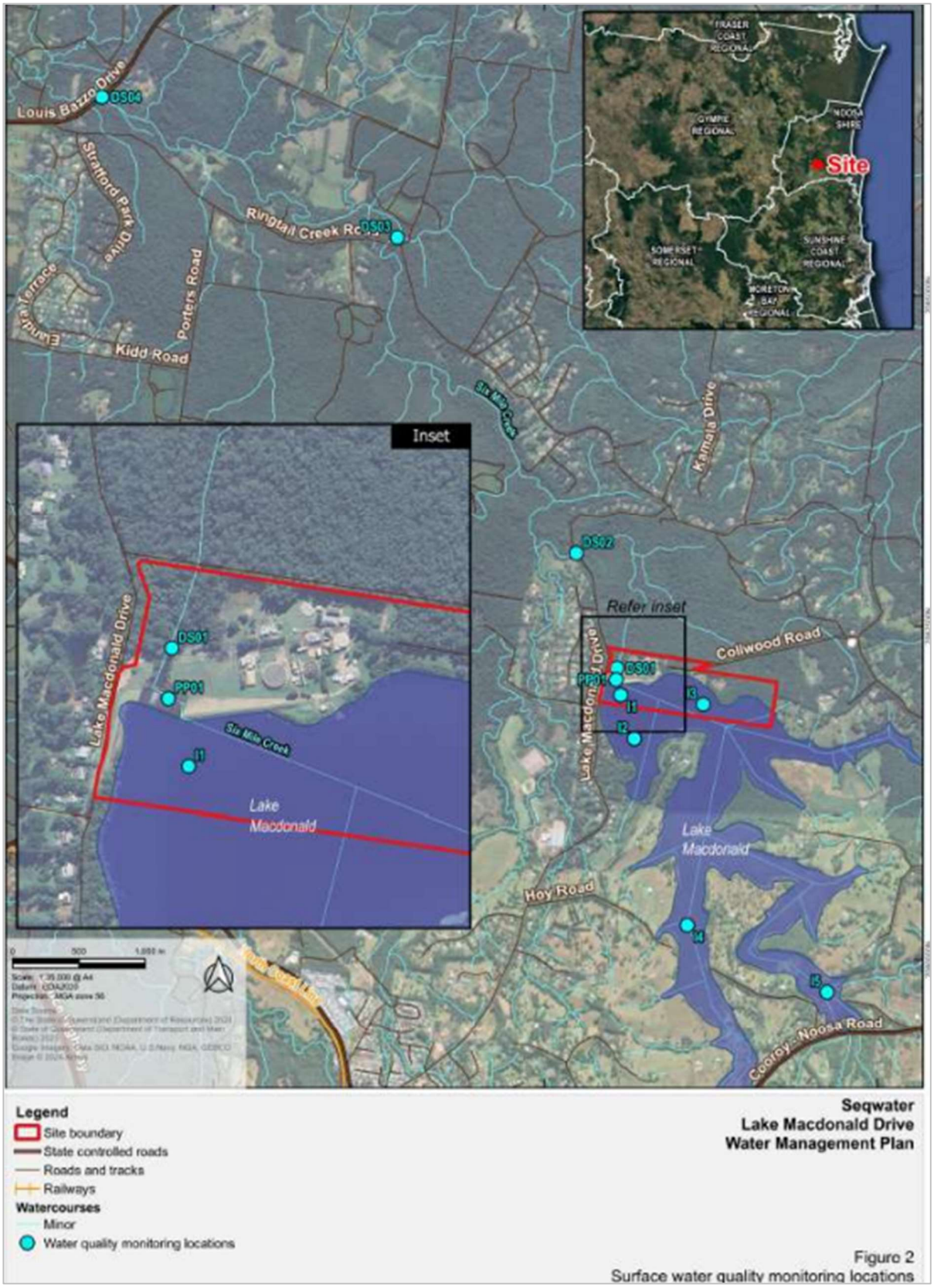


Figure 6: Water quality monitoring locations

1.1.1. Upstream Monitoring

Water monitoring was conducted on 15 occasions across the reporting period 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 I1 is a real time continuous water quality metre inserted into a floating buoy with probes located approximately 1 metre below the water surface. The monitor relays a recording to the web-based platform every hour. This has resulted in 75 days worth of data upstream of the works during the period (on some occasions monitoring locations were inaccessible due to weather and/or river conditions).

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. This report summarises the data for the upper reaches and the main body of the impoundment. This is because 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 represents how often the project water quality objectives were exceeded in the main body of the lake and Table 7 represents 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	Nitrate	TP	TSS
New Criteria (post 18 Aug)	Low	33	18.9	6.1-6.9	0.053	0.0142	0.034	5
	high	20	25	6.1.-8.0	0.11	0.02	0.048	9
Non-conform – low trigger	Count	0	7	0	16	0	14	11
	%	0%	16%	0%	43%	0%	38%	30%
Non-conform – high trigger	count	0	8	3	6	5	18	21
	%	0%	18%	7%	16%	14%	49%	57%

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

Parameter		DO%	NTU	pH	Ammonia	Nitrate	TP	TSS
New Criteria (post 18 Aug)	Low	33	18.9	6.1-6.9	0.053	0.0142	0.034	5
	high	20	25	6.1.-8.0	0.11	0.02	0.048	9
Non-conform – low trigger	Count	0	7	2	3	0	4	5
	%	0%	23%	7%	14%	0%	18%	23%
Non-conform – high trigger	count	0	10	1	18	6	17	15
	%	0%	33%	3%	82%	27%	77%	68%

The data collected indicates that:

- ***Dissolved Oxygen (DO):*** DO remained in an acceptable range with no exceedances during the monitoring period.
- ***Turbidity:*** Turbidity showed 18% of sampling events exceeding the high-risk upstream triggers in the main body of the impoundment and 33% of the sampling events exceeding at the upper reaches. As no significant activity has been occurring within the lake (other than lowering), these levels are within the natural variation of the system or external influences.
- ***pH***: pH showed minor departures of the criteria with a low number of exceedances observed across the entire lake . Given the low lake levels pH upstream remains relatively stable.
- ***Nutrients:*** All nutrients (ammonia, nitrate and phosphorous) frequently exceeded upstream high-risk trigger values however these exceedances were significantly more prevalent in the upper reaches. Construction activities do not directly impact nutrient levels in the lake however it is possible the elevated levels are associated with lake lowering. At this point there is insufficient data from which to draw conclusions. Increased sampling by the project aquatic ecologist was implemented in response to the high nutrient levels observed in previous months and although the frequency of exceedances is still high, the severity of exceedances has reduced significantly since the previous monitoring period indicating that nutrient levels are stabilising.
- ***TP-*** Total Phosphate exceeded the high-risk triggers in 49% of sampling events in the main body and 77% of sampling events in the upper reaches.
- ***TSS –*** Total suspended solids exceed the high-risk trigger for 57% of sampling events in the main body and 68% of the monitoring events in the upper reaches. This is potentially due to lake lowering and the suspension of solids in more shallow water and will continue to be monitored.

- ***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.

1.1.2. Downstream Monitoring

Downstream water monitoring was conducted on 15 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. The monitor located at DS01 is a real time continuous water quality metre inserted into a PVCD tube with probes located approximately 1 metre below the water surface. The monitor relays a recording to the web-based platform every hour. This resulted in the collection of 60 days' worth of data downstream of the works during the reporting period (on some occasions monitoring locations were inaccessible due to weather and/or river conditions). Table 8 represents how often the project water quality objectives were exceeded.

Table 8: Downstream Water Quality Summary

Parameter		DO%	Turbidity NTU	pH
New Criteria (post 18 Aug) Threshold Criteria	low	56	6.6	5.9-7.1
	high	36	50	5.9-8.0
Non-conform - low	Count	15	39	5
	%	25%	65%	8%
Non-conform - high	Count	3	0	0
	%	5%	0%	0%

- ***Dissolved Oxygen (DO):*** DO typically has been more stable downstream with less exceedances of the trigger values than the last monitoring period. With only 29% of low-risk triggers exceeded and 5% of high-risk triggers exceeded. Owing to warmer temperatures and less rainfall, DO typically decreases in warmer water, coupled with less siphon flows, Six-mile creek has shown lower DO readings, which is also a historical seasonal observation prior to project works for this system.

- Observations made using water quality real-time analyser at location DS01 continue to indicate a strong correlation between flow rate and DO with rapid localised decline of DO occurring when lake lowering releases were paused. Site operations have been amended where possible to manage this effect with pulsing discharges through the siphons and modifying dewatering infrastructure to allow for lower flow rates. It is also important to note that historically six-mile creek downstream has patterns of low DO over the warmer seasons and would occur naturally irrespective of project works.
- ***Turbidity***: Turbidity was assessed as conforming with the high trigger criteria on all occasions and is observed to be above the low trigger criteria 65% 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 conforming with the high trigger criteria on all occasions but non-conforming with low trigger criteria 8% of the time. The low trigger thresholds remains narrow since new criteria were developed and such divergence is expected and not indicative of poor performance or poor water quality.

SPC/EC *is being monitored at all sites.* There is no criteria for EC so there are no exceedances to monitor against

1.1.3. Water Quality sampling completed by SQP as part of lake monitoring requirements

Monthly monitoring events were undertaken to provide additional information on the status of lake water quality within Lake Macdonald, (Refer to Figure 7). Water quality sampling was undertaken to assess lake health using in-situ monitoring, along with lab sampling for nutrients and chlorophyl-A. A single event was undertaken before lake drawdown and continued after the fish salvage program was halted.

Monitoring generally aims to assess lake health after drawdown and provide monthly updates. Three events will be included in this report including data collected September, October and November 2025.

Prior to lake lowering dissolved oxygen levels were relatively poor across the lake. Monitoring after drawdown has shown an improvement that has continued to be observed through the current quarter, Refer to Table 9 '*SQP water quality results.*

Monthly sampling has recorded persistent elevated concentrations of total nitrogen during all sampling events undertaken this quarter. Total nitrogen is a measure of all nitrogen compounds in a sample, which includes ammonia, nitrite, nitrate, and organic nitrogen. The highest nutrient levels were recorded in August 2025 and since then levels have stabilised.

High chlorophyl-A counts and hyper saturated oxygen readings during the quarter, indicate that intense photosynthesis by photosynthetic aquatic organisms such as algae and aquatic plants is occurring in the lake. This is likely occurring in response to elevated nutrient concentrations.

Increase in ammonia levels occurred this quarter in response to increasing rainfall in the catchment. Ammonia levels increased during November after being low for several months. High levels of ammonia in dams typically are a result of decomposition of organic matter runoff from human activity (agricultural and urban runoff) (Kadlec and Knight, 1996). A total of 13 (26%) of the 50 water quality samples collected within the quarter exceeded the ammonia high risk trigger value. Nearly all these readings occurred within the November sampling event, with sampling in the months of September and October recorded relatively low concentrations. High ammonia levels seemed to correlate with increased rainfall within the catchment, possibly indicating ammonia is coming from catchment sources.

During each monitoring event nutrient and in-situ sampling was undertaken at five sites (S1-S5) during the September event and 10 sites in the October and November site visits (S1-S10). The frequency of sampling increased from five to ten sites in October and November in response to elevated nutrients and TSS levels observed in August and September.

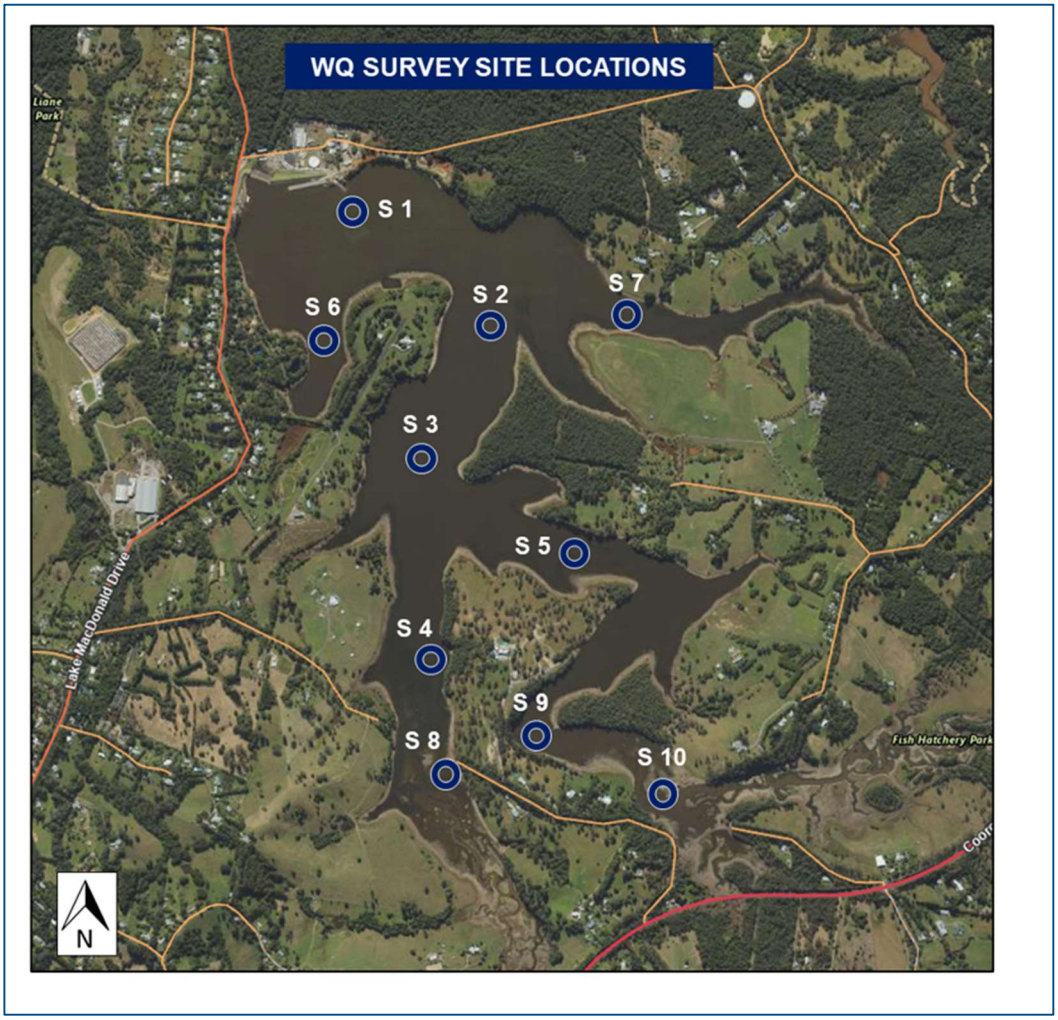


Figure 7: Monthly lake health survey locations by SQP

For this monitoring period sampling has been conducted monthly on 9th September 2025, 14th October and 20th November.

Nutrient and chlorophyl-A sampling was undertaken at the surface and bottom depths of each site. In-situ water quality parameters are those measured directly with a portable water quality meter. The measured parameters included pH, turbidity, temperature, dissolved oxygen and conductivity.
During the current quarter there were isolated values recorded that were either higher or lower than the respective high-risk trigger values, These included:

- Low pH readings recorded in October near the dam wall (sites 2 and 6)
- In contrast high pH readings were recorded around the main basin (sites 1, 3, 6 and 7) in November

High turbidity was recorded at the bottom layers of a profile undertaken within site 2 in November within the main basin of the dam. Generally, turbidity was better on the surface layers of the dam and often increased at depth.

Low dissolved oxygen was recorded in deeper sections of two site profiles within the upper dam (site 5 and 9) in November. All other readings during the quarter were acceptable. Hyper-saturated oxygen readings were common in all sampling events from the dam surface readings (over 100% oxygen saturation). This is an indication of intense photosynthesis by photosynthetic aquatic organisms such as algae and aquatic plants.

Table 9: SQP water quality results (Red indicates high risk exceedances).

Water Quality Parameter	Before drawdown (16 May)			September			October			November		
	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
In-situ sampling (profile)												
pH	6.63	6.26	6.84	6.77	6.13	7.49	6.32	4.70	7.27	7.14	4.81	8.33
Turbidity (NTU)	24.39	6.70	64.50	16.09	11.40	26.90	19.89	11.60	28.00	11.49	7.20	63.00
Dissolved oxygen (%)	68.46	39.10	86.20	104.28	81.00	124.00	88.11	61.70	112.00	101.67	10.90	144.10
Temperature	21.15	20.10	22.60	21.28	19.50	23.60	26.41	24.00	28.40	28.01	23.80	31.90
Lab sampling surface												
Total nitrogen (mg/l)	0.42	0.20	0.60	0.90	0.80	1.00	1.05	0.09	1.60	0.91	0.40	2.50
Nitrate (mg/l)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.04
Ammonia (mg/l)	0.09	0.06	0.14	0.01	0.01	0.02	0.04	0.01	0.10	0.15	0.08	0.43
Total phosphorus (mg/l)	0.02	0.01	0.03	0.04	0.03	0.04	0.06	0.05	0.07	0.07	0.05	0.12
Chlorophyll a µg/L	5.00	5.00	5.00	19.40	5.00	24.00	30.88	18.00	52.00	8.10	5.00	21.00
Lab sampling bottom												
Total nitrogen (mg/l)	0.53	0.40	0.70	0.80	0.70	0.90	1.02	0.80	1.50	1.01	0.70	1.50
Nitrate (mg/l)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia (mg/l)	0.08	0.07	0.10	0.07	0.03	0.14	0.06	0.01	0.10	0.27	0.07	0.98
Total phosphorus (mg/l)	0.03	0.01	0.05	0.05	0.04	0.07	0.07	0.06	0.10	0.07	0.04	0.10
Chlorophyll a µg/L	5.00	5.00	5.00	17.60	5.00	26.00	24.89	17.00	36.00	5.89	5.00	13.00

Total nitrogen is a measure of all nitrogen compounds in a sample, which includes ammonia, nitrite, nitrate, and organic nitrogen (Kadlec and Knight, 1996). Total nitrogen was at its highest in August with a reading of 20mg/l on the 27th. There have still been exceedances this quarter (September, October and November), they are relatively low-level exceedances.

A total of 41 (82%) of the 50 water quality samples collected within the quarter exceeded the total nitrogen high risk trigger value of 0.78mg/L. Despite the persistent high readings, many of the readings were considered low-level exceedances (a mean of 0.96 mg/l for all samples).

High levels of ammonia in dams typically are a result of decomposition of organic matter runoff from human activity (agricultural and urban runoff) (Kadlec and Knight, 1996). A total of 13 (26%) of the 50 water quality samples collected within the quarter exceeded the ammonia high risk trigger value of 0.11mg/L. Nearly all these readings occurred within the November sampling event, with sampling in the months of September and October recorded relatively low concentrations. High ammonia records were recorded after increased rainfall within the catchment, possibly indicating ammonia is coming from catchment sources.

Ammonia is toxic to many forms of aquatic life (fish, plankton and invertebrates) at concentrations greater than 0.20mg/l (Kadlec and Knight, 1996). Ammonia is the preferred form of nitrogen for plant and autotrophic bacteria; hence high levels can cause excessive growth of algae and plants. The biological breakdown of Ammonia by bacteria consumes oxygen, reducing the oxygen available for aquatic life (Kadlec and Knight, 1996).

During the current quarter chlorophyl counts were high in all areas of the dam during September (mean of 18.57ug/L / sample) and October (mean of 26.47ug/L / sample) and dropped in November (mean of 7ug/L sample). Chlorophyl-A is a key indicator of algal biomass and water quality in southeastern Queensland dams, with guidelines setting a target of less than 4 µg/L for moderately disturbed freshwaters to protect aquatic ecosystems. Lake Macdonald has a history of high chlorophyl-A count, with a mean of 10ug/L being recorded from historical data.

Monthly water quality sampling has been undertaken to assess dam health after fish salvage operations were halted in July 2025. The frequency of sampling increased from five to ten sites in October and November in response to poor results in August and September.

2. 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 Table10.

Table 10: Aquatic Fauna and Salvage Program of Works Summary

Date	Activity	AMP Requirement	Duration	Notes
Monthly (September to October)	Water quality investigation	To document lake health	1 day/ month	Nutrients testing at 5– 10 sites. In-situ water quality profiling also undertaken within sites
25-26th August	Habitat site assessments upstream control sites	Section 6.3 (Table 6.1)	Quarterly (3 days per event)	Up and downstream of the project site
18th – 20th November	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 (2-day event)	Up and downstream of the project site
12th September	Download of platypus camera traps	Section 5.5.3	Quarterly (1 – 2-day event)	
Various	Camera trap analysis from last quarter	Section 5 Table 5.2	Quarterly (5 days)	Last quarter data presented within this quarterly report
13-14th October	eDNA platypus sampling	Section 5	Quarterly (1-2 days)	Water samples collected from various sites.

Date	Activity	AMP Requirement	Duration	Notes
14th October	Fish salvage and relocation undertaken within tailwater pool	Section 5	As required (1 day)	Fish salvage due to fish becoming isolated in tailwater pond from downstream of 6 mile creek due to low rainfall.
Early December	Platypus camera download	Section 5.5.3	Quarterly (1 day)	
8-9th September	Fish condition within lake	Section 5 Table 5.2	Quarterly (2-day event)	Within Lake Macdonald.
12th – 13th November	Fish condition within lake	Section 5 Table 5.2	Quarterly (2-day event)	Within Lake Macdonald.

2.1. Fish community monitoring

The AMP sets out the requirement for quarterly monitoring of fish condition in the lake, using length weight measurements compared to baseline and evaluation survey data, which was conducted by the project SQP.

During the two monitoring events a total of 24,695 fish representing 13 fish species were recorded (caught and observed) during the two surveys of Lake MacDonald (10). This fish catch data is represented by 10 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 22 turtles occurred within the small mesh fyke nets, these included 20 Kreft's turtles and 2 long neck turtles

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 13,291 small-bodied fish species representing five 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 85% of all small-bodied fish captured. Glassfish (*Ambassis agassizii*) were also abundant, while crimson spotted rainbowfish (*Melanotaenia duboulayi*) purple spotted gudgeons (*Mogurnda adspersa*) were present in low abundances.

Large bodied fish communities-

A total of 11,387 large-bodied fish species representing seven species were recorded during the two monitoring events. 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*), saratoga (*Scleropages leichardti*) and spangled perch (*Leiopotherapon unicolor*)

Large-bodied fish communities were dominated by bony bream with this species accounting for 96% of all large-bodied fish caught during the two surveys. Significantly more bony-bream were captured during the second monitoring event than any of the previous surveys (including baseline sampling). Large numbers were recorded within the Six Mile Creek arm of the lake during the second monitoring event. It is possible that a spawning event was occurring with fish moving into the shallower areas of the dam. Bony-bream produce large numbers of eggs (33,000-880,000) spawn in late spring to summer (Goman and Bray, 2021).

Table 11: Fish community results from the first two dam monitoring events

FAMILY *Species*	**Common name**	**Survey 1**	**Survey 2**	**Total**
Small bodied fish species				
AMBASSIDAE				
Ambassis agassizii	Glassfish	600	1,276	1,876
ATHERINIDAE				
Craterochalus stercusmuscarum fulvus	Flyspecked hardyhead	4,106	2,326	6,432
ELETRONIDAE				
Hypseleotris klunzingeri	Western carp gudgeon	3,616	1,360	4,976
Mogurnda adspersa	Purple spotted gudgeon	2	-	2
MELANOTAENIIDAE				
Melanotaenia duboulayi	Crimson spotted rainbowfish	-	5	5
Large bodied fish species				
ANGUILLIDAE				
Anguilla reinhardtii	Long finned eel	26	31	57
CLUPEIDAE				
Nematalosa erebi	Boney bream	453	10,509	10,962
OSTEOGLOSSIDAE				
Scleropages leichardti	Saratoga	2	3	5
PERCICHTHYIDAE				
Macquaria novemaculeata	Australian bass	15	13	28
PLOTOSIDAE				
Tandanus tandanus	Freshwater catfish	26	8	34
TERAPONTIDAE				
Amniataba percoides	Barred grunter	257	42	299
Leiopotherapon unicolor	Spangled perch	-	2	2
Pest fish species				

POECILIIDAE				
Gambusia holbrooki	Mosquito fish	0	17	17
Turtles				
CHELIDAE				
Chelodina longicollis	Long neck turtle	1	1	2
Emydura Krefftii	Krefft's turtle	7	13	20
Total fish catch		9,103	15,592	24,695
Small-bodied fish		8,324	4,967	13,291
Large-bodied fish (excluding bony bream)		779	99	878
Turtle catch		8	14	22

Fish communities over time -

A summary of fish communities recorded from the first two monitoring events and over time is presented in Table 11 & Table 12. A total of 16 fish species were recorded within Lake Macdonald during the three survey events. These have included 12 native fish species, 2 translocated native fish species and two pest fish species.

Table 12: Fish communities recorded to date

Fish species	Baseline December 24	Survey 1 August 25	Survey 2 November 25	Total
Small-bodied fish species				
Carp gudgeon	976	3,616	1,360	5,952
Crimson spotted rainbowfish	51	0	5	56
Flathead gudgeon	7	0	0	7
Flyspecked hardyhead	2,732	4,106	2,326	9,164
Glassfish	2,660	600	1,276	4,536
Purple spotted gudgeon	2	0	0	2
Large-bodied fish species				
Australian bass	3	15	13	31
Banded grunter	223	257	42	522
Boney bream	3,886	453	10,509	14,848
Freshwater catfish	57	26	8	91
Long finned eel	104	26	31	161
Mary River cod	1*	0	0	1
Southern Saratoga	13	2	3	18
Spangled perch	0	0	2	2
Pest fish species				
Mosquitofish	529	0	23	552
Platy	71	0	0	71
Total catch (EF and fyke)	**11,243**	**9,102**	**15,609**	**36,013**
Fish per 100 EF seconds	35	67	134	73
Fish per fyke net	383	717	692	521
Recorded native diversity	12	9	11	14

During all three monitoring events a total of 36,013 fish were recorded (Table 12). The catch data from each of the surveys has been standardised and converted to catch per unit effort for both electrofishing and fyke netting (bottom of Table 12). 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 increased since drawdown and were similar between the previous two monitoring events.
- 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 a macrophyte (combomba) dominated lake to the present, where aquatic plants are nearly absent. This would have implications for fish species such as rainbowfish that rely on aquatic plants to for egg laying and reproduction (Goman and Bray, 2022).
- Catches of large-bodied fish with boat electrofishing during the three surveys has been variable between surveys. Bony bream and saratoga were more abundant within the October survey, while Australian bass, freshwater catfish and banded grunter, were more abundant during the August survey. This probably reflects the depth and general distribution of the fish species within the lake at the time of the survey and how effective the electrofishing boat is in capturing these species

This section of the report summarises the results of two quarterly monitoring events undertaken in August and November 2025, investigating fish communities and fish condition in Lake Macdonald.

A total of 24,695 fish representing 13 fish species were recorded during the two monitoring events using boat electrofishing and fyke netting.

Monitoring of small-bodied fish communities show that this group of fish are highly abundant within lake Macdonald and that catches of most small-bodied fish have increased since the baseline survey.

Catches of large-bodied fish during the monitoring events has been variable and is likely a result of the general distribution of the different fish species within the lake at the time of the survey

Fish condition scores were calculated for selected large-bodied fish species. The condition of the two predatory fish including bass and saratoga increased during the monitoring period. The condition of banded grunter has decreased since lake drawdown, possible changes to dam habitats affecting the feeding behaviour of this species are the most likely cause. Condition of bony bream has dropped during the last monitoring period; this is natural and most likely due to mature fish being in post spawning condition.

2.2. Habitat monitoring

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.

During each monitoring event photo point monitoring was undertaken at each location, this included in each sub-location of each of the sites (upper, middle and lower).

During the baseline survey 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.

Water velocity was also monitored during the August sampling event, with water velocity low immediately downstream of the dam and increased further downstream with increasing tributary inflows.

During the November sampling event water velocity was consistently low within all three downstream sites due to dry spring conditions.

Flow velocity within the upper sites (sites CU02 and SMCUS01) was low consistent with low flows during both events.

All recorded flow velocities were generally within the known swim speeds for the native fish community that reside within 6 Mile Creek and upper tributaries (Watson et al. 2019).

An analysis of profiles found the following trends:

- SMCD01 (site immediately below dam) showed minor bed scour and deposition in all profile locations.
- SMCD02 (site located approximately 1.5 km downstream of dam). Upper transect showed some bed and bank deposition. 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.
- SMCD04 (site located approximately 7km downstream of dam). Profiles indicate that some minor scour and deposition have occurred over time.

- CU02 (control site located in Corroy Creek upstream of dam). Profiles indicate that some minor scour and deposition have occurred over time.
- 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.
- Quarterly monitoring includes assessing three downstream sites located within Six Mile Creek (SMCDS01, SMCDSO2 and SMCDS04), two upstream control sites (SMCUS01 and CU02) and a single dam site.

Habitat monitoring included the following elements, photo point monitoring, bank height relative to water level, flow velocity, cross sectional profiles, water quality, bed substrata, aquatic plant composition, percent riffle cover, bank erosion and instream wood habitat measurements.

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 the quarterly monitoring period.

2.3. Bank erosion

Bank erosion was observed during the baseline survey within two of the survey sites including SMCD01 and SMCD02. Observations include:

- Within site SMCD01 below Lake Macdonald some bank erosion was present during the baseline survey at the top of the site next to an old culvert structure. Erosion was likely to have been historical from previous large spill events. Other areas of the site appeared stable. Photographic comparisons found that there has been minor worsening of erosion in this area (from December 2024 to November 2025).
- During the baseline survey bank erosion is found to be present in two locations within the middle to lower section of SMCD02. These areas had steep banks and were located on outside bend of the river, making them particularly prone to erosive forces. Stream profile transects were conducted at or near both locations to monitor these areas. Minor changes to the bank profiles in these locations were evident in transect data.

During this monitoring period no new areas of erosion were observed within any of the monitoring sites.

2.4. 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.

2.5. Bed substrata

Bed sediments were dominated by silt, sand, and gravel. Some coarser rock types were also found within SMCD01, SMCUS01 and CU02. No change was observed during the drawdown period.

2.6. Turtle monitoring

As per the AMP - *Bi-annual turtle monitoring of turtle condition in lake using length weight measurements compared to baseline and evaluation survey data. T*he first turtle monitoring events were undertaken between the 7th and 10th of October 2025 by the project SQP and monitoring locations are shown in Figure8.

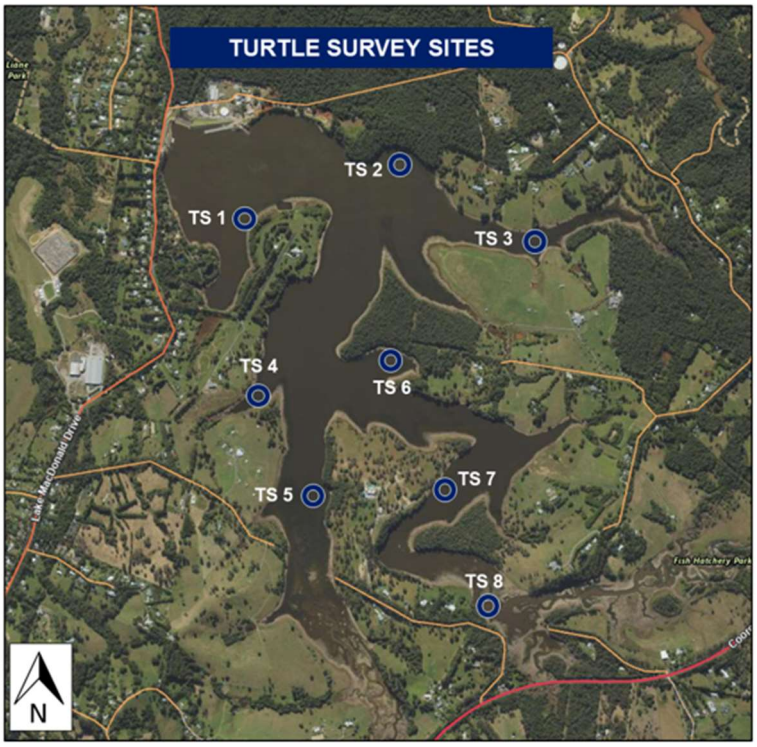


Figure 8: Turtle monitoring location sites

During the current monitoring event a total of 232 turtles were recorded during a four-day survey, compared to 432 turtles that were captured over a five-day period during the baseline event. Despite the difference in the overall catch a similar catch per unit effort (CPUE) was recorded, See Table 13.

Table 13: Turtle % total catch and species

Site	Habitat type	Abundance (% Total Catch)			Total
		E. m. krefftii	*C. expansa*	*W. latisternum*	
1	Main basin	8(5)	6(8)	0	14
2	Main basin	4(3)	3(4)	0	7
3	Backwater	30(13)	17(24)	4 (40)	41
4	Backwater	10(7)	5(7)	2(20)	17
5	Backwater	59(39)	23(32)	3(30)	85
6	Backwater	5(3)	4(6)	0	9
7	Flooded tributary	19(13)	8(11)	1(10)	28
8	Flooded tributary	26(17)	5(7)	0	31
Turtles / site		19	9	1	29
Totals		**151 (65)**	**71 (31)**	**10 (4)**	**232**

Turtle condition scores were calculated for the three turtle species. The condition of all turtle species has decreased since baseline monitoring occurred. Although only small sample sizes of saw shell turtles were available to assess this species. Body Condition Index scores calculated indicate that the condition of broad shell turtles and Kreft turtles has dropped since lake drawdown and have poor body condition.

Reduced condition of turtles is likely to have been caused by lowered dam levels that has reduced aquatic vegetation, increased turtle density and possibly reduced foraging opportunities. Scheduled monitoring in February 2026 will provide further information on turtle communities and health within Lake Macdonald.

The turtle species present in Lake Macdonald have diverse dietary requirements. Broad shelled turtles present in the dam have an almost exclusive carnivorous diet feeding on fish, crustaceans, carrion and occasionally plant material (Cann and Sadlier, 2017). While both the Kreft turtle and saw shell turtle are opportunistic omnivores feeding on what is readily available including plant material (algae and aquatic macrophytes), crustaceans, gastropods, and bivalves (Cann and Sadlier, 2017). Since lake drawdown the extensive beds of aquatic macrophytes (mostly introduced combomba) have mostly disappeared with the lowered water levels. This may have reduced foraging opportunities for turtles, particularly the omnivorous Kreft and saw shell turtles, that consume plant material.

Further data will be collected in February 2026 and reported in the next quarterly report to assess overall turtle community health condition and will confirm if any intervention would be required. At this stage there is no immediate threat to the turtle community.

2.7. Platypus monitoring

The Aquatic Flora and Fauna Management Plan (AFFMP) 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.

2.8. 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 13 October 2025 following the sampling protocol provided by EnviroDNA.

A total of 54 samples at the 22 sites were sampled for platypus DNA in October 2025. Out of the 54 samples analysed for the presence of platypus DNA, eight (8) samples returned a positive result (2-3 positive qPCRs), and an additional six (6) samples returned an equivocal result (1 positive qPCR). No platypus DNA was detected in the remaining 40 samples.

Detections were mostly clustered in two upstream tributaries of Lake Macdonald with no detections in the lake zone. Compared to previous results, platypus occurrence appears to have 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).

2.9. Active platypus burrow searches

No active platypus or burrow searches were conducted for this first quarterly 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

2.10. Camera trapping

As part of monitoring activity 10 camera traps (Browning DCL Pro Nano) were installed in July and retrieved in September 2025. Five were installed along Six Mile Creek upstream of Cooroy Noosa Road and the remaining five within Cooroy Creek downstream of the Cooroy Noosa Road.

In response to the baseline eDNA and camera trapping results, the locations of the camera traps for the current quarterly monitoring period (September to November) were altered with a focus on installing cameras in areas of higher baseline eDNA and camera trap activity.

The results presented within this section of the report summarise the results from the previous quarterly monitoring period extending from July to September 2025. This included a total of 194-time lapse videos and 29,207 motion trigger images. A portion of these of these were analysed and 31 platypus were recorded during this period. The monitoring results obtained by the cameras suggest platypus activity in both systems has been maintained post-drawdown.

The results of the eDNA analysis and the camera trapping review 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 be required to help determine if this natural variability in platypus movement and occurrence in these systems, or a result of lake drawdown.

2.11. Fish salvage

A fish salvage was undertaken on the 14th of October 2025 in the spillway tailwater pool immediately in front of the dam spillway. Due to low rainfall and no siphon releases, many fish had become isolated in this pond and disconnected from travelling downstream of 6-mile creek. The water body could not sustain the volume of fish and water quality was declining, so a salvage effort was initiated.

A total of 3,460 fish and a single turtle were captured during the fish salvage operation. This total included 3,057 small-bodied fish, 347 large-bodied fish, a single turtle and 56 pest fish. These fish (apart from the pest fish, which were humanely euthanised) were relocated immediately downstream of 6-mile creek. Inspections of the site and release area downstream the following day after the fish salvage revealed that fish had perished overnight. This included, approximately 23 fish consisting of long finned eels, freshwater catfish and a single bass, these were removed from the site and buried. Refer to Table 14 for a full catch breakdown by species and quantity.

Table 14: Fish Salvage of the stilling basin

FAMILY *Fish species*	Common name	Total
Small-bodied fish species		
AMBASSIDAE		
Ambassis agassizii	Olive perchlet	114
ATHERINIDAE		
Craterochalus stercusmuscarum fulvus	Flyspecked hardyhead	50
ELETRONIDAE		
Hypseleotris sp.	Carp gudgeon	2860
MELANOTAENIIDAE		
Melanotaenia duboulayi	Rainbowfish	33
Large-bodied fish species relocatable		
ANGUILLIDAE		
Anguilla reinhardtii	Long finned eel	38
CLUPEIDAE		
Nematalosa erebi	Boney bream	127
OSTEOGLOSSIDAE		
Scleropages leichardti	Saratoga	13
PERCICHTHYIDAE		
Maquaria ambigua	Golden perch	7
Percalates novemaculeata	Australian bass	15
PLOTOSIDAE		
Tandanus tandanus	Freshwater catfish	80
TERAPONTIDAE		
Amniataba percoides	Banded grunter	57
Leiopotherapon unicolor	Spangled perch	10
Turtles		
CHELIDAE		
Emydura macquarii krefftii	Krefft's turtle	1
Pest fish species		
CHICHLIDAE		
Oreochromis mossambicus	Tilapia	56
Total fish and turtles (species)		3461 (14)
Total small-bodied fish		3057
Total large-bodied fish		347

2.12. 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:

- *Myriophylum sp*. was recorded in low abundances for the first time in CU02.
- Occasional free floating combomba, water lilies (*Nymphiodes sp.)* 1% cover were recorded within SMCD01. The combomba plants were not rooted and were likely to have been washed downstream from the lake.
- Within the dam the edges and banks are slowly being colonised by native aquatic plants including water primrose (*Ludwigia peploides*) and Persicaria (*Persicaria sp*).

Mat rush (*Lomandra sp.*) was common within all habitat sites ranging from 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.

2.13. Riffle habitats

A small riffle habitat is present within SMCD02 under the bridge. This habitat is not natural but occurs as a result of bed scour material added to the site during bridge construction.

Small riffle habitats were observed within both the upstream sites. SMCUS01 varied between 5% and 10% riffle habitats, while CU02 varied between 2% and 5% riffle habitats.

Since drawdown no significant change to these habitats has occurred.

3. Flora & Fauna (terrestrial)

No vegetation clearing was completed in this monitoring period. All clearing has been completed to date for the project. No interactions with rare or threatened species were noted and no animal breeding places were tampered with or disturbed during this reporting period also.

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

1 terrestrial fauna incident was noted during the reporting period, (Report only). An unwell pelican was observed floating at the edge of Lake MacDonald adjacent to the works area and was collected and taken to a wildlife carer for rehabilitation. The suspected cause of its illness was reported to be botulism; the bird was fully rehabilitated and released by the wildlife rescue.

4. Noise & Vibration

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

Figure 9: Noise and Vibration Monitoring Locations

4.1. Noise

Noise monitoring has been conducted in order to assess compliance against the acoustic quality objectives (Table 15). 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.

Both noise loggers and the vibration logger were moved since the last monitoring report to a residential property along Lake MacDonald Drive for a more representative sample site. (Refer to Figure 9) One noise logger is located inside the property, and one is located at the façade. The vibration logger is located at a property boundary adjacent to Lake Macdonald drive.

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 15 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 15: 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 at the end of the monitoring period to collect further data from project activities and is detailed in Table 16. The noise attendant makes continuous notes of what activities are happening throughout the 15-minute recording period and the table breaks this down as a % of time across the monitoring period. The noise levels exceed the objectives and the data indicates that non-project traffic is the primary source of noise emissions. Attended noise monitoring is measured in 15-min intervals. The project baseline of 55dBA was also measured in 15-minute intervals in 2018 and is therefore a better metric to compare against rather than the objectives outlined in Table 15.

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 16: Attended noise monitoring results

Date	Location	Construction Event	Main traffic Sources	% of time active	LA_{eq} (15minutes)	Comments	No. of Project Vehicles	No. of non-project vehicles (residential traffic)
24/11/25 2:54 pm	Location 2	Piling activity occurring, use hammer Lake MacDonald Residential Traffic	Lake Macdonald Residential traffic	80	63.2	Kellers site using impact hammer, impact hammer used in minimal time periods. Attended monitoring time selected to coincide with the impact hammering. Lake Mac traffic a significant noise source	4 Light vehicles	36
			Piling activity - impact hammer	50			5 trucks	
			LMDIP trucks carting rock bags	20				
			Crane lifting rock bags	20				
27/11/25 8:25 am	Location 2	Lake MacDonald Residential Traffic Tipper trucks carting rock bags to Kellers.	Lake Macdonald Residential traffic	80	56.6	Non-site related residential traffic was the predominant noise source recorded during the noise monitoring period.	3 Light vehicles	44
			LMDIP trucks carting rock bags	20			9 trucks	
			Construction noise - putting rock bags in	5				

27/11/25 8:44 am	Location 2	Lake Macdonald Residential Traffic Tipper trucks carting rock bags to Kellers.	Lake Macdonald Residential traffic	80	57.1	Non-site related residential traffic was the predominant noise source recorded during the noise monitoring period.	4 Light vehicles	37
			LMDIP trucks carting rock bags	20			9 trucks	
			Construction noise - putting rock bags in	5				

Figure 10 indicates that noise throughout the day with the exception of between 2am and 5am is above the 50 dBA objectives. This includes almost 9 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.

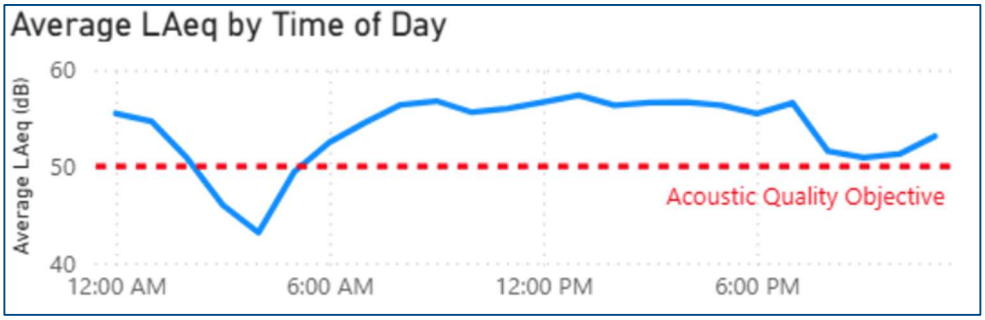


Figure 10: Average LA_{eq} - 1hr by time of day (Monday to Sunday 24-hour period)

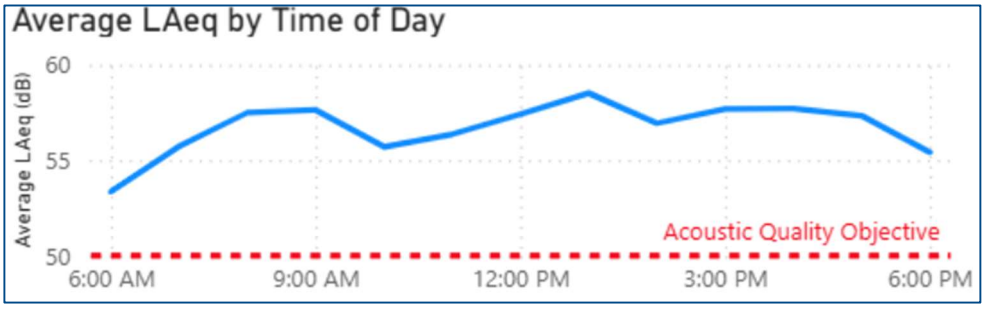


Figure 11: Average LA_{eq} - 1hr by time of day during work hours weekdays (6am-6pm Monday-Friday)

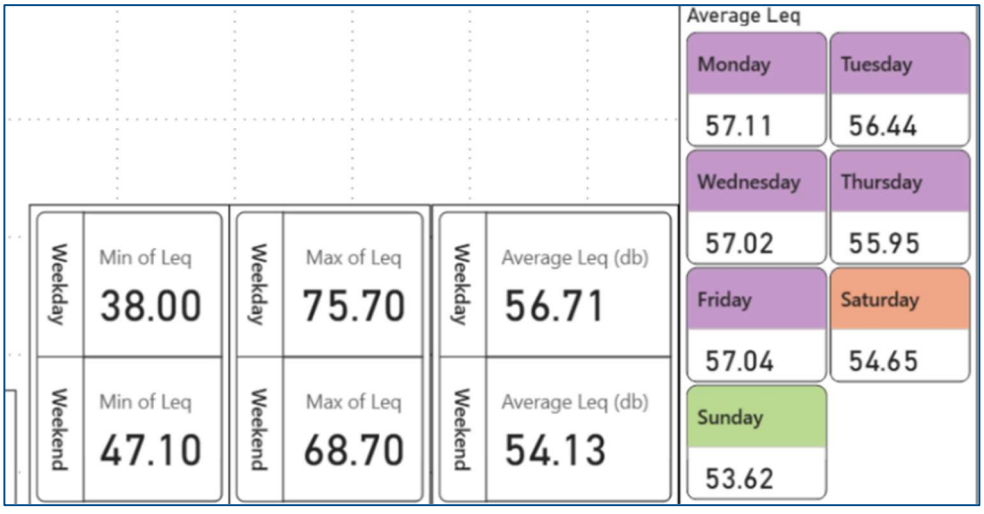


Figure 12: Average LA_{eq} - 1hr during working hours 6:30-6:30

Figure 12 shows that on average LAeq during construction working hours is consistently 6-7 dBA above the acoustic quality objectives.

Figure 13 below 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 6170 class 3 and above vehicles travelled over the counter, with 1711 being directly attributed to the LMDIP project. This equates to 27% of all recorded vehicles for the monitoring period.

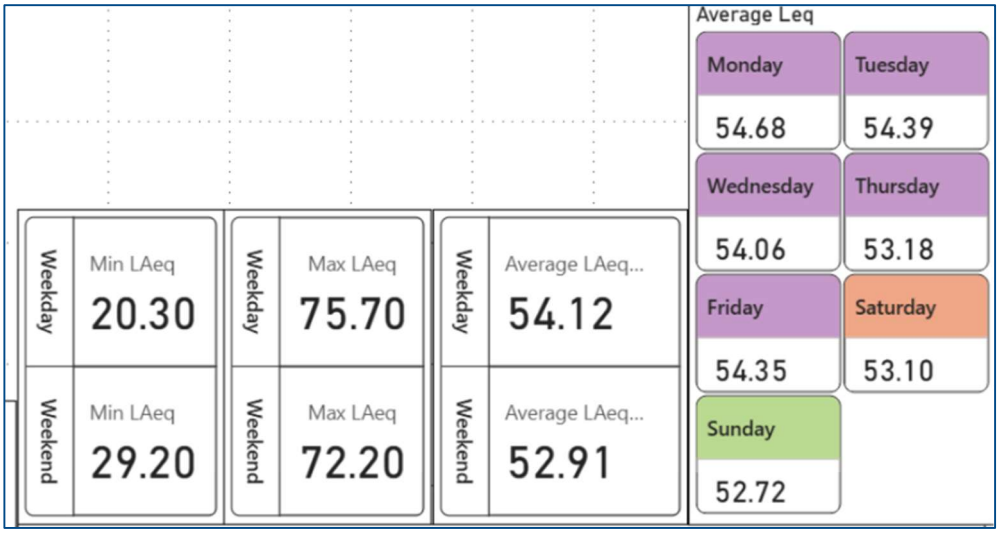


Figure 13: Average LA_{eq} across 7 days outside working hours 6:30pm - 6:30am

4.2. Vibration

High vibration risk activities being conducted during the monitoring period included, vibratory and hammer sheet piling, truck and dog rock haulage and rock tip off and push for the cofferdam construction.

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.

Vibration monitoring has been undertaken at two separate locations:

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

Location 2: The Right-Hand spillway wall. Monitoring was undertaken from the 2nd of August through until the 16th of October, monitoring at this location was compliant with all target levels. The highest reading was recorded at 11:54am on the 11th of September at 0.7943 mm/s.

During the monitoring period there were 6 timeframes when the vibration recorded an exceedance. Only on two of these occasions was the level directly attributable to construction activities. These can be seen in

Table 17 below.

Table 17: Vibration results above human comfort level

Day	Date	Record End Time	Time [s]	VEC[mm/s]	Comments
Monday	08/09/2025	10:46:04	24	2.36592	Anomaly, not picked up by dam wall monitor which was closer.
Wed	24/09/2025	08:35:40	30	2.285599	Vibration hammer on pile 44-50
Wed	24/09/2025	08:39:40	30	2.048802	Vibration hammer on pile 44-50
Sun	28/09/2025	08:52:41	30	2.42661	Non-Construction day
Thursday	16/10/2025	09:13:20	30	3.419795	No Piling activities or heavy vehicle movements this day
Thursday	30/10/2025	18:03:41	30	5.260173	Severe Thunderstorm

5. 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 14. 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.

Figure 14: Air Quality Monitoring Locations, (including PM10 Monitor)

5.1. Dust Deposition Gauges

Results from the dust deposition gauge (DDG) testing are provided in Table 8. All results were below the compliance criteria of 120mg/m2 per day. DDG3 shows a higher rate of dust mg/m²/day which is potentially shows a higher reading of insoluble solids likely due to its location onsite behind the project office adjacent to a haul road where quarried materials are being delivered and stockpiled. This haul road has now been sealed. Further investigation will be undertaken to confirm if additional dust mitigations are required onsite and if the monitor needs to be moved to a more suitable location.

*Note **The map included in LMDIP-05829-GNL-ENV-MPL-00006 provided to the OCG showed dust gage 4 (DDG4) at the Botanical gardens, which is incorrect. DDG4 was relocated from the Borrow Pit site to an adjacent stakeholder's property to better represent dust impacts.*

Table 18: Dust Deposition Guage Results

Month / Year	Guage ID	Date Out	Date In	Insoluble solids (mg/m^2/day)
August- September 25	DDG1	18/08/2025	19/09/2025	63.3
	DDG2			26.7
	DDG3			13.3
	DDG4			20
September-October 25	DDG1	19/09/2025	16/10/2025	90
	DDG2			60
	DDG3			10
	DDG4			26.7
October -Nov-25	DDG1	16/10/2025	13/11/2025	6.7
	DDG2			33.3
	DDG3			93.3
	DDG4			33.3

5.2. PM10 Monitoring

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 and all technical issues reported in the previous report were resolved. PM10 monitoring was undertaken using a Cube360 real-time analyser.

The data in Figure 15, demonstrates no exceedances in this reporting period with all data captured well below the 50µg/m³ 24-hour criteria. There were a few days in August, where data was not recorded which was due to a connectivity issue and the connection to the recording platform cloud dropped out, this is of no impact to the overall results.

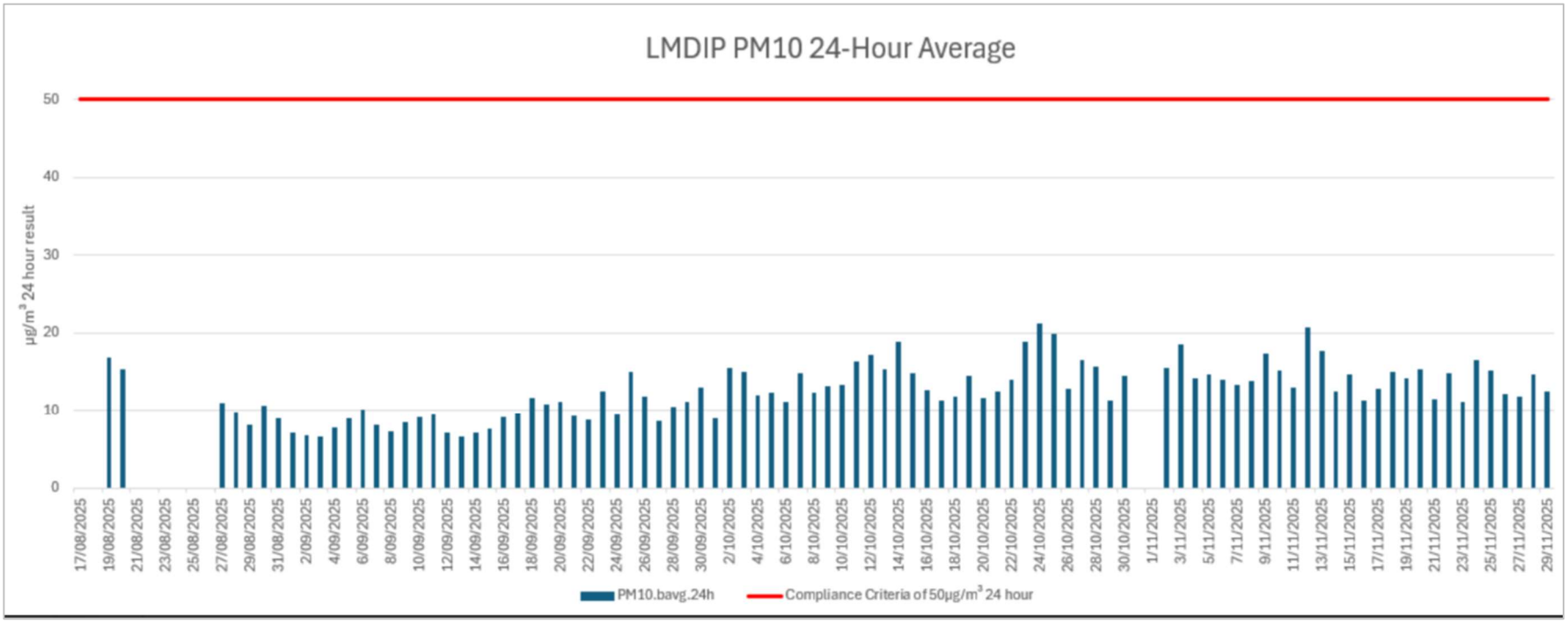


Figure 15: LMDIP PM10 24 Hour Average

6. 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 9.

In summary:

- 4.62 tonnes of general waste has been generated on the project to date including 1.82 tonnes in the reporting period
- 311.60 tonnes of construction and demolition waste has been generated on the project to date including 123 tonnes in the reporting period
- >94.87% of waste has been diverted from landfill to date.
- 46.660 tonnes of steel waste recycled during the monitoring period.

Table 19: 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		**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		**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		**6.00**
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		**8.47**
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		**27.60**
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		**7.65**
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		**3.89**
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**
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		**4.62**
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	0.00	**89.96**
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	0.00	**85.35**
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		**4.62**
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	0.0	**311.60**
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		0.29
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%		94.87%