Lake Macdonald Dam Improvement Project

Community Reference Group
Meeting 2

Wednesday 12 February 2025

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Admin and updates

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Introductions

Special guest speakers:

- Simon – Environmental Manager, John Holland
- Daniel – Design Manager, Seqwater
- Cameron – Project Manager, John Holland

Administration

- Update to Terms of Reference
- Name consent for use on meeting minutes
- Photo consent forms
- Outstanding actions from last meeting

Haulage routes	Newsletters	Fishing platform	Fish hatchery
• To be covered today	• December 2024 • January 2025 • Available on website and emailed to distribution list	• To reopen when construction complete	• Previous MRCCC agreement with Seqwater terminated February 2020 • Tanks will be relocated and remaining equipment to be disposed of • During construction will be used to house field related equipment • Plans following construction TBC

Communication updates

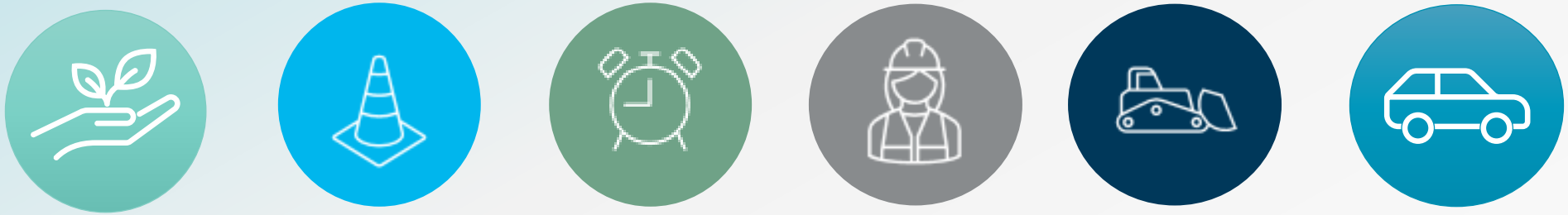
Office of Coordinator-General (OCG) consultation

- December 2024, the Lake Macdonald DIP team submitted a project change application to the OCG relating to proposed changes to the temporary cofferdam design for water security reasons.
- The community was invited to make a submission on the proposed changes from 16 December 2024 to 28 January 2025.
- Four feedback submissions received:
  - Three x state and local government submissions (DTMR, DETSI and Noosa Shire Council)
  - One x community member submission (local property owner)
- Lake Macdonald DIP team response to submissions are underway and expected to be lodged by 14 February 2025.
- A consultation summary report will also be submitted to the OCG.

Figure: Artist's impression of new dam

Seqwater consultation

Key themes:



Environment

Construction impacts

Project timing

Work opportunities

Project scope

Traffic and speed

Upcoming engagement

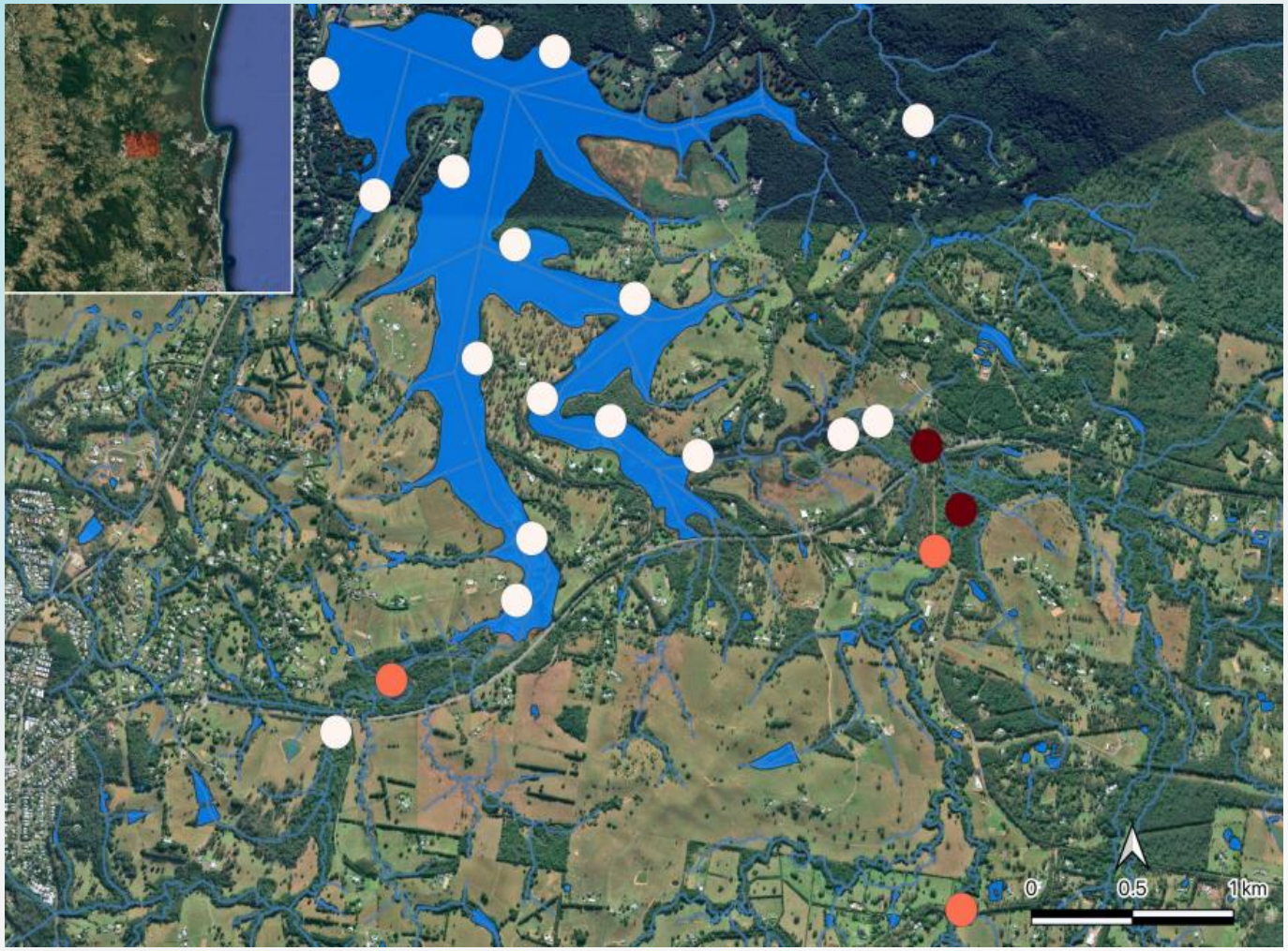
Engagement	Timeframe
Cooroy State School	February meeting
Noosa Shire Council DA public comment – Lake Macdonald Rowing Club	Opens 17 Feb and closes 10 March
Seqwater and Noosa Shire Council project working group	25 February
Project newsletter	April 2025

Flora and Fauna impacts

Lake Macdonald Aquatic Biomass Survey

- The Aquatic Biomass survey, platypus habitat survey and Platypus E-DNA samples collected on Lake Macdonald will determine what species are present in the lake and will potentially need relocation during lake drawdown.
- Various survey techniques were used including electrofishing, fyke netting, sonar and habitat survey and assessments.
- Early indications of survey suggest no invasive species have been found and no endangered species have been recorded.
- Turtle and fish species were found during the survey.
- Species Management Plan have been developed to address species specific mitigation measures
- An aquatic fauna relocation program is required for species of conservation significance
- If required, species will be relocated to Cooloolabin Dam.

Platypus E-DNA results



Map of sites sampled in November 2024 and analysed for platypus DNA around Lake Macdonald with the results reflected by colour (white = negative, orange = equivocal, red = positive).

What is Platypus E-DNA testing??

Water samples collected from water bodies where platypus live, can be tested for the presence of platypus DNA

Vegetation clearing

- Tree clearing is required as part of the project works under strict approvals
- Minor tree clearing has already been completed for early works site establishment
- Additional tree clearing is required for main project works
  - This includes areas of Koala Priority Area and Core Koala Habita
  - No koalas or evidence of koalas has been observed within the project area
  - There's specific methodology for tree clearing in koala habitat areas
  - All personnel must follow legislative requirements including Koala Conservation Policy which outlines sequential and staged clearing methods
  - Experienced Koala Fauna spotters will be present during clearing in koala habitat.
- Protected plants
  - Native Guava seeds will be collected and propagated in conjunction with Noosa Landcare and replanted at local Landcare restoration sites (approx. 500 plants).

Initiatives

- Cod logs – project timbers have been identified to be salvaged for the Burnet Mary Regional Group (BMRG) cod log trial
- Habitat stacks – Noosa Shire Council is taking some felled project timber from clearing works for local habitat stack programs
- Cash for cans being collected onsite with money donated to local Koala rescue groups
- Kabi Kabi First Nations People invited to salvage project timbers/significant trees and participate in protected plants seed salvage and propagation program
- Sustainability initiatives being investigated.

Excavator placing root balls to build habitat stack.

Logs are halved and carved out by chainsaws before being reassembled.

Traffic management plan

Traffic management

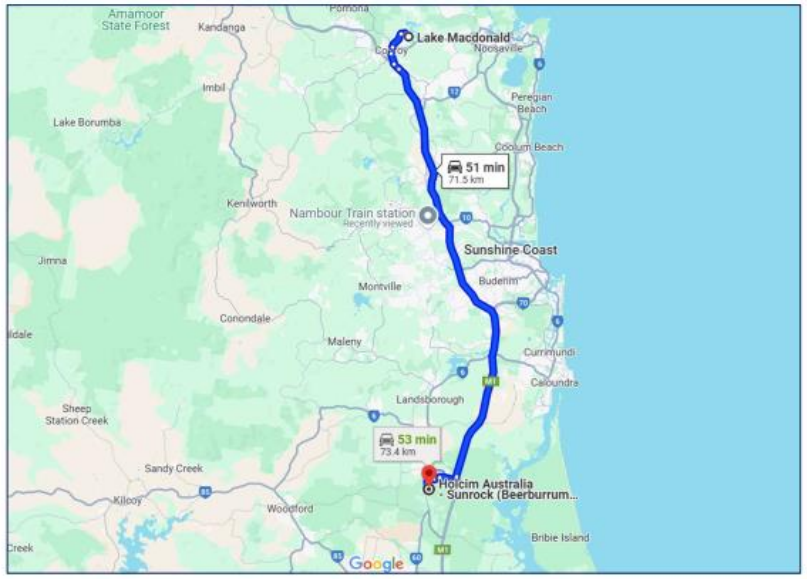
- Key Topics
  - Truck haulage routes
  - Truck movements
  - Pedestrian management and Speed limit zones

Haulage routes

Haulage routes

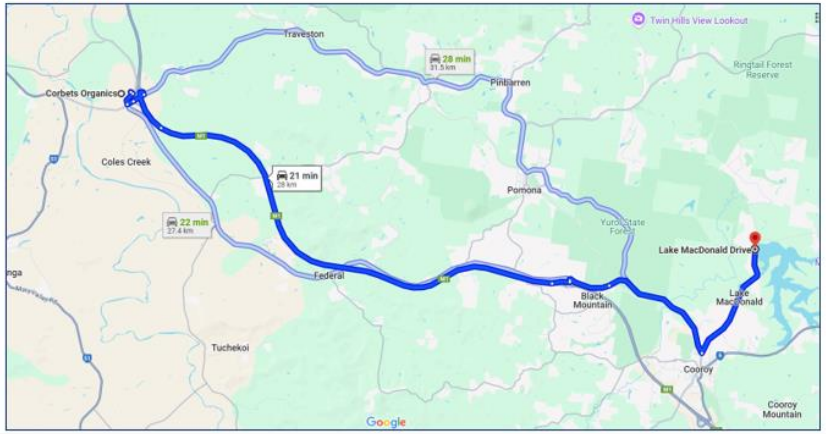
Cordwells, Kin Kin

Holcim, Beerburrum

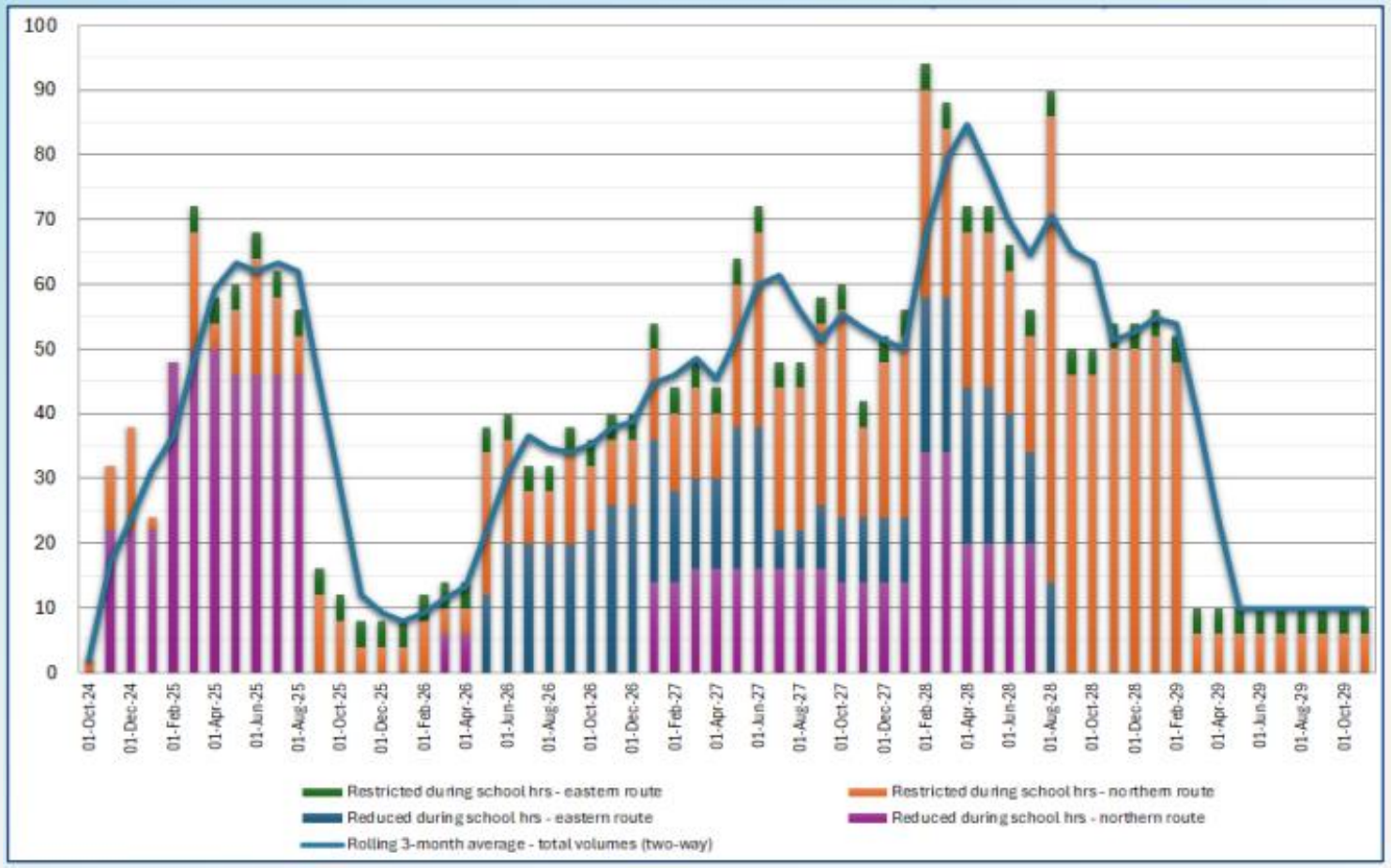


Boral. Moy Pocket

Corbets, Traveston



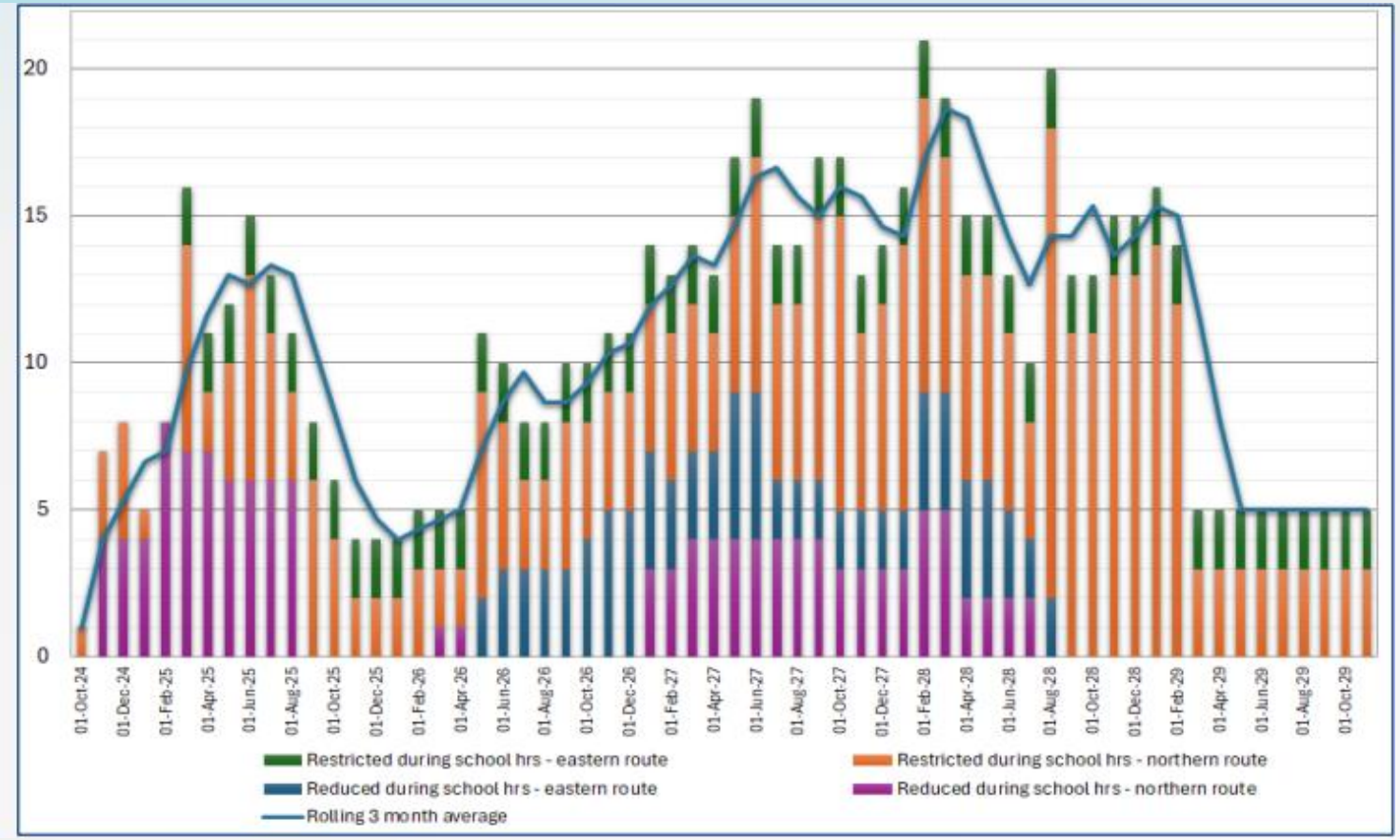
Heavy vehicle movements - Monthly



HV movements two-way by month by route and reduced or restricted school hours

- Maximum is 94 heavy vehicles (two-way) movements with 3-monthly rolling average is 85 heavy vehicle (two-way) movements
- Estimated peak hour flow for heavy vehicles is 21 two-way movements (rounded up to be conservative)

Heavy vehicle movements – Hourly Peak



HV Movements hourly two-way peak

- 11 movements entering and 11 movements exiting the site, or one heavy vehicle entering and one exiting the site every 5.5 minutes.

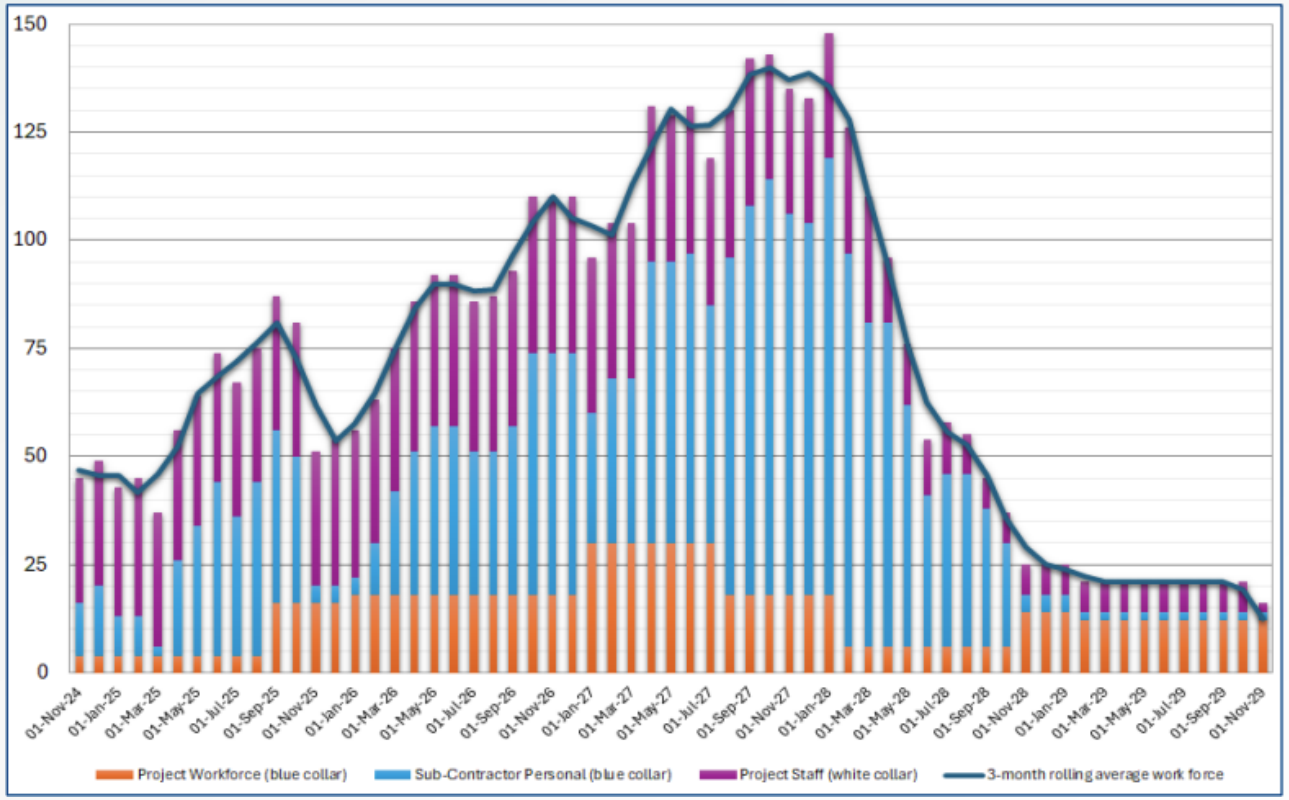
Traffic Impact Assessment

Light Vehicle Routes and Movements

- 60% (approx. 78 workers) from Sunshine Coast (entering site locally via Elm Street south and Lake Macdonald Drive).
- 20% (approx. 26 workers) from Noosa (entering site locally via Cooroy-Noosa Road and Sivyers Road).
- 20% (approx. 26 workers) from Gympie (entering site locally via Elm Street north and Lake Macdonald Drive).

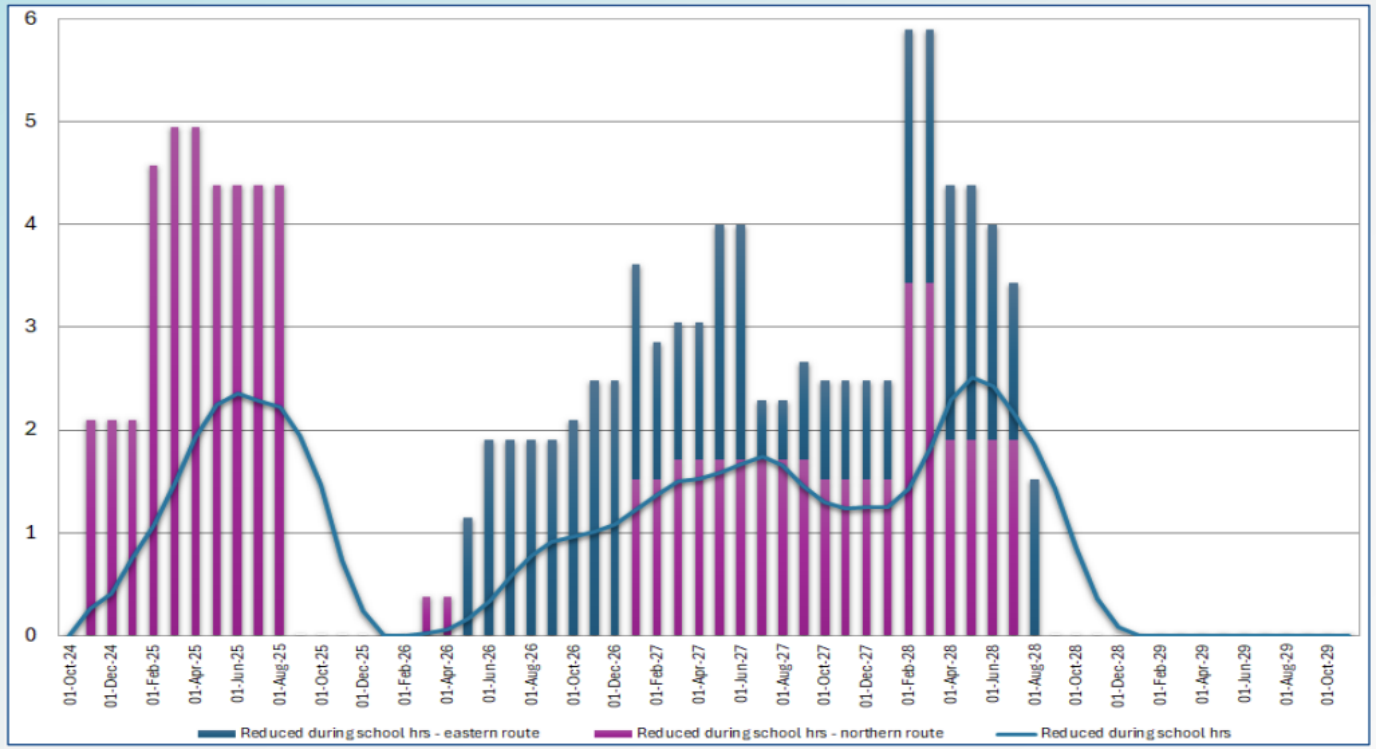
**Noted to arrive well before AM peak and in PM generally outside peak, noting existing left during higher LMD northbound flows which are not opposing/conflicting each other.*

Worker Type	Arrive	Depart	Peak Month	Peak 3-month Average	Project Average
Project Staff (white collar)	6:00 - 6:30 AM	6:00 - 6:30 PM	29	31	25
Project Workforce (blue collar)	5:30 - 6:30 AM	5:00 - 6:00 PM	18	18	14
Sub-Contractor Personal (blue collar)	6:00 - 6:30 AM	5:00 - 5:15 PM	101	91	34
Total			**148**	**140**	**72**



Traffic Impact Assessment

Heavy Vehicle movements – School Peaks



Reduced heavy vehicle two-way flows during school peaks

Local Traffic Observations:

- Cooroy State School start/end times are 8:45am and 2:50pm.
- Traffic flows through the intersection highlight distinct peak hour (ending) times of 8:30am / 8:45am and 3:30pm / 3:45pm.

Minimised heavy vehicle flows proposed between 7:20 – 8:45am and 2:30 – 3:45pm.

- Maximum of six two-way movements (or three movements entering and three movements exiting the site).
- One heavy vehicle entering the site every 20 minutes and one exiting the site every 20 minutes, noting split between the northern and eastern routes

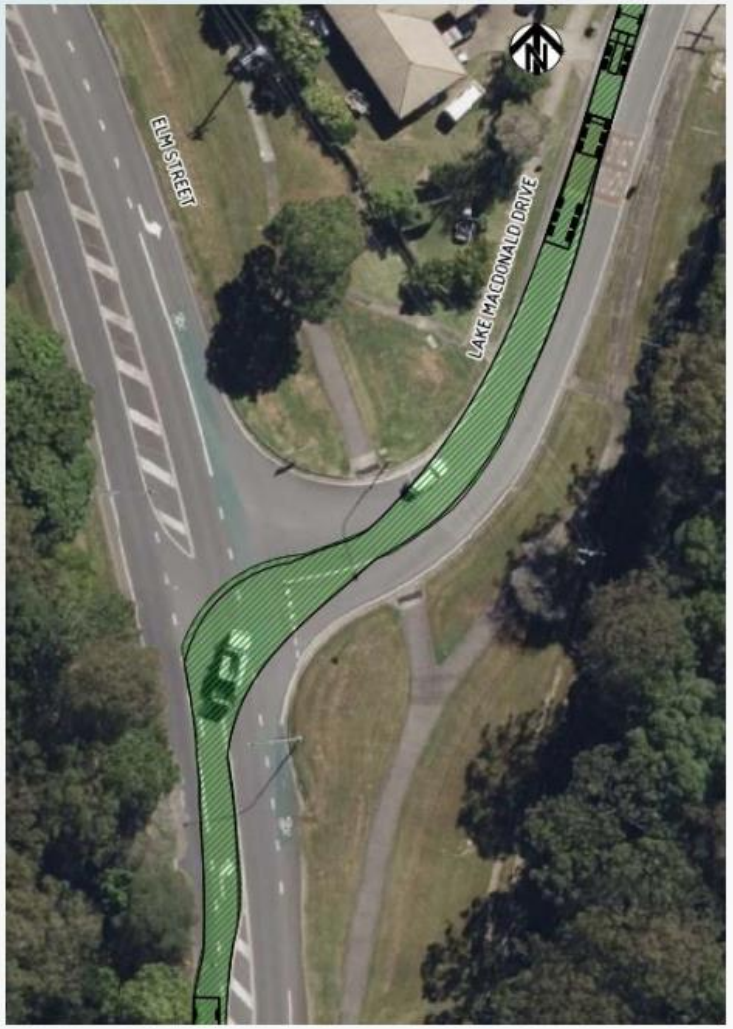
Traffic Impact Assessment

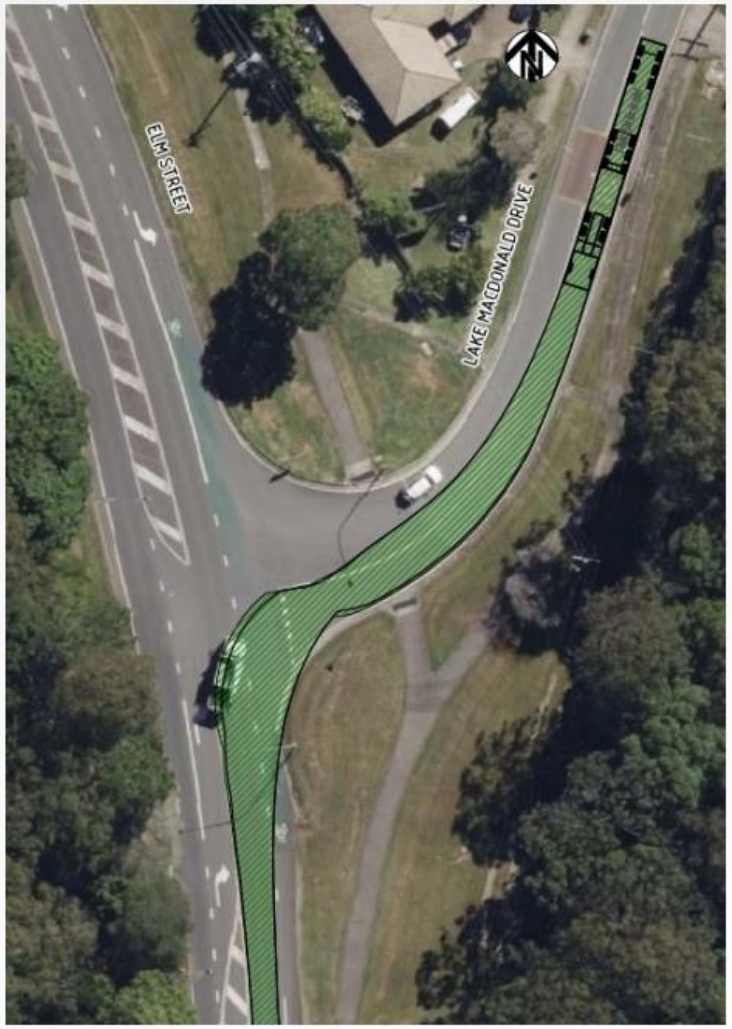
Proposed Mitigation Measures

- Elm Street / Lake Macdonald Drive:
  - Minimised HV flows during school peak periods
  - Localised widening for semi-trailer swept path
  - Traffic Guidance scheme for early works
  - Driver awareness
- Lake Macdonald Drive / Collwood Road:
  - Traffic Guidance scheme with works zone
  - Exiting vehicles held for all entering vehicles
  - Driver awareness
- Elm Street / Diamond Street:
  - Driver awareness
- Cooroy – Noosa Road / Sivyers Road:
  - Driver awareness

Existing traffic situation

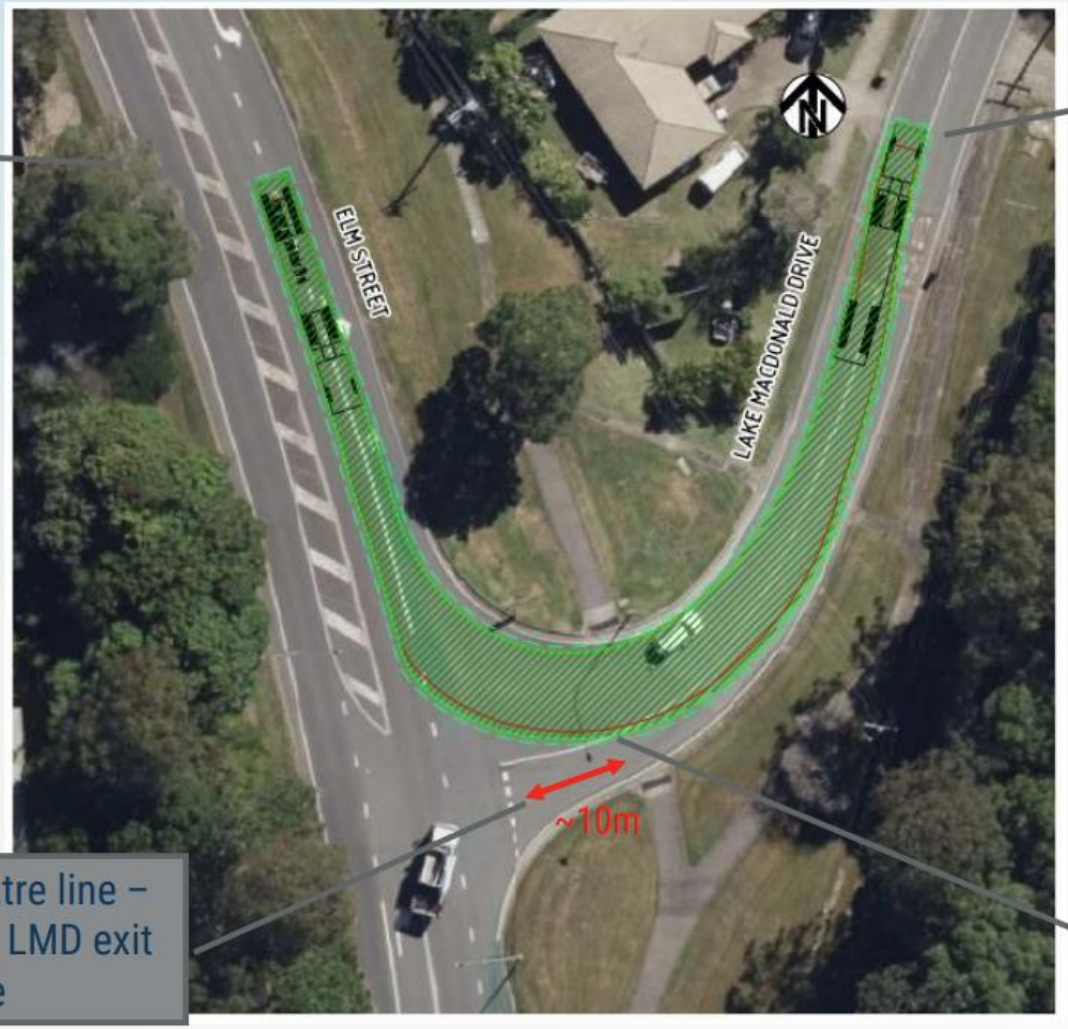
Elm Street/Lake Macdonald Drive Intersection swept paths – B-double





Traffic Impact Assessment

Elm Street/Lake Macdonald Drive Intersection HV swept paths - predicted



Commenced straddling both lanes

Back in lane

Not over centre line – no impact to LMD exit lane

Location commences going over centre line

Traffic Impact Assessment

Elm Street/Lake Macdonald Drive Intersection HV swept paths - actual

<u>Semi-trailer trial run</u>

1. Straddles both lanes on approach.
2. Crosses centre line which complies with AustRoads requirements for rural roads.

Existing traffic situation

Elm Street/Lake Macdonald Drive Intersection swept paths

B-Double left turn out is over centre line

B-Double right turn in is *well* over centre line

Existing traffic situation

Elm Street/Lake Macdonald Drive Intersection swept paths

School bus left turn in seems to be ok

School bus left turn out is over centre line

Road Safety Audit

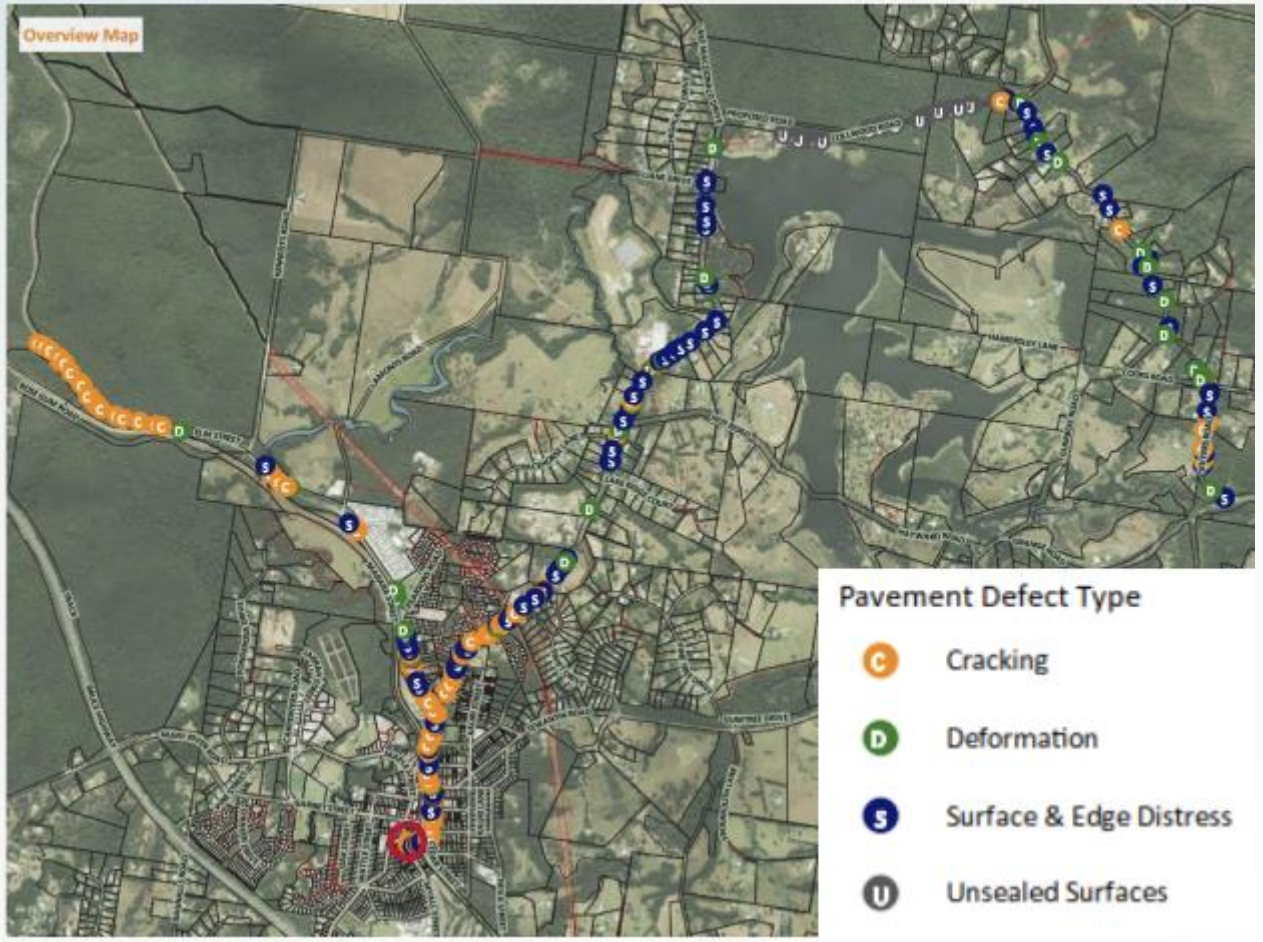
Key suggested actions:

- General maintenance by TMR / NSC for signage and line-marking – missing or fading
- General maintenance by TMR / NSC for overgrown vegetation
- Elm Street / Lake Macdonald Drive:
  - Mitigation for swept paths dependent on actual swept path of semi-trailer straddling both lanes
  - Warning signs for Project HV's and trapped lane
  - Driver awareness training e.g. trapped lane
- Lake Macdonald Drive:
  - Traffic Guidance scheme with works zone and
  - Exiting vehicles held for all entering vehicles
  - Driver awareness
- Elm Street / Diamond Street
  - Driver awareness
- Cooroy – Noosa Road / Sivyers Road:
  - Driver awareness.

Dilapidation Assessment

Summary of findings:

- Numerous pavement defects identified in both the 2020 and the latest assessment, and existing pavement condition is poor at various locations.
- Project is working with TMR and NSC on planned pavement maintenance activities.

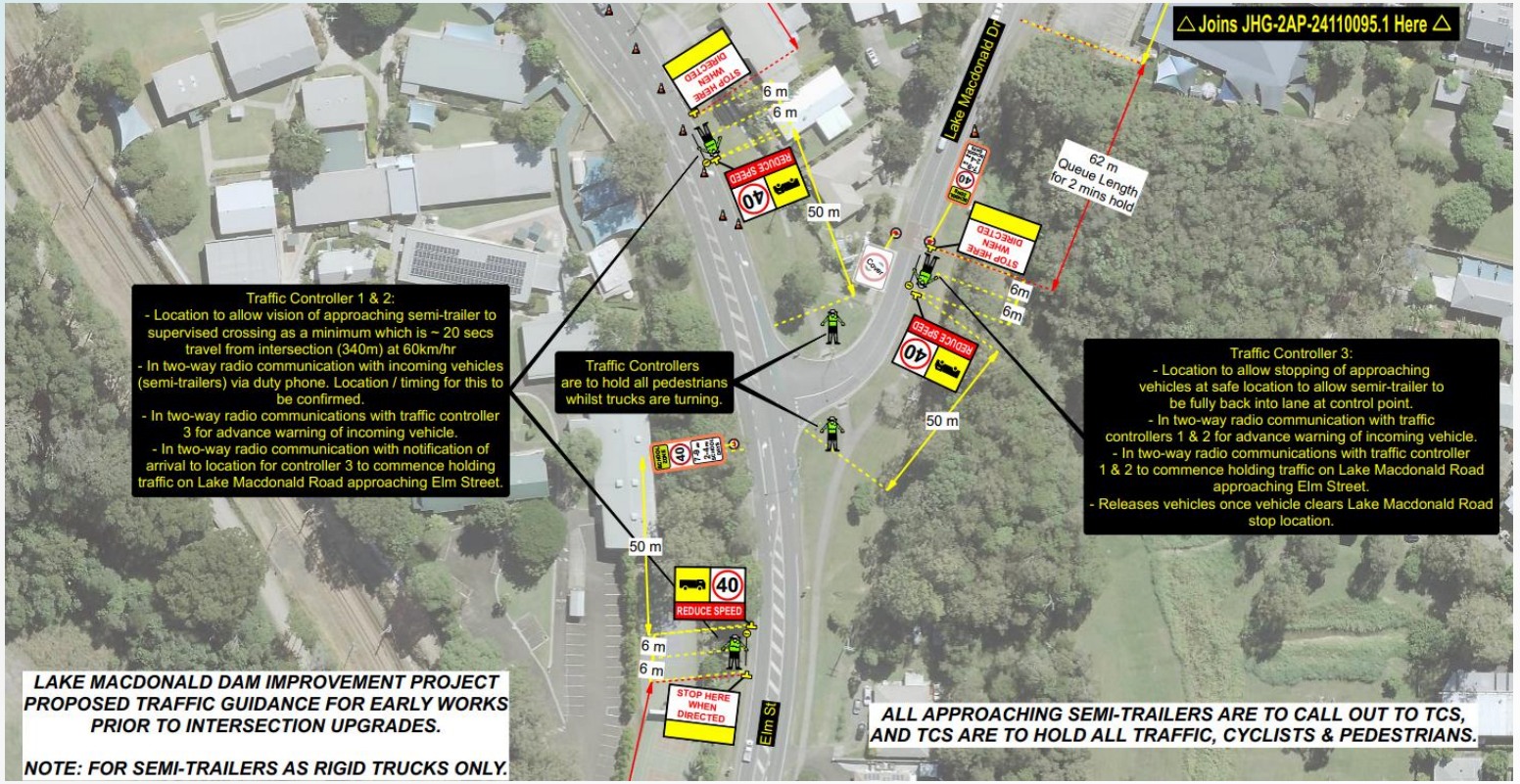


Pre-construction Pavement Dilapidation Survey Report

Elm Street and Lake Macdonald Drive Intersection

Speed Limit and Pedestrian Movements

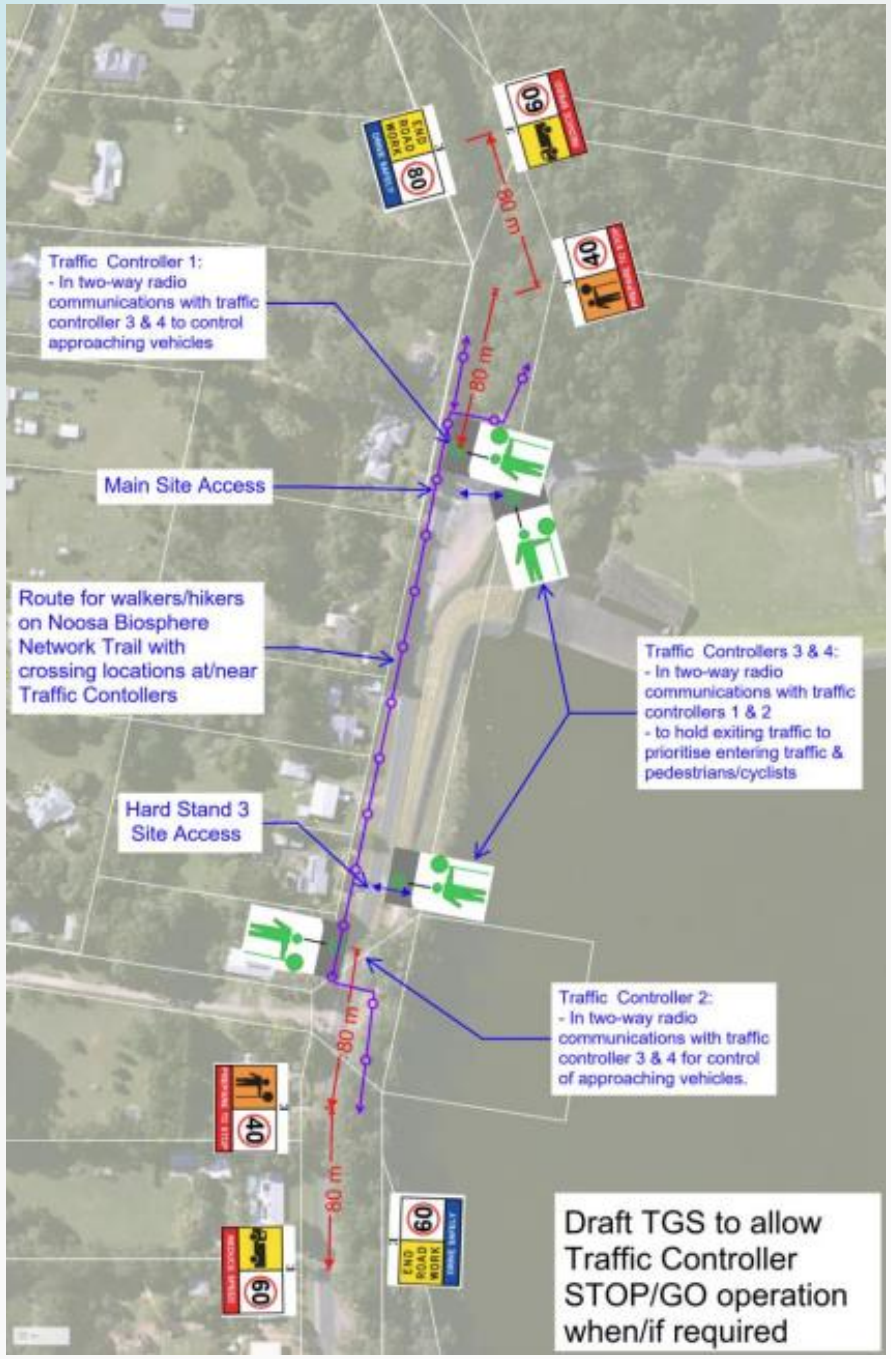
- 40km/hr on approaches as per the Manual of uniform traffic control devices (MUTCD) guidelines.
- Currently in place for semi-trailer movements as per Early Works approval
- Reviewed monthly until intersection has been widened.
- Required until intersection widening completed.
  - Similar TGS to be applied during intersection widening works



Lake Macdonald Drive

Speed Limit and Pedestrian Movements

- 40km/hr on approaches as per the Manual of uniform traffic control devices (MUTCD) guidelines.
- Support construction of the Left Embankment
- Numerous single lane closure to support works.



Construction Phasing overview

Program overview

Phase 0
Early works
2024-2025

Phase 1
Construction of temporary cofferdam
2025

Phase 2
Demolition of existing dam wall
2025-2026

Phase 3
Construction of new spillway & infrastructure
2026-2028

Phase 4
Remove cofferdam and site rehabilitation
2028-2029

Completion
2029

Phase 0 staging:
- Vegetation removal
- Site establishment
- Haul roads
- Deliveries.

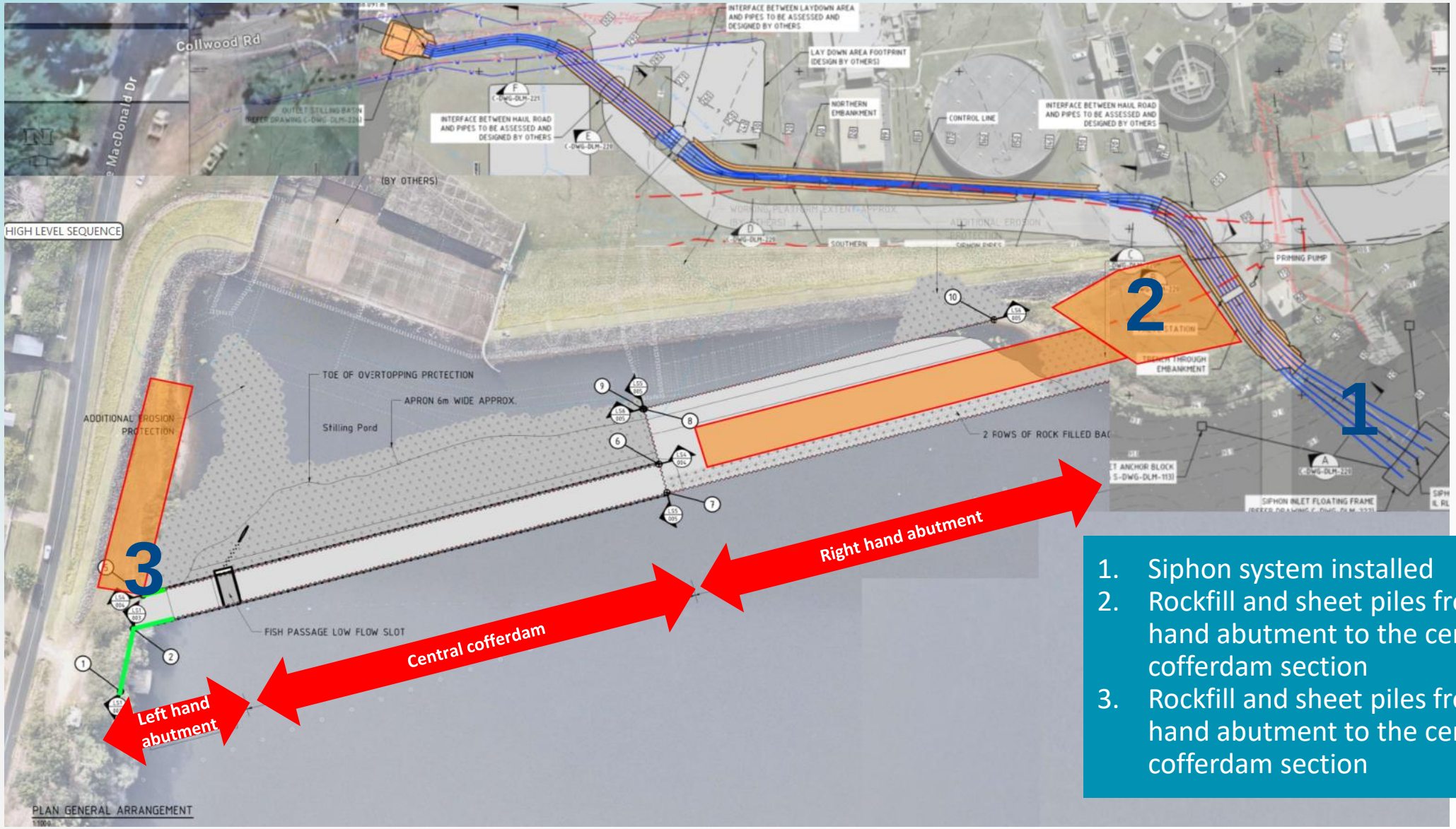
Phase 1 staging:
- Hardstand and siphon system completion
- Maintain water level at 42% (RL 93)
- Rock placement and sheet pile installation.

Phase 2 staging:
- Demolition of existing spillway
- Removal of unsuitable material
- Excavation to rock, then backfill with mass concrete.

Phase 3 staging:
- Construction of a split-level concrete spillway
- Removal and reconstruction of the left and right embankments
- Ground improvement works.

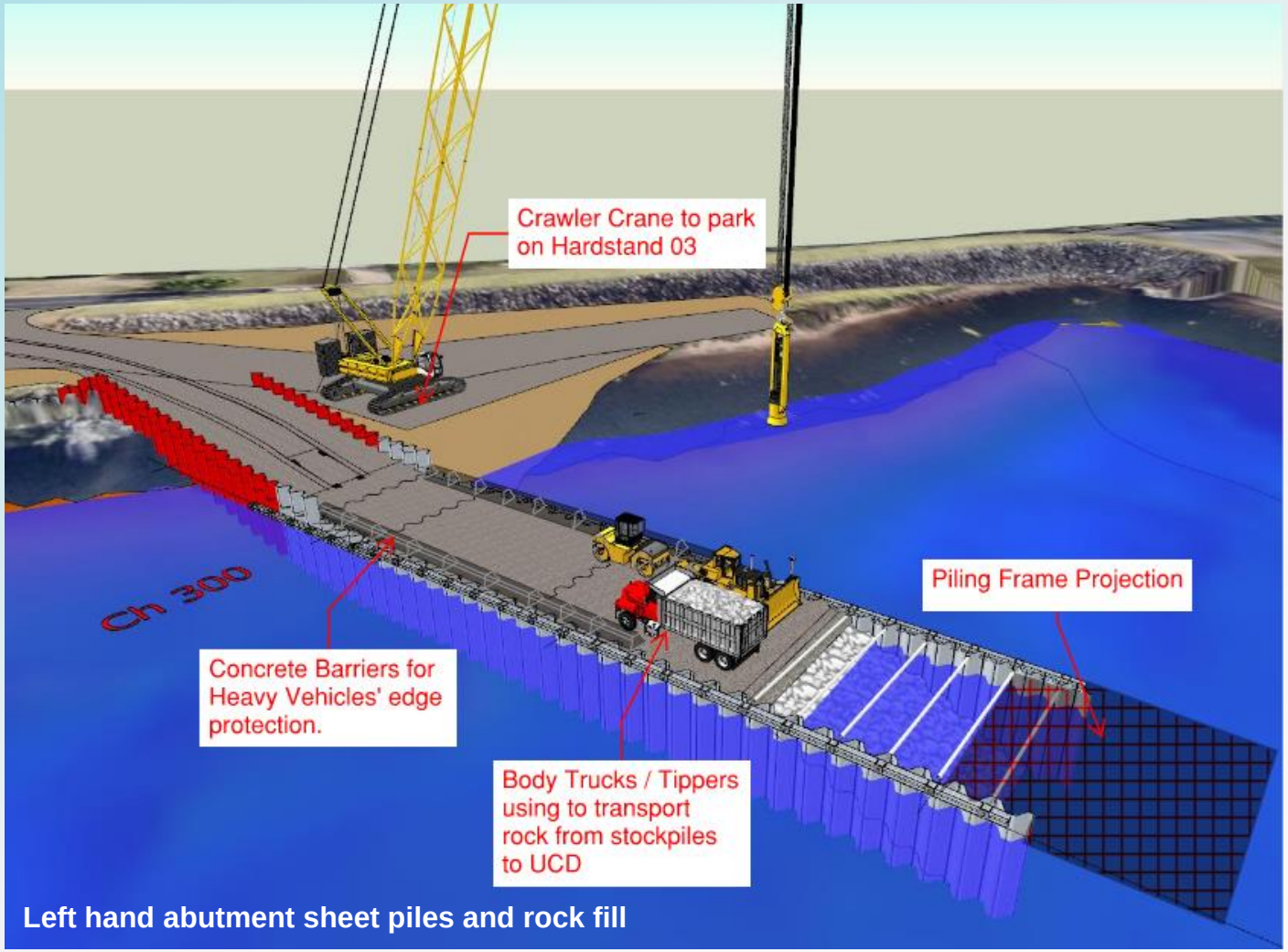
Phase 4 staging:
- Commission all installed structures and systems
- Remove cofferdam allowing the dam to refill
- Rehabilitation to disturbed areas.

Cofferdam overview



1. Siphon system installed
2. Rockfill and sheet piles from right hand abutment to the central cofferdam section
3. Rockfill and sheet piles from left hand abutment to the central cofferdam section

Temporary cofferdam construction



Left hand abutment sheet piles and rock fill

Right hand abutment rock fill

Future meeting discussions

Future meetings

Meeting 3	Meeting 4	Meeting 5	Other future meeting discussions
• Construction impacts • Cofferdam construction	• Fish passage • Community sponsorship • Construction and environment update	• Demolition	• Legacy projects • Future construction phase breakdowns • Gympie Weir upgrade

Questions

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Conclusion

Next meeting Wednesday 21 May 2025

Thank you

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