

Review of Environmental Factors

Waterway Health Improvement Program | Parry Park

June 2026

Sydney WATER
Water IS OUR LIFE



Acknowledgement of Country

Sydney Water respectfully acknowledges the Traditional Custodians of the land and waters on which we work, live and learn. We pay respect to Elders past and present.

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Determination

This Review of Environmental Factors (REF) assesses potential environmental impacts of the Parry Park Waterway Health Improvement Program project. The REF was prepared under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), with Sydney Water both the proponent and determining authority.

The Sydney Water Project Manager is accountable for ensuring the proposal is carried out as described in this REF. Additional environmental impact assessment may be required if the scope of work or work methods described in this REF change significantly following determination.

Certification

I certify that I have reviewed and endorsed this REF and, to the best of my knowledge, it is in accordance with the EP&A Act and the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation). The proposal has been considered against matters listed in section 171 (Appendix A) and the guidelines approved under section 170 of the EP&A Regulation. The information it contains is neither false nor misleading.

Prepared by:	Reviewed and endorsed by:	Endorsed by:
[redacted]	[redacted]	[redacted]
Yameng Lai Senior Environmental Scientist Sydney Water Date: 15/06/2026	Deana Filipas Senior Environment Scientist Sydney Water Date: 16/06/2026	Emma Ross Project Manager Sydney Water Date: 16/06/2026

Decision Statement

The main potential construction environmental impacts of the proposal include impacts from noise, traffic and access. During operation, there may be some minor potential impacts associated with traffic and access during maintenance. There will be positive social (and recreational), visual, biodiversity and drainage outcomes as a result of the proposal. The proposal will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats. Therefore, a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR) is not required.

Given the nature, scale and extent of impacts and implementation of the mitigation measures outlined in this REF, the proposal is unlikely to have a significant impact on the environment. Therefore, we do not require an Environmental Impact Statement (EIS) and the proposal may proceed.

Determined By: [redacted]

Jill Berwick, A/Senior Manager, Environment and Heritage Services, Sydney Water
Date: 19/06/2026

1 Introduction

1.1 Context

Sydney Water provides water, wastewater, recycled water and some stormwater services to over five million people. We operate under the *Sydney Water Act 1994* and have three equal objectives to protect public health, protect the environment and be a successful business.

We are a statutory State-owned corporation and are classified as a public authority, and a determining authority for the proposal under Division 5.1 of the EP&A Act. This REF assesses the potential environmental impacts associated with Parry Park Waterway Health Improvement Program project and identifies mitigation measures that avoid or minimise potential impacts.

1.2 Proposal background and need

Coxs Creek is part of the Cooks River catchment and runs through Parry Park as a concrete lined channel. Sydney Water aims to provide a Water Sensitive Urban Design (WSUD) asset that aligns with the Parry Park Masterplan (2018) and enhances community amenity. Refer to Chapter 4 for further detail on the Parry Park Masterplan.

Table 1-1 summarises the proposal need, objectives and consideration of alternatives.

Table 1-1 Proposal need

Aspect	Relevance to proposal
Proposal need	The proposal is part of Sydney Water's Waterway Health Improvement Program. The program aims to provide infrastructure solutions to improve water quality and biodiversity outcomes for major rivers.
Proposal objectives	The proposal objectives are to: • enhance waterway health • improve the natural and built environment • implement infrastructure solutions to enhance water quality, biodiversity and social outcomes.
Consideration of alternatives/options	A 'do nothing' scenario will not meet the proposal objectives. The Parry Park Master Plan identifies an option to create a wetland/naturalise the Coxs Creek channel on the northern side. Through ongoing collaboration between Sydney Water and stakeholders, the proposed wetland and location on the southern side of Coxs Creek was chosen.

1.3 Consideration of Ecologically Sustainable Development

Table 1-2 considers how the proposal aligns with the principles of ecologically sustainable development (ESD).

Table 1-2 Consideration of principles of ecologically sustainable development (ESD)

Aspect	Relevance to proposal
Precautionary principle – *if there are threats of serious or irreversible environmental damage, lack of scientific uncertainty should not be a reason for postponing measures to prevent environmental degradation. Public and private decisions should be guided by careful evaluation to avoid serious or irreversible damage to the environment where practicable, and an assessment of the risk-weighted consequences of various options.*	The proposal will not result in serious or irreversible environmental damage and there is no scientific uncertainty relating to the construction of the proposal. Once completed, the proposal will provide positive biodiversity, recreational and social outcomes to the local community.
Inter-generational equity – *the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*	The proposal will help to meet the needs of future generations by creating a biodiverse, naturalised stormwater feature at Parry Park. The proposal will increase Green and Golden Bell Frog habitat which will protect and enhance biodiversity for future generations to benefit.
Conservation of biological diversity and ecological integrity – *conservation of the biological diversity and ecological integrity should be a fundamental consideration in environmental planning and decision-making processes.*	The proposal will not have an adverse impact on biological diversity or impact ecological integrity. Once completed, the proposal will improve biodiversity within Parry Park.
Improved valuation, pricing and incentive mechanisms– - *environmental factors should be included in the valuation of assets and services, such as 'polluter pays', the users of goods and services should pay prices based on the full life cycle costs (including use of natural resources and ultimate disposal of waste) and environmental goals*	The proposal will provide cost efficient use of resources and provide optimum outcomes for the community and environment.

2 Proposal description

Table 2-1 provides details on the proposal including methodology, location, access, timing, and other requirements.

Table 2-1 Proposal details

Aspect	Description
Proposal description	The proposal is a constructed wetland in Parry Park, Lakemba. The proposal includes: • a constructed wetland with a water recirculation system • Green and Golden Bell Frog habitat • new drainage assets such as a gross pollutant trap • connecting a new water pipe into the existing network across Punchbowl Road • ancillary features such as fencing, footpaths and a permanent maintenance access track • landscape features such as plantings, lookout decks, seating and artwork. Refer to Figure 2-1 for an overview of the proposal location, Figure 2-2 for key design elements of the proposal and Figure 2-3 for an artistic impression of the proposal.
Location and ownership	The proposal is in Parry Park which is on Crown Land administered by the City of Canterbury Bankstown Council (Lot 7061, DP1058541). Parry Park is bordered by several suburbs and key roads. Figure 2-1 shows the proposal location in relation to these suburbs and roads. Various playing fields and the Australian National Sports Club (ANSC) building occupy the north-eastern side of Parry Park. The proposal is in the south-western portion of Parry Park, on a flat grassy field, lined by trees along Coxs Creek and Punchbowl Road. The broader area is generally residential, with industrial areas about 1km to the north and north-east. Parry Park is bordered by Koala Road, the A3 (Wiley Avenue) and Punchbowl Road. The park has several land uses including: • 5 residential and community buildings to the north of the proposal area • a new playground to the north of the proposal area • the Australian National Sports Club to the east of the proposal area.
Site access	The A3 (Wiley Avenue/King Georges Road) and Punchbowl Road intersection at the southern corner of Parry Park is a multi-lane, signalled intersection. Access to the proposal area will come from this intersection onto Punchbowl Road and enter the ANSC carpark by a left turn. A temporary access track will be constructed from the back of the ANSC carpark into the grassy field. Egress from the proposal area will use the temporary access track to the carpark and exit the ANSC by a left turn onto Punchbowl Road.
Ancillary facilities (compounds)	Ancillary facilities, including site sheds, amenities and materials laydown, will likely be contained within the proposal area. Additional nearby locations, such as temporarily occupying the vacant land south of the existing carpark, will be explored and discussed with the landowner(s) (Council and/or Transport for NSW) during the detailed design phase. The exact location of ancillary facilities will be chosen by the Delivery Contractor and remain within the assessment area, in consultation with the landowner(s). This location will be approved by Sydney Water's Project Manager as described in the mitigation measures in Section 5.
Methodology	The proposal methodology will involve: • Site investigations, such as geotechnical and utility surveys

Aspect	Description
	• Site establishment, including: – establishing a temporary access track and ancillary facilities in the proposal area – some grass clearing and tree trimming. • Construction, including: – excavation and earthworks – installing stormwater and associated structures, drinking water pipe, permanent access track and footpaths – planting and landscaping – groundwater dewatering, if required. • Commissioning and testing of equipment such as: – the gross pollutant trap – the new drinking water pipes. • Restoration, including: – removing temporary laydown areas – restoring the work areas to pre-existing condition or better, in consultation with the relevant landowner(s).
Materials and equipment	Equipment required for the works include: • confined spaces safety equipment (e.g. gantry/davit) • hand tools such as concrete saws • generators, air compressors, sediment tanks, storage containers and skip bins • site facilities and amenities • light, medium and heavy vehicles such as excavators, backhoes, concrete agitator trucks and pumps, street sweepers, compactors, dozer trucks and vacuum trucks.
Work hours	Work and deliveries will generally be scheduled to occur during standard daytime hours of: • 7am to 6pm, Monday to Friday • 8am to 1pm, Saturdays. The proposal will require work outside these hours for connecting a new water pipe into the existing network across Punchbowl Road. Some other minor activities, such as materials delivery, may be required outside of standard daytime hours. Sydney Water's Project Manager can approve work outside of standard daytime hours through the approval process described in the mitigation measures in Section 5.
Proposal timing	Site investigation works are expected to start in late-2026. Construction is expected to start in mid-2027 and be completed in early-2029. Site establishment will take about 2 months, excavation and installation of structures will take about 1 year, and landscaping will take about 3 months. In total, construction is expected to take about 1.5 years.
Operational requirements	Access to the proposal will be required during operation for maintenance activities. Sydney Water will maintain the proposed wetland. The below maintenance requirements are estimates and will be refined during detailed design: • maintenance of Green and Golden Bell Frog habitat (about 3-4 visits during winter months) • maintenance of drainage structures and pipes (yearly or after major storm events) • cleaning the gross pollutant trap (monthly or quarterly as required) • cleaning the sediment forebay/basin (every 5 years) • maintenance of landscaping such as weeding and planting (fortnightly, monthly or as required).

Aspect	Description
	Additional maintenance activities would be completed by Council such as: • maintenance of the proposed barbeques, picnic and shade facilities.
Assessment area and changes to the scope of work	The assessment area shown in this REF (Figure 2-1) is indicative and based on the latest concept design at the time of REF preparation. The final proposal may change based on detailed design and/or construction planning. The general mitigation measures in Section 5.2.5 outline when changes to the proposal trigger supplementary environmental impact assessment. If required, further assessment must be prepared in accordance with SWEMS0019.



Figure 2-1 Proposal location, land ownership and key roads

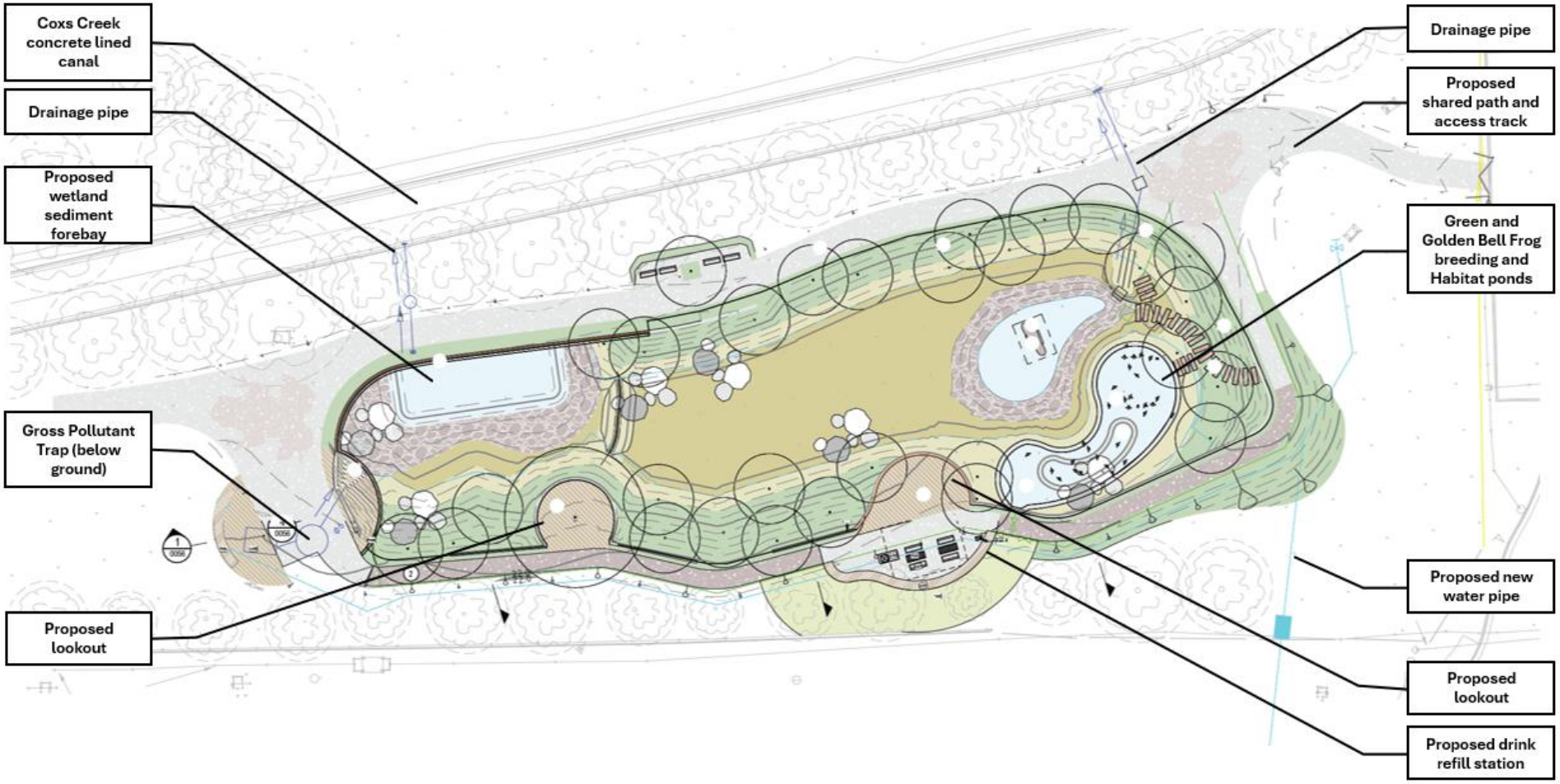


Figure 2-2 Overview of proposed design and key elements

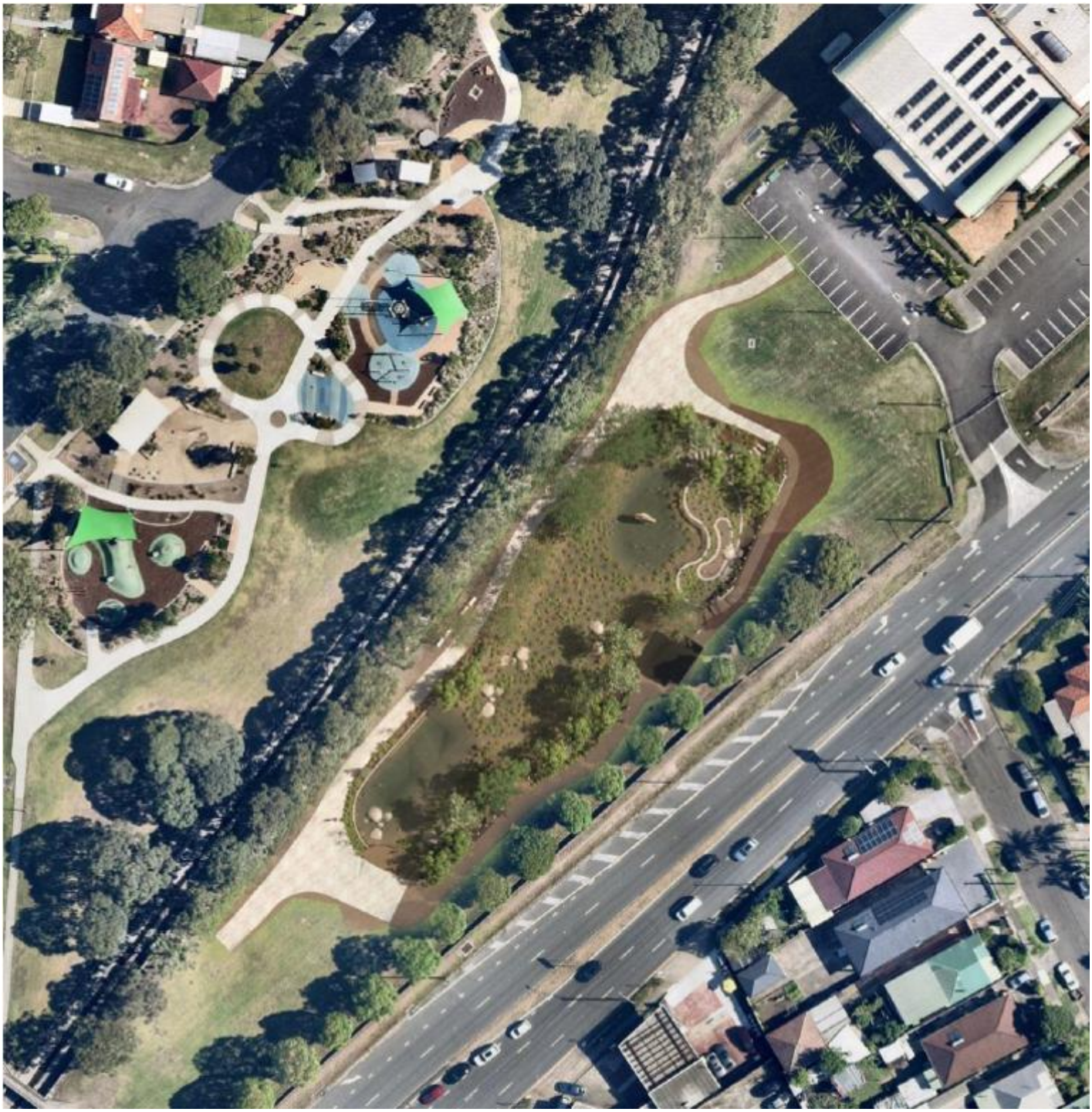


Figure 2-3 Artistic impression of the proposal (aerial view)

3 Consultation

3.1 Community and stakeholder consultation – general

Our approach to community and stakeholder consultation is guided by Sydney Water's community and stakeholder engagement guidelines.

Stakeholder and community engagement is a planned process of initiating and maintaining relationships with external parties who have an interest in our activities. Community and stakeholder engagement:

- enables us to explain strategy, policy, proposals, or programs
- gives the community and stakeholders the opportunity to share their knowledge, issues and concerns
- enables us to understand community and stakeholder views in our decision-making processes alongside safety, environment, economic, technical and operational factors.

The nature, scale and extent of the proposal's potential impact has been evaluated in this REF. If our work impacts the community in some way, we will consult with affected groups throughout the proposal. This includes engaging the broader community and stakeholders during plan or strategy development or before making key decisions.

We will also provide the City of Canterbury Bankstown Council (Council) with reasonable notice when we would like to commence work. Council will be consulted about matters identified in environmental planning instruments such as public safety issues, temporary works on Council land, and full or partial road closures of council managed roads.

3.2 Community and stakeholder consultation – proposal

Sydney Water has been working closely with Council throughout the project lifecycle including seeking feedback at planning and design milestones. During the concept design phase, Sydney Water has considered Council's feedback, such as lighting requirements and incorporated it into the design. Sydney Water has also conducted surveys to understand the location of Council stormwater infrastructure, and designed the proposal to avoid and minimise impact to these.

Council are supportive of the concept design and Sydney Water will continue to work closely with Council as the detailed design progresses, including considering Council's feedback at the next design milestones. Sydney Water will provide Council with the final designs (known as "issue for construction") which will be agreed and accepted by Council before construction starts.

Sydney Water will consult with the broader community and affected stakeholders as the detailed design progresses. This will include consulting with the Australian National Sports Club and Council to arrange a permanent solution for operational access to the proposal, including easements.

As Punchbowl Road is classified as a State road, a Road Occupancy Licence (ROL) from Transport for NSW is required. The Delivery Contractor will consult with Transport for NSW to obtain the ROL before works start.

3.3 Consultation required under State Environmental Planning Policies and other legislation

The State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) specifies that Sydney Water must consult with councils and other authorities for work in sensitive locations or where the work may impact other agencies' infrastructure or land.

Under Section 2.10 of the TISEPP, consultation with Council is not required as the proposal will not have a substantial impact on Council's stormwater management services, will have a minor disruption on pedestrian movement and will not strain the capacity of the road network (Section 5.2.2). The proposal is located in a passive recreation section of Parry Park with low pedestrian traffic. Despite the minor impacts, Sydney Water would continue to consult and work closely with Council throughout the design and construction process.

Under Section 2.12 of the TISEPP, Sydney Water may carry out the proposal as it would have a minor change and a positive benefit to flood movement and patterns (Section 5.2.3).

Under Section 2.13 of the TISEPP, the State Emergency Service (SES) were notified for works on flood liable land as the proposal is being carried out under a relevant provision (Division 20 – Stormwater Systems). NSW SES responded within 21 days and confirmed no further comment on the proposal (Appendix C).

As access easements may be required for maintenance and inspections, Sydney Water will consult with Council, as the Crown land manager, regarding easements required for the proposal before works start.

4 Legislative requirements

4.1 Strategic context

The Parry Park Masterplan was completed by Canterbury Bankstown Council in 2018. The proposal aligns with several of the Masterplan's objectives, outcomes and opportunities, including:

- water sensitive urban design (WSUD)
- wetland habitat for wildlife, increasing biodiversity value and improving water quality and visual experiences
- a destination parkland that provides for a range of experiences and family activities
- enhanced walking and shared paths, and pedestrian access.

4.2 Environmental legislation

Sydney Water is the proponent and determining authority under the EP&A Act. The proposal does not require development consent and is not classified as State significant infrastructure. We have assessed this proposal under Division 5.1 of the EP&A Act. This REF has concluded that the proposal is unlikely to have a significant impact on the environment.

The following environmental planning instruments (Table 4-1) and legislation (Table 4-2) are relevant to the proposal. Table 4-2 also documents any licences and permits required, and timing and responsibility for obtaining them.

Table 4-1 Environmental planning instruments relevant to the proposal

Environmental Planning Instrument	Relevance to proposal
Canterbury-Bankstown Local Environmental Plan 2023 (CB LEP 2013)	The proposal is located on land zoned RE1 Public Recreation.
State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP)	**Division 20 Stormwater systems** The proposal aligns with the definition of 'stormwater management system' under Section 2.136 of the TISEPP, whereby the proposal involves collection, detention and discharge of stormwater (2.136(1)(a)) and as the proposal is an artificial wetland (2.136(1)(b)). Section 2.137 of the TISEPP permits development for stormwater management systems by or on behalf of a public authority without consent. As Sydney Water is a public authority, the proposal is permissible without consent. **Division 24 Water supply systems** The new water pipe is a 'water reticulation system' under the dictionary in the Standard Instrument. Section 2.159(1) of the TISEPP permits development for water reticulation systems by or on behalf of a public authority without consent

Environmental Planning Instrument	Relevance to proposal
	on any land. As Sydney Water is a public authority, the proposal is permissible without consent. **Exempt development** Schedule 1, Section 2.20 and Section 2.162 of the TISEPP permits the following proposal activities as exempt development: • construction of external lighting if light spill is contained within site and in accordance with AS 4282–1997, *Control of the obtrusive effects of outdoor lighting* (Schedule 1) • routine maintenance or associated landscaping works (2.162(b)) • removal of litter, silt or debris from any part of the water supply system (2.162(c)). **Division 12 Parks and other public land** As outlined in Chapter 3 of this REF, Council has reviewed the designs and supports the proposal, including the ancillary features to this stormwater project. Section 2.73 and 2.74 of the TISEPP allows a range of ancillary works such as pedestrian pathways, viewing platforms, food preparation facilities (e.g. barbeques) and recreational facilities (e.g. seats, shelters and bins). The works are permissible under the TISEPP as Sydney Water will construct these ancillary facilities on behalf of Council, the public authority who owns/controls Parry Park and the Crown land manager of Parry Park.

Table 4-2 Consideration of key environmental legislation

Legislation	Relevance to proposal	Permit or approval	Timing and responsibility
Environmental Planning and Assessment Act 1979 (EP&A Act)	Sydney Water is the proponent and determining authority under the EP&A Act. The proposal does not require development consent and is not classified as State significant infrastructure. We have assessed this proposal under Division 5.1 of the EP&A Act. This REF has concluded that the proposal is unlikely to have a significant impact on the environment.	REF and determination	Pre-construction, Sydney Water
National Parks and Wildlife Act 1974 (NPW Act)	No impact to Aboriginal heritage is expected and an Aboriginal Heritage Impact Permit is therefore not required. See section 5.2.4.	N/A	Pre-construction, Sydney Water
Water Act 1912/ Water Management Act 2000	During detailed design, the Delivery Contractor will investigate and assess the need for pumping groundwater/dewatering. If dewatering is required, a Water Supply Works Approval (WSWA) will be obtained. No dewatering is to occur until a WSWA has been approved.	WSWA	Pre-construction, Sydney Water and Contractor

Legislation	Relevance to proposal	Permit or approval	Timing and responsibility
Roads Act 1993	Punchbowl Road is categorised as a State road and is administered by Transport for NSW. Works in Punchbowl Road to connect a new water pipe into the existing water supply network will require approval from Transport for NSW. A Road Occupancy Licence will be obtained before works start.	Road Occupancy Licence	Pre-construction, Contractor
Crown Land Management Act 2016	The proposal is located on Crown Land and is managed by Council. No native title claims exist over Parry Park based on a search of the National Native Title Tribunal registers (15 June 2026).	Licence/easement	Pre-construction, Sydney Water

5 Environmental assessment

Section 5.1 describes the existing environment and assesses direct and indirect impacts of construction and operation. It also identifies mitigation measures to minimise impacts. These will be incorporated into contract documents and a Construction Environmental Management Plan (or similar) before works start.

5.1 Existing environment

The proposal area is a flat grassy field lined by trees along Coxs Creek and Punchbowl Road. The broader area is generally residential.

The proposal area has been historically disturbed by the channelisation of Coxs Creek, utility works, road works and construction of the Australian National Sports Club (ANSC).

5.2 Environmental aspects, impacts and mitigation measures

5.2.1 Noise and vibration

The proposal is surrounded by a mix of residential and recreational sensitive receivers. Residential receivers are to the north of the proposal area along Koala Road, to the west of the A3 (Wiley Avenue/King Georges Road), and to the south of Punchbowl Road. Recreational receivers are the major users of Parry Park including users of the ANSC, Parry Park Play Space and local visitors. The existing noise environment is influenced by regular traffic along Punchbowl Road and the A3. Other local sources of noise include a car mechanic on Punchbowl Road, local traffic and Parry Park Play Space and sports fields users.

The likelihood of noise impact was assessed using Table 2 of the *Draft Construction Noise Guideline* (EPA 2020). The review indicated that the likelihood of noise impact is medium-high risk and therefore a quantitative noise impact assessment was completed (Appendix D). Three construction stages were assessed based on the likely noisiest equipment to be used during those stages.

5.2.1.1 Potential construction impacts

The quantitative assessment (Appendix D) identified that during construction, the proposed works have the potential to impact on sensitive receivers.

Noise

Given the already elevated noise environment from nearby busy roads and intersections, the vehicle and construction noise generated by the proposal will have a minimal to minor, and temporary to short term impact on background noise levels during construction. There are no other major sources of noise, with train lines and industrial areas being over 800 m from the proposal area. Consultation with affected receivers will occur before works start and appropriate mitigation measures will be implemented to avoid, minimise and mitigate impacts.

Appendix D provides a detailed noise assessment and Table 5-1 summarises the potential noise impacts. Figure 5-1 to Figure 5-3 show the noise contours for residential receivers.

Table 5-1 Summary of potential noise impacts

Receivers	Site investigations (in late 2026) and site establishment (about 2 months)	Earthworks, excavation and installing structures (about 1 year)	Night works (about 2 weeks)
Residential receivers	Minimal and temporary as noisy equipment (a concrete saw) will be used intermittently, as required. Daytime sleep disturbance may occur at one childcare centre, 220 m from the proposal area.	Minor-moderate and short-term as noisy equipment (such as excavators) will generally be used continuously, with periods of respite, throughout the shift. Daytime sleep disturbance may occur at one childcare centre, 220 m from the proposal area.	Moderate and short term as a concrete saw will be used intermittently as required. Sleep disturbance will be minor as the use of noisy equipment after 10pm will be avoided where possible and will stop by 12am.
Passive recreational receivers	Minimal and temporary impact as visitor numbers during standard daytime hours are likely to be low, and are typically higher in the afternoons and early evenings when construction is finishing for the day.	Background noise levels would likely rise during construction. However the impact would be minimal due to the existing noise environment. Visitor numbers during standard daytime hours are likely to be low and limited to the afternoons and early evenings when construction is finishing for the day. Noise impacts to sensitive receivers would likely be minimal and short term.	Visitor numbers during night hours are likely to be low and limited to the early evenings.
Active recreational receivers	Minimal and temporary as use of the ANSC appears to be limited to weekday evenings and weekends.	Minimal and temporary as use of the ANSC appears to be limited to weekday evenings and weekends.	Minimal and temporary as the ANSC building and sports fields will be 60 m from the night works at the closest point. Night works will be completed within 2 weeks.
Businesses	Given the existing noise environment and the noise generated from the car mechanic, noise from the proposal is unlikely to significantly impact businesses in the area.		



Figure 5-1 Noise contours for residential receivers during site investigation and establishment

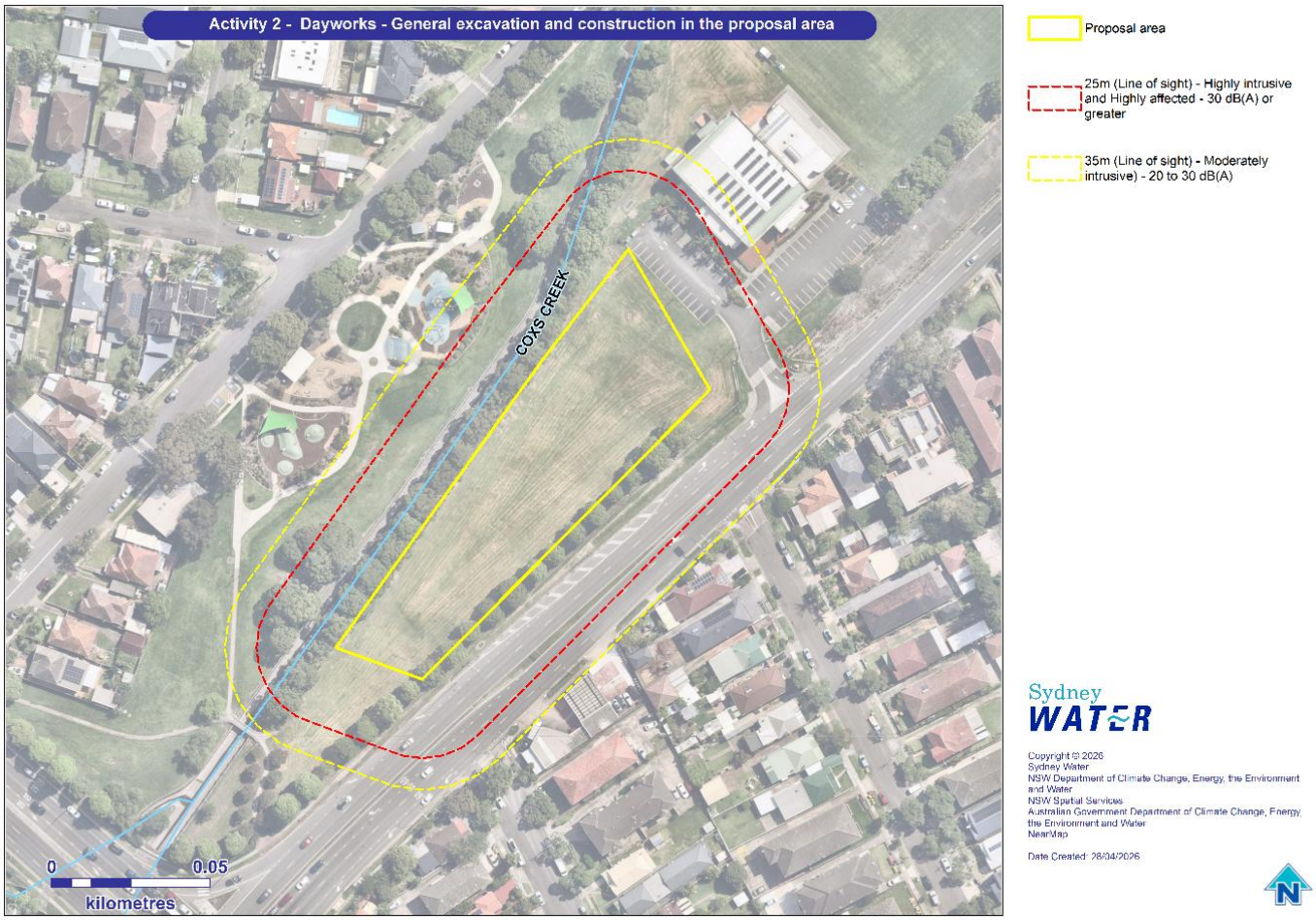


Figure 5-2 Noise contours for residential receivers during the main construction period

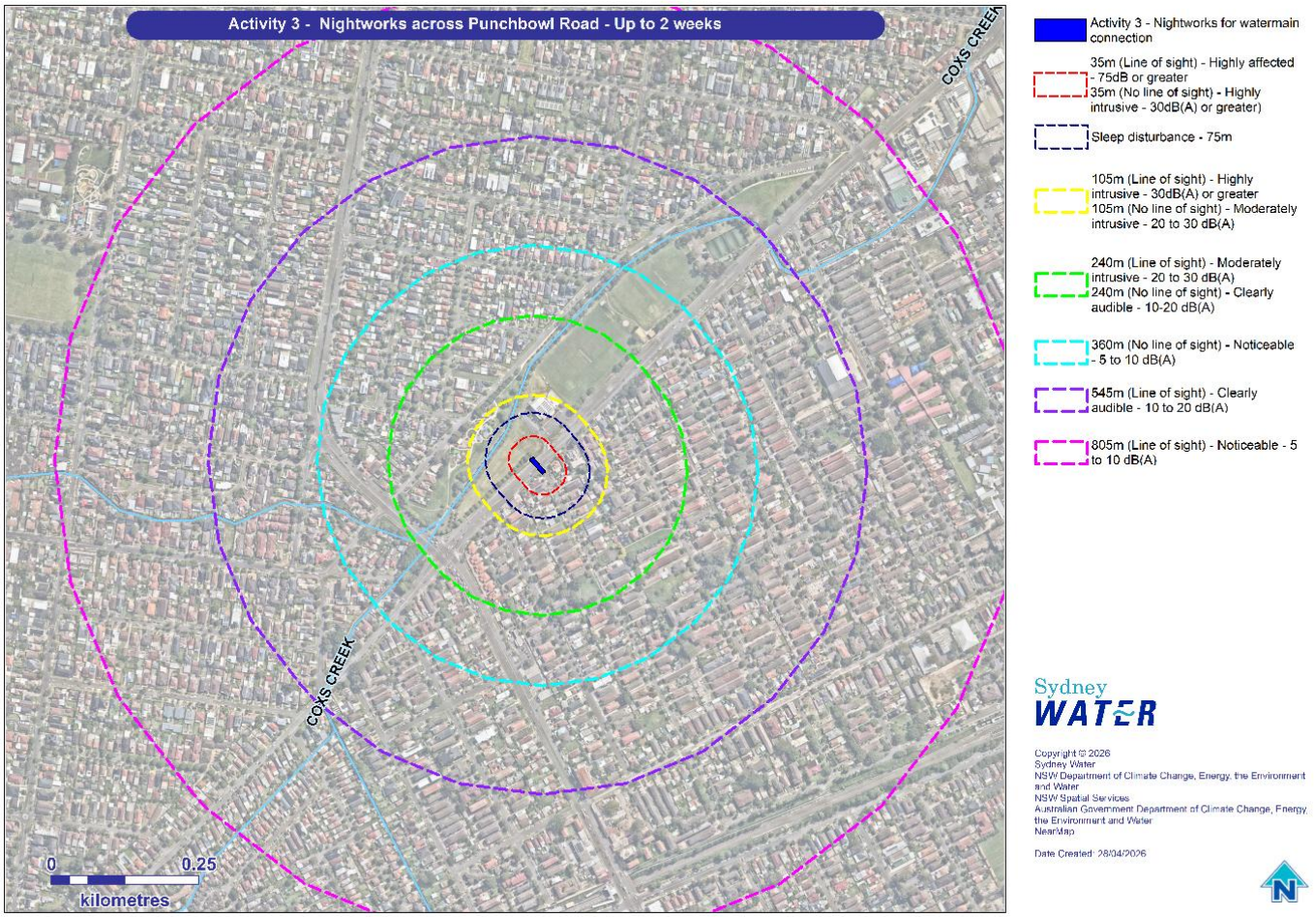


Figure 5-3 Noise contours for residential receivers during nightworks for water pipeconnection

Vibration

The proposal will generate vibration during construction due to plant and equipment use. A quantitative assessment in Appendix D identified that during construction, there may be cosmetic damage and human comfort impacts when a large excavator (18-34T) is used. These impacts will be avoided through using a small excavator (5-12T) or medium excavator (12-18T) and by maintaining the minimum working distances.

Consultation with affected receivers will occur before works start and appropriate mitigation measures will be implemented to avoid, minimise and mitigate impacts.

5.2.1.2 Potential operational impacts

During operation, there will be no major changes to background noise. Additional noise from increased visitors to the new wetland and recreational facilities will be minor and in line with the existing recreational land use. Operational activities include maintenance inspections and works, which may generate temporary noise

impacts. Vibration impacts during operation are not likely to occur. Potential impacts from maintenance activities will generally be minor and temporary and are unlikely to significantly impact surrounding receivers.

5.2.1.3 Mitigation measures

With the implementation of the mitigation measures below, impacts to noise and vibration can be adequately managed, and residual impacts are expected to be low.

Table 5-2 Environmental mitigation measures – noise and vibration

Mitigation measures
If works start more than 12 months from the completion of the noise technical memo (Appendix D), the Delivery Contractor is to review the proposal details, including methodology, timing and duration, and existing environment. Should there be any changes, the Delivery Contractor is to re-assess the noise impacts.
Works must comply with the EPA Construction Noise Guideline (Draft, 2021), including scheduling work and deliveries during standard daytime working hours of 7am to 6pm Monday to Friday and 8am to 1pm Saturday. No work to be scheduled on Sunday nights or public holidays. Any proposed work outside of these hours must be justified. The proposal will also be carried out in accordance with: • Sydney Water's Noise Management Procedure SWEMS0056 • Noise Policy for Industry (EPA, 2017). All reasonable and feasible noise mitigation measures should be justified, documented and implemented on-site to mitigate noise impacts.
Incorporate standard daytime hours noise management safeguards into the CEMP, including but not limited to: • identify and consult with the potentially affected residents and sensitive receivers such as childcare centres, before the start of works. This should: - describe the nature of works, the expected noise impacts, approved hours of work, duration, complaints handling and contact details - determine the need for and appropriate timing of respite periods (e.g. avoid noisy works or provide respite during times identified by residents and sensitive receivers as more sensitive times, such as when the childcare centre schedules 'nap time'). • implement a noise complaints handling procedure • do not warm-up plant or machinery near residential dwellings before the nominated working hours • select appropriate plant for each task, to minimise the noise impact (e.g. all stationary and mobile plant will be fitted with residential type silencers) • do not use engine brakes when entering or leaving the work site(s) or within work areas • regularly inspect and maintain equipment in good working order • arrange work sites where possible to minimise noise (e.g. generators away from sensitive receivers, site set up to minimise use of vehicle reversing alarms, site amenities and/ or entrances away from noise sensitive receivers) • use natural landforms / mounds or site sheds as noise barriers • schedule noisy activities around times of surrounding high background noise (local road traffic or when other noise sources are active).
If works beyond standard daytime hours are needed, the Delivery Contractor would: • justify the need for out of hours work and why it is not possible to carry out the works during standard daytime hours • consider potential noise impacts and implement the relevant standard daytime hours mitigation measures • follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01)

Mitigation measures

- document consideration of all reasonable and feasible measures, and document reasonable and feasible measures to be implemented
- identify additional community notification requirements and outcomes of targeted community consultation
- seek approval from the Sydney Water Project Manager in consultation with the environment and community engagement representatives.

As night works are needed for the water pipe connection in Punchbowl Road, the Delivery Contractor would:

- justify the need for night works
- consider potential noise impacts and implement the relevant standard daytime hours mitigation measures
- follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01)
- document consideration of all reasonable and feasible measures, and document reasonable and feasible measures to be implemented
- identify community notification requirements (i.e. for scheduled night work (not emergency works))
- notify all potentially impacted residents and sensitive noise receivers not less than one week before the start of night work
- seek approval from the Sydney Water Project Manager in consultation with the environment and community engagement representatives.

If additional night works are needed, the Delivery Contractor would:

- justify the need for night works
- follow the steps above.

If works on Sundays or public holidays are required, the Delivery Contractor would:

- justify why all other times are not feasible
- consider potential noise impacts and implement the relevant standard daytime hours mitigation measures
- follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01)
- document consideration of all reasonable and feasible measures, and document reasonable and feasible measures to be implemented
- identify community notification requirements
- seek approval from the Sydney Water Project Manager in consultation with the environment and community engagement representatives.

Conduct attended noise and vibration monitoring and confirm Rated Background Levels.

Conduct a dilapidation survey/asset condition assessment before the start of works which have potential to damage existing structures.

Conduct letterbox drops, doorknocking, phone calls and provide respite to affected stakeholders in accordance with the recommended distances of the TfNSW Construction and Maintenance noise estimator tool and 'Reasonable and Feasible' measures.

Continue engagement with affected stakeholders (including sensitive receivers such as nearby childcare centres) throughout the works including providing project updates, notifying of out of hours works, and responding to community complaints.

Limit truck routes to major roads, and limit truck deliveries to within standard construction hours where feasible, or within agreed hours in consultation with affected stakeholders (including sensitive receivers such as nearby childcare centres).

Prepare a daily register of planned activities on site.

Mitigation measures
Position site buildings and/or containers between noisy equipment and affected receivers.
Install temporary noise barriers at work fronts or around stationary equipment including during night works.
Noisy works and equipment (e.g. concrete saw) to be completed before 10pm where possible and to stop by 12am.
Monitor compliance with the recommended vibration levels in DIN 4150-3 1999: Structural Vibration – Part 3; Effects of vibration on structures.
Do not work within minimum vibration working distances where possible.
Consider less vibration intensive methodologies where practicable, such as using a smaller excavator near sensitive structures, and use only the necessary sized and powered equipment.

5.2.2 Traffic and access

5.2.2.1 Existing environment

The A3 and Punchbowl Road are busy, multi-lane roads and are both categorised as a State road. The A3 has a traffic volume of about 40,000 in each direction each day (Traffic Volume Viewer website, TfNSW). The two roads intersect at the southern corner of Parry Park which is a large, signalised intersection with dedicated turning lanes. There are no shared paths or cycle lanes.

A review of aerial satellite imagery (NearMap) and available timetables of clubs using the ANSC (indoor soccer, Western Ravens Volleyball Club, Ascent Volleyball Club) shows that daytime carpark use is generally low. The ANSC is generally used on weekdays in the late afternoons, evenings and nights, and all day on the weekends.

5.2.2.2 Potential construction impacts

Traffic

The proposal will require light, medium and heavy vehicle movements during construction. Construction will generally occur during standard daytime hours, thus vehicle movements may occur during morning and evening peak traffic times. There will be about 20 construction staff and over 40 vehicle movements per day during peak construction activities. Given the existing traffic conditions and high use of the A3 and Punchbowl Road, the additional construction vehicle movements are unlikely to significantly increase traffic or traffic light wait times along those roads.

As the use of the ANSC during the majority of standard daytime hours is likely to be low, potential traffic impacts will likely be minor and limited to late afternoon and early evening during weekdays, and Saturday mornings throughout the construction period.

Works in Punchbowl Road are required for a new potable water pipe connection into the existing network. These works will occur between McCourt Street and Parry Park over a period of 2 weeks. Works will occur at night when there are lower traffic volumes and in accordance with the road occupancy licence. Temporary lane

closures will be required and lanes will be reopened at the end of each shift. There will be no traffic impacts during the day, and traffic impacts during the night shifts will be short-term, complete in 2 weeks.

Access

Access to the proposal will use the existing ANSC driveway to avoid constructing a new access onto Punchbowl Road. An access track will be constructed from the existing carpark to facilitate access to the proposal area. The access track will be paved and up to 4 m wide.

Construction vehicles and delivery trucks will travel from the A3/Punchbowl Road intersection onto Punchbowl Road and enter the ANSC carpark by a left turn. As there is a concrete divider on Punchbowl Road, access in and out of the proposal area will be by left turn only. There is a dedicated left turn shoulder lane into the existing driveway, therefore potential traffic impacts will be minimal. As there is no merging shoulder lane out of the existing driveway, there may be longer wait times for vehicles exiting the carpark.

Works would occur during standard daytime hours which may include works on Saturdays 8am to 1pm. This would have a temporary impact on vehicle access in and out of the ANSC. The impacts would be managed through the implementation of mitigation measures in Table 5-3 and consultation with ANSC.

During works, including nightworks, access to properties will be maintained at all times.

Parking

The proposal may temporarily impact the availability of street parking on Koala Road during daytime work hours, due to construction personnel vehicles. However, as the design and construction planning progresses, alternate parking arrangements will be investigated such as parking in the 15 m road verge between the ANSC carpark and Punchbowl Road, in consultation with relevant stakeholders. Should alternative parking arrangements be successfully implemented, there will be negligible impacts to parking spaces on Koala Road and in the ANSC carpark.

5.2.2.3 Potential operational impacts

Operational activities include maintenance inspections outlined in Section 2 which may generate additional light vehicle movements. These maintenance activities and impacts will generally be minor and temporary and are unlikely to significantly impact traffic or parking. Access to certain sections of the wetland may be temporarily impacted while the maintenance works occur.

At the end of construction, the temporary access track will be modified to be retained for operational access. As the design and construction planning progresses, Sydney Water will consult with the ANSC and Council to arrange a permanent solution for operational access to the proposal, including obtaining easements and licences as required. The permanent access track would remove two parking spaces in the ANSC car park.

Additional traffic from increased visitors to the new wetland and recreational facilities may reduce parking on Koala Road and other surrounding streets. However, given the low density land use and availability of parking on nearby streets, impact to parking spaces would be minimal.

5.2.2.4 Mitigation measures

With the implementation of the mitigation measures below, impacts to traffic and access can be adequately managed, and residual impacts are expected to be minor.

Table 5-3 Environmental mitigation measures – traffic and access

Mitigation measures
Consult with the Australian National Sports Club (ANSC) and Council before works start about the design of the final access route for operation.
Prepare a Traffic Management Plan (TMP), Traffic Guidance Scheme (TGS) or similar as part of the CEMP in consultation with the relevant traffic authority. This will include: • confirmation of haulage routes • access arrangements to the proposal area, including entry and exit locations • management of vehicle movement including measures to encourage rideshare, management of oversized vehicles, materials transport • traffic control and safety measures • consultation and notification requirements • a response plan for any construction-related traffic incident • monitoring, review and amendment plans for traffic management measures • coordination with nearby developments if construction periods and routes overlap • an oversize and/or over mass (OSOM) transport management plan. Meet Transport for NSW Traffic control at work sites Technical Manual issue 6.1 requirements for Transport for NSW roads. The Delivery Contractor will obtain a Road Occupancy Licence (ROL) from Transport for NSW before the start of works, for works in State roads and if works are within 100m of traffic signals.
Consult with and develop management measures with the ANSC and Council to minimise access and parking impacts.
Notify stakeholders such as the users of the Australian National Sports Club and Council before works start.
Erect signs to inform road users of the proposed works and any temporary lane closures.
Ensure work vehicles do not obstruct vehicular or pedestrian traffic, private driveway, public facility or business access unless necessary and only if appropriate notification has been provided.
If traffic control or pavement restoration is required, consult with the relevant traffic authority about managing impacts to pedestrian traffic, signposting, meters, parking and line-marking.
Manage sites to allow people to move safely past the works, including alternative pedestrian access.
Repair any damage to the car park (e.g. potholes) caused by construction vehicles.

5.2.3 Water and drainage

5.2.3.1 Existing environment

Coxs Creek is a concrete stormwater channel and is at a low point in the environment. Water movement and surface water runoff is expected to flow from the surrounding area towards Coxs Creek. Surface water samples (one from upstream and one from downstream of the proposal area) were tested and were above acceptable levels for bacteria such as *e. coli*, and metals such as copper and zinc (Site Investigation Report, DDP). The surface water assessment concludes that the proposal site is unlikely to be a source of these contaminants and that these elevated levels of contaminants are likely representative of wider urban pollution.

One groundwater well was installed during site investigations towards the north-eastern end of the proposal area. The well recorded groundwater at 2.2m below ground level (bgl). Additionally, wet soil was encountered between 2-2.5m bgl during geotechnical borehole drilling. Groundwater would likely be encountered during excavation, construction of the wetland basins and during periods of wet weather. During detailed design, the Contractor will investigate and assess the need for pumping groundwater/dewatering. If dewatering is required, a Water Supply Works Approval (WSWA) will be obtained before any dewatering occurs on site. Any discharge during construction will be carried out in accordance with the mitigation measures and will follow the Sydney Water Discharge Protocol.

The proposal area is within the mapped extents of a Probable Maximum Flood (PMF) event (Figure 5-4). During a 1% Annual Exceedance Probability (AEP) event, water starts overtopping Coxs Creen and flows into the boundaries of the proposal area (Figure 5-5).

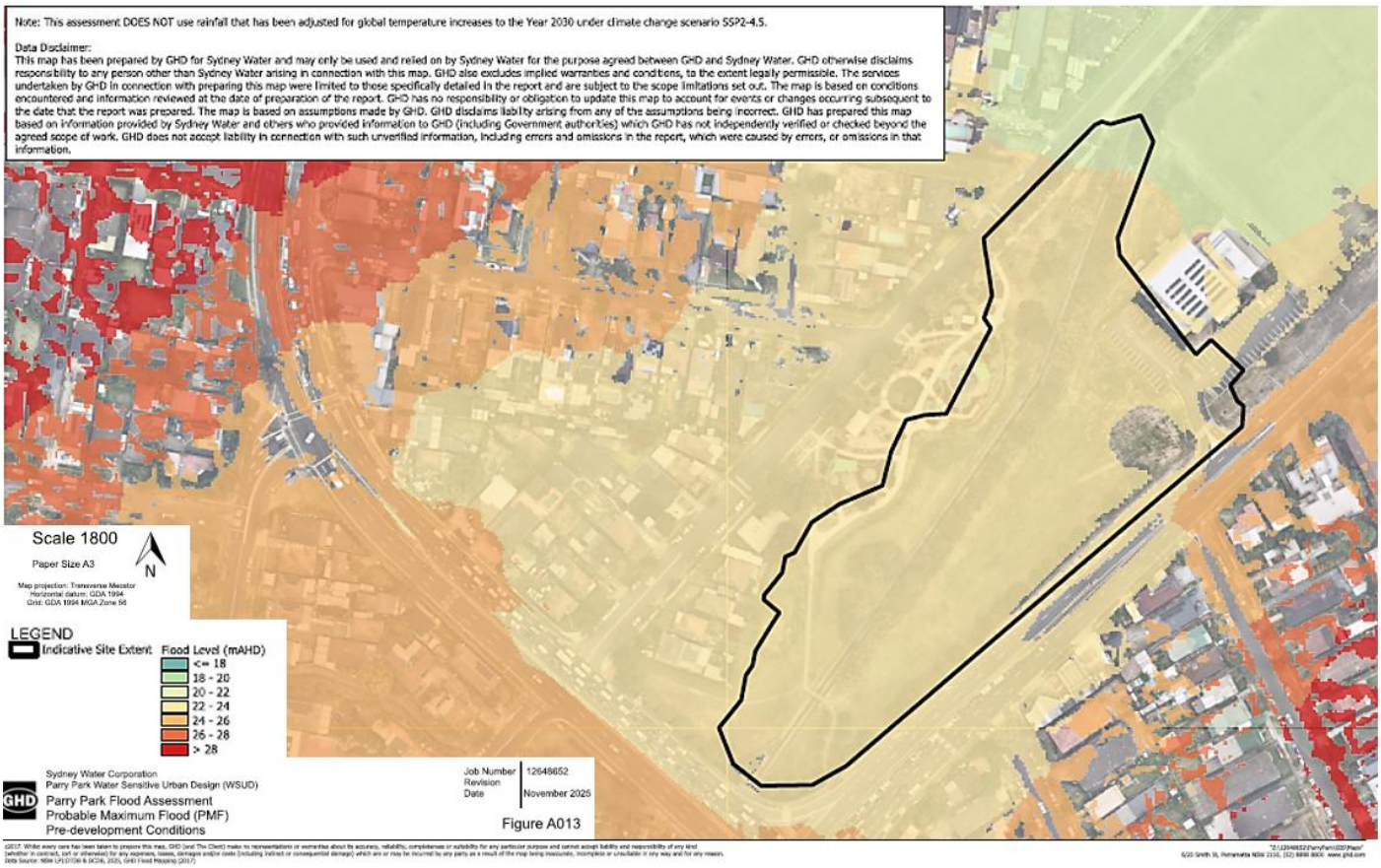


Figure 5-4 Flood map – PMF

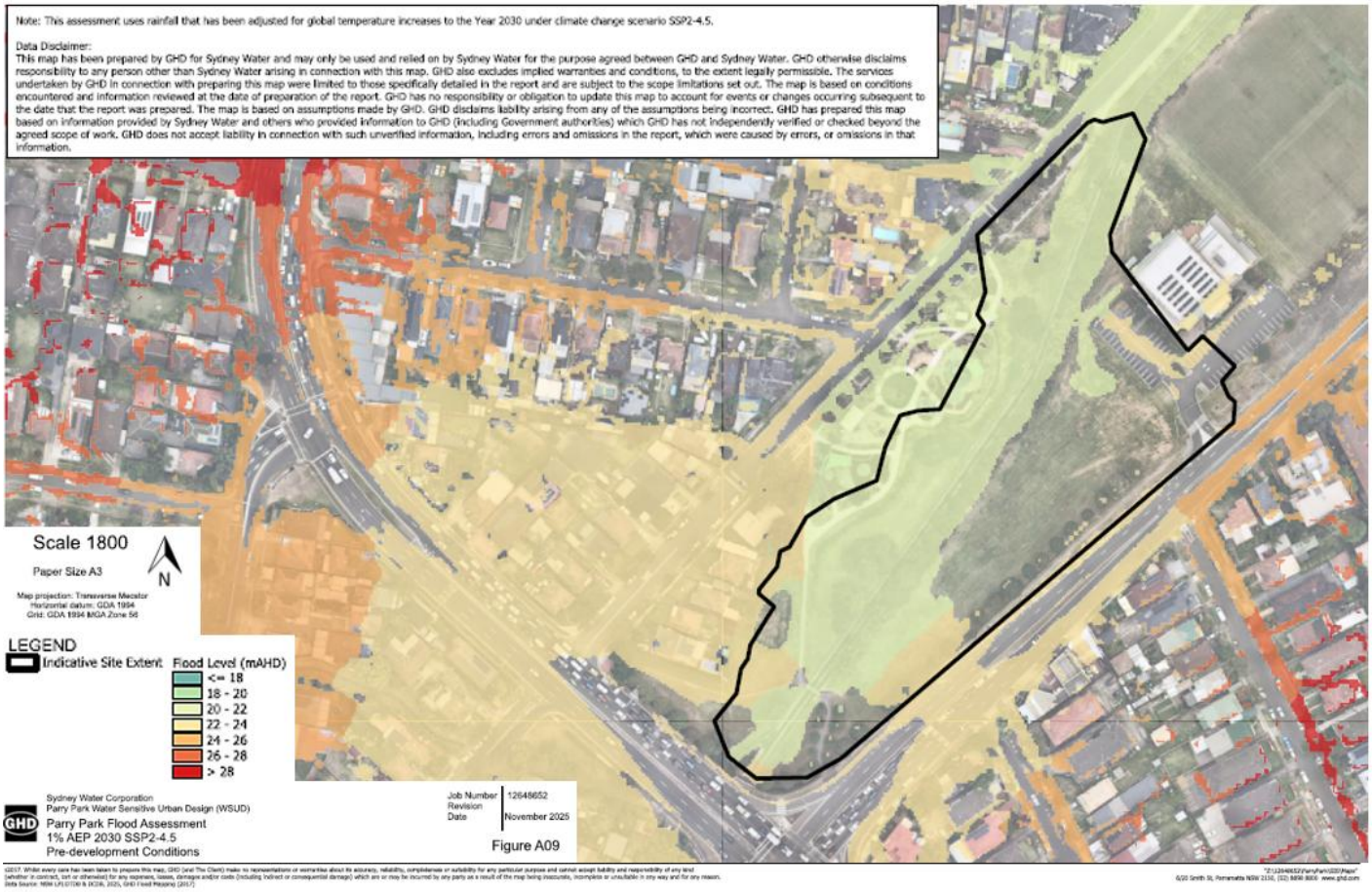


Figure 5-5 Flood map – 1% AEP

5.2.3.2 Potential construction impacts

The proposal area is between Punchbowl Road and Coxs Creek. During construction, there would be earthworks for the construction of the wetland basins and excavation for installing underground infrastructure, such as the new water pipe and gross pollutant trap. Soil would be stockpiled in the proposal area. During high rainfall and flood events, surface water from Punchbowl Road may overflow into the proposal area and into Coxs Creek. Overflows from Punchbowl Road and flood waters may introduce contaminants to the proposal area. These may also lead to erosion and movement of soils to the proposal area, and from the proposal area e.g. into Coxs Creek.

The proposal area is largely outside of the 1% AEP flood area (Figure 5-5). Small quantities of fuels and other chemicals may be stored on site such as diesel generators, plant and machinery. Flood waters could wash away stockpiles or equipment, potentially releasing chemicals, fuel and oil into Coxs Creek.

5.2.3.3 Potential operational impacts

During operation, the proposed wetland will generally provide positive benefits to water quality, water movement and flood impacts. The new wetland and basin areas would have capacity to store water and allow sediments to settle. The sediment basin would remove about 95% of particles greater than 125 micrometres from the water during a storm (DDP, 2026). The installation of stormwater devices, such as the gross pollutant

trap, would also reduce litter and improve quality of water entering Coxs Creek. Two drainage pipes with drainage pits will connect the wetland to Coxs Creek to allow dewatering during cleaning and maintenance. They will be controlled by valves and fitted with perforated plates to minimise sediment movement into Coxs Creek.

The Concept Design Report (DDP, 2026) summarises flood modelling results from the 10%, 5%, 1% AEP and PMF events under two future scenarios; a pre-development (no proposal) scenario and a post-development (proposal) scenario. Flood maps (DDP, 2026) show the flood levels, velocities, inundation periods and hazard levels in the proposal area and immediate surrounding area.

Compared to a 'no proposal' scenario, the proposal would result in the following outcomes during 10%, 5% and 1% AEP and PMF events:

- no change to the depths of water in Coxs Creek
- no change to the duration of inundation in the surrounding areas
- increase the duration of inundation in the wetland area (due to the wetland being able to hold more water compared to a grassy field)
- lower flood depths in the surrounding areas
- have deeper flood depths in the wetland area (due to the excavation for the wetland basins and sediment forebay)
- decrease the flood velocity in the surrounding areas
- increase the flood velocity where flows are discharged into the wetland (i.e. the gross pollutant trap discharge point on the southern side of the proposal area)
- decrease or not change the hazard levels in the surrounding areas
- increase the hazard level in the proposed wetland area (due to the deeper water depth and velocity).

Generally, there would be positive changes to flood behaviour. Potential flood impacts are limited to discrete areas within the wetland and there are unlikely to be receivers in the proposal area during and immediately after 10%, 5% and 1% AEP and PMF events. Therefore, potential impacts to receivers are unlikely to occur.

5.2.3.4 Mitigation measures

With the implementation of the mitigation measures below, impacts to water and drainage can be adequately managed, and residual impacts are expected to be minor.

Table 5-4 Environmental mitigation measures – water and drainage

Mitigation measures
Sydney Water will obtain a groundwater Water Supply Works Approval if needed. The Delivery Contractor is responsible for: • providing expert hydrogeological technical information to obtain the approvals • preparing all application materials before works start and supplying these to Sydney Water with appropriate lead time. These application materials include, but are not limited to:

Mitigation measures
– a Dewatering Management Plan – include elements such as how water quality will be protected and how extraction volumes will be monitored. – dewatering calculations, with appropriate justifications (i.e., groundwater assessment report or memo, expert hydrogeological technical information) – approval application form/s • complying with the conditions of the approvals (such as protecting water quality; minimising aquifer extraction volumes, monitoring extraction with flow meters and recording volumes).
Locate portable site amenities, chemical storage and stockpiles of erodible materials away from watercourses, drainage lines and flood prone areas where possible.
Keep stockpiles to a minimum and ensure adequate contingency measures are in place to prevent sedimentation of waterways in the event of a large flood event.
Keep functioning spill kit on site for clean-up of accidental chemical/fuel spills. Keep the spill kits stocked and located for easy access.
Store all chemicals and fuels in accordance with relevant Australian Standards and Safety Data Sheets. Record stored chemicals on site register. Ensure bunded areas have 110% capacity of the largest chemical container, or an additional 25% capacity of the total volume stored within (whichever is greater). Tightly secure chemicals and fuels in vehicles. Clearly label all chemicals.
Bund potential contaminants and store on robust waterproof membrane, away from watercourses, drainage lines and flood prone areas where possible.
Ensure equipment is leak free. Repair oil/fuel leaks immediately or remove from site and replace with a leak-free item.
Conduct refuelling, fuel decanting, vehicle maintenance and equipment washdown in compounds where possible. If field refuelling is necessary, designate an area away from waterways, drainage lines and flood prone areas, with functioning spill kits close by.
Discharge all water in accordance with Sydney Water's Water Quality Management During Operational Activities Policy (D0001667) including erosion controls, discharge rate, dechlorination, monitoring. Re-use potable/groundwater water where possible.

5.2.4 Other

Table 5-5 provides a concise assessment of other environmental aspects relevant to the proposal area.

Table 5-5 Assessment of other environment aspects

Aspect	Description	Potential construction impacts	Potential operational impacts
Aboriginal heritage	The Parry Park Play Space Aboriginal Heritage Due Diligence (AHDD) (Canterbury Bankstown Council, 2021) concluded that there are no 'zones of archaeological potential' in the	The potential for intact archaeological deposits has been substantially reduced by extensive disturbance which has likely removed or altered original soil profiles. The AHDD	The proposal is unlikely to have any negative operational impacts on Aboriginal heritage and may provide positive benefits through cultural

Aspect	Description	Potential construction impacts	Potential operational impacts
	playground area to the north of Coxs Creek. An AHDD carried out for the proposal by AECOM (Appendix E – Aboriginal Heritage Due Diligence) identified no registered Aboriginal Heritage Information Management System (AHIMS) sites nearby (the nearest AHIMS site is [redacted] Based on a desktop and visual site inspection, the AHDD concluded that the proposal area is within previously disturbed land from construction of: • the channelised Coxs Creek (which is about 50 m to the south of the original watercourse) • roads • underground utilities • other general urban development activities.	for the proposal concluded that the archaeological sensitivity of the proposal area is low and the proposal is unlikely to have construction impacts on Aboriginal heritage. *This information has been redacted to protect sensitive Aboriginal heritage information*	wayfinding elements and artwork.
Topography, geology and soils	The proposal area is sloped, with elevations at approximately 24 m Australian Height Datum (AHD) along Punchbowl Road and sloping down towards Coxs Creek (18 m AHD). Geotechnical investigations were carried out and summarised in the Site Investigation Report (DDP, 2025): • Fill was encountered in the first 30 cm below ground level (bgl). • Several layers of soils extend to about 6 m bgl. • Ashfield Shale was encountered at about 6 m bgl. The proposal is not in an area impacted by salinity and is in an area of low probability of acid sulphate soil occurrence (DDP, 2025). Soil samples were tested for contaminants and results show that soils were generally within acceptable limits, however some samples detected high levels of polycyclic aromatic hydrocarbons.	Large amounts of soil will be excavated and stockpiled to construct the proposed wetlands. This could result in potential erosion and soil movement into Coxs Creek. Inappropriate management of acid sulphate or contaminated soils could result in off-site leaching and impact surrounding land and waterways. Mitigation measures in Table 5-6 will be implemented to minimise potential impacts.	The topography of the site will be modified by the proposal. Potential impacts to drainage are assessed in Section 5.2.3. Earthworks and landscaping during construction will likely remove the majority of existing topsoil and fill layers within the proposal area. This will positively impact future visitors as the risk of contact with potentially contaminated soils is reduced.
Waste and hazardous materials	Sydney Water's corporate objectives include to be a resource recovery business with an increasing portfolio of circular economy products and	The proposal will generate some green waste and a large volume of excavated soil. Spoil will be temporarily stockpiled	Waste may be generated during maintenance activities such as green waste.

Aspect	Description	Potential construction impacts	Potential operational impacts
	services. This includes reducing waste through recycling and re-use, and encouraging our suppliers to minimise waste.	on site. Some spoil would be reused on site and some would be transported offsite for reuse or disposal. The proposal would also generate general construction waste such as concrete from road cutting and laying foundations, and excess materials from building the fencing, footpaths, lookouts and other elements of the proposal. Mitigation measures in Table 5-6 will be implemented to minimise potential impacts.	General waste generated through visitors to the wetland will be managed under Council's waste management system.
Air and energy	The proposal is in a residential area where existing odour is likely influenced by traffic emissions.	The proposal will potentially generate dust during excavation works and emissions from construction machinery, equipment and vehicles. Construction activities would contribute to greenhouse gas emissions through the use of plant and equipment and through the embodied carbon in the materials. However works would not significantly increase Sydney Water's greenhouse gas emissions. These will be managed through the mitigation measures in Table 5-6.	Minimal impacts to air quality are expected during operation, associated with maintenance vehicles and equipment. The proposal would likely be a carbon sink, increasing vegetation and biodiversity of the park. The proposal would improve water quality and lead to an overall more sustainable environment in the long term.
Vegetation and threatened species	The proposal is bordered by a line of planted trees along Coxs Creek, and a line of planted trees along Punchbowl Road. A review of available historic aerial imagery (Historic Imagery spatial portal, Spatial Services) indicates that the trees were planted in the early 2000s. The vegetation is not mapped as part of a threatened ecological community and a species impact statement is not required. There are no threatened flora or fauna mapped within the proposal area. There are 5 records of Downy Wattle about 100 m north-east of the proposal. Historic aerial imagery indicates that the proposal area was a cleared grass	During construction, vegetation clearing will be limited to existing turf. Clearing of existing trees is not proposed. Vegetation impacts during construction are likely to be negligible. Flora and fauna will not be impacted as no vegetation clearing is proposed. Night works will be limited to 2 weeks. Therefore potential night time lighting and noise impacts to fauna will be short term. Potential impacts to threatened species are unlikely.	The proposal will enhance the biodiversity outcomes of the area through the planting of native vegetation and habitat creation for Green and Golden Bell Frogs. Lighting may be installed however will be in line with Council requirements and designed to minimise potential impacts to nocturnal fauna where possible.

Aspect	Description	Potential construction impacts	Potential operational impacts
	field until the early 2000s. An environmental representative for the project attended a site visit on 6 March 2026 and did not sight any wattle plants in the proposal area. There are Grey-headed Flying-fox records within 1 km of the proposal.	Potential impacts will be managed through the mitigation measures in Table 5-6.	
Visual	There is an existing line of trees along Coxs Creek and Punchbowl Road which partially shields the proposal area from receptors in the north and south. The ANSC building is slightly elevated from and has direct line of sight of the proposal area.	Temporary visual impacts associated with construction equipment, stockpiles and fencing will likely be minimal to most receptors. During nightworks across Punchbowl Road, there will be temporary visual and lighting impacts to local residents. Residual impacts will be managed through the mitigation measures in Table 5-6.	The proposal will improve the visual character and amenity through water, vegetation and art or sculptural features. Proposed lighting will improve nighttime visibility and safety.
Social	The proposal area provides passive recreation opportunities for the local community. There are several alternate parks nearby including: • McCourt Street Reserve 230 m to the south-east • Fairmount Street Reserve 270 m to the south-east • The north-eastern most point of Parry Park, 530 m to the north-east • Ethel Pyers Reserve 630 m to the north • Roberts Park 800 m to the north-west.	The proposal area will remove a large area of greenspace used for passive recreation purposes. Given the availability of other areas for passive recreation, the proposal will not have a significant social impact during construction. Impacts will be managed through the mitigation measures in Table 5-6.	When operational, the proposal may improve social amenity through improvements to the area, and the interactive lookout decks, seating and artworks. The proposal would likely become a local 'destination' and attract more visitors to the park. This may enhance visitors' sense of community and wellbeing. The south-western portion of the proposal area will be reinstated to a grassy field at the end of the construction period, or as agreed with Council.
Cumulative and future trends	Sydney Water is not aware of any other Sydney Water works occurring in the area. A review of the Major Projects website and Council's Development Applications identified the following:	Cumulative impacts are unlikely as Sydney Water and the Contractor will consult with the ANSC and Council, including understanding any potential upcoming developments, to reduce	The proposal is unlikely to be impacted by future trends or exacerbate future trends. There will generally be a positive

Aspect	Description	Potential construction impacts	Potential operational impacts
	• A Development Application (DA) (DA276/2024) from 2024 indicates that the Australian National Sports Club intended to carry out building improvements and build a sensory gym. • DA 1/2002/E from January 2026 indicates that the Australian National Sports Club intends to carry out stormwater drainage works.	impacts. Cumulative impacts may include minor traffic impacts along Punchbowl Road and the A3.	impact to urban cooling and flood mitigation.

5.2.4.1 Mitigation measures

With the implementation of the mitigation measures below, impacts to the aspects assessed in Table 5-6 can be adequately managed, and residual impacts are expected to be low.

Table 5-6 Environmental mitigation measures – other environment aspects

Mitigation measures
Aboriginal heritage
Do not make publicly available or publish, in any form, Aboriginal heritage information on sites/potential archaeological deposits, particularly regarding location.
Repeat the basic AHIMS search if it is older than 12 months. Conduct additional assessment if new sites are registered and could be impacted by the works.
If suspected human remains are discovered: • cease all excavation or disturbance in the area (a buffer for at least 20m) • notify the Sydney Water Project Manager in accordance with SWEMS0009 • notify the local Police and NSW Environment line on 131 555, as soon as practicable • work is not to recommence in that location unless authorised in writing by Heritage NSW.
The Contractor's CEMP will include a stop works procedure for if Aboriginal objects and sites, including possible human skeletal material (remains) are identified. If identified, all works in the area must cease immediately and notify Sydney Water Project Manager in accordance with SWEMS0009.
If any design or methodology changes are proposed outside of the assessment area, the Delivery Contractor is to review the proposal details and reassess if additional heritage assessment or approvals are required. If required, • Engage a suitably qualified heritage consultant, to be confirmed with the Sydney Water environmental representative and in consultation with the Sydney Water Heritage Team • Assess any proposed changes in design and methodology for consistency against the heritage approvals. • If required, complete additional assessments or approvals.

Mitigation measures

Topography, geology and soils

Include a Stockpile Management Plan (SMP) in the CEMP to adequately manage any proposed stockpiles. This will include detail on:

- exact location of stockpiles
- minimising stockpile size
- height, slopes and batters
- preventing mixing and cross contamination
- consideration of future maintenance
- capping
- erosion and sediment control
- restoration.

The Stockpile Management Plan will be approved by the Sydney Water Project Manager in consultation with the Contamination and Hazardous Materials team.

Prevent sediment moving offsite in accordance with Managing Urban Stormwater, Soils and Construction, Volume 1 and 2A (Landcom 2004 and DECC 2008), including, but not limited to:

- divert surface runoff away from disturbed soil and stockpiles
- install sediment and erosion controls before construction starts
- inspect controls at least weekly and immediately after rainfall
- rectify damaged controls immediately
- remove controls once surfaces have been stabilised, including removing trapped sediment in drainage lines.

If imported material is required, the Delivery Contractor is to ensure imported material is Virgin Excavated Natural Materials (VENM) or meets a relevant NSW EPA Resource Recovery Order and Resource Recovery Exemption, or is a commercially supplied material that is not waste. If using materials that are subject to a NSW EPA Resource Recovery Order/Exemption the Delivery Contractor must ensure the conditions in that Order/Exemption are strictly adhered to.

All site workers and visitors to wear appropriate personal protective equipment to avoid contact with surface soils and waters.

Stop work in the immediate vicinity of suspected contamination. Indicators of contamination include discoloured soil, anthropogenic material within fill, asbestos, chemical or petrol odours and leachate. Contain disturbed material on an impermeable surface and cordon areas off. Notify the Sydney Water Project Manager and the Environmental Representative (who will contact Contamination and Hazardous Materials team) to agree on proposed management approach.

Stop work during heavy rainfall or in waterlogged conditions when there is a risk of sediment loss off site.

Sweep up any sediment/soil transferred off site at least daily, or before rainfall.

Waste and hazardous materials

During detailed design, consider measures to minimise excess waste generation. Consider measures to optimise earthworks design to minimise excess spoil volumes and maximise the reuse of material on site.

Prepare a Waste and Resource Recovery Plan (WRRP) in the CEMP to appropriately manage and classify any materials including soils, construction/demolition wastes and associated stockpiles

Mitigation measures

The plan will be prepared by the Delivery Contractor (or nominated environmental consultant) and approved by the Sydney Water Project Manager in consultation with the Environmental Representative and Contamination and Hazardous Materials team.

The WRRP should include:

- expected waste types and their location
- delineation of waste/resource types including identification of likely vertical and lateral extents (where warranted)
- visual monitoring of materials during excavation and measures to be undertaken to prevent co-mingling, and cross-contamination of waste or resource types
- ex-situ waste and resource recovery classification program, including timing relative to project/excavation phases as well as proposed hold points
- waste minimisation and resource recovery methodologies (including consideration of onsite reuse or management if contaminated)
- roles and responsibilities in relation to stockpile and material management and monitoring program
- proposed onsite reuse locations and reuse methodology (if applicable)
- proposed offsite reuse, offsite recycling and/or offsite disposal locations and facilities
- legislative compliance requirements
- consideration of future maintenance
- site restoration.

The Contractor will seek opportunities to reduce, recycle and reuse materials. This will be documented in the CEMP.

Manage waste in accordance with relevant legislation and maintain records to show compliance e.g. waste register, transport and disposal records. Record and submit SWEMS0015.27 Contractor Waste Report.

Provide adequate bins for general waste, hazardous waste and recyclable materials.

Minimise stockpile size and ensure delineation between different stockpiled materials.

Minimise the generation of waste and sort waste streams to maximise reuse/recycling in accordance with the legislative requirements.

Manage waste and excess spoil in accordance with the NSW EPA Resource Recovery Orders and Exemptions (if applicable) and/or Waste Classification Guidelines. Where materials are not suitable or cannot be reused onsite or offsite, recycle where appropriate. Recycle soils at a licensed soil recycling facility or dispose at an appropriately licenced landfill facility.

Prevent pollutants from escaping e.g. by covering skip bins.

If fibro or other asbestos containing material is identified, restrict access and follow Sydney Water's Asbestos Management – Minor Works procedure, Document Number 746607 and SafeWork NSW requirements. Contact Sydney Water Project Manager (who will consult with Contamination and Hazardous Materials team propertyenvironmental@sydneywater.com.au).

Should asbestos containing soil be identified, asbestos waste may need to be tracked using the EPA's Waste Locate online tracking System. The delivery contractor will review and comply with the requirements of the Protection of the Environment Operations (Waste) Regulation 2014.

Mitigation measures

Air and energy

The Contractor is to complete the Greenhouse Gas estimation tool to establish the base case for design and to consider opportunities to reduce greenhouse gas emissions where relevant.

Explore opportunities to use sustainable materials during construction.

Use alternatives to fossil fuels where practical and cost-effective.

Track energy use as per SWEMS0015.28 Contractor NGER template.

Maintain equipment in good working order, comply with the clean air regulations of the *Protection of the Environment Operations Act 1997*, have appropriate exhaust pollution controls, and meet Australian Standards for exhaust emissions.

Switch off vehicles/machinery when not in use.

Implement measures to prevent offsite dust impacts, for example:

- water exposed areas (using non-potable water source where possible such as water from excavation pits)
- cover exposed areas with tarpaulins or geotextile fabric
- modify or cease work in windy conditions
- modify site layout (place stockpiles away from sensitive receivers)
- vegetate exposed areas using appropriate seeding.

Cover all transported waste.

Flora and fauna

Provided it is essential for delivering the project, Sydney Water's Project Manager can approve the following vegetation removal and tree trimming, without additional environmental assessment (but only after consultation with the Environmental and Community Engagement Team Representatives and affected landowners). Sydney Water considers vegetation removal in these circumstances has minimal environmental impact.

- Any minor:
  - vegetation trimming or
  - removal of exotic vegetation or
  - removal of planted native vegetation
  - where the vegetation is not a threatened species (including a characteristic species of a threatened community or population), heritage listed, in declared critical habitat or in a declared area of outstanding biodiversity value.
- Any removal of remnant vegetation where there is no net change to environmental impact (e.g. a different area of vegetation is removed but the total area is the same or less than assessed in the EIA).

Written explanation of the application of this clause (including justification of the need for trimming or removal and any proposed revegetation) should be provided when seeking Project Manager approval. Any impacts to native vegetation and trees must be offset in accordance with the Biodiversity Offset Guideline (SWEMS0019.13).

Physically delineate vegetation to be cleared and/or protected on site and install appropriate signage before works start.

Mitigation measures
Protect trees in accordance with the requirements of Australian Standard 4970-2009 for the Protection of Trees on Development Sites. Do not damage tree roots unless absolutely necessary, and engage a qualified arborist where roots >50mm are impacted within the Tree Protection Zone.
Notify potentially affected residents of any tree removal.
Inspect vegetation for potential fauna before clearing or trimming. If fauna is present, engage WIRES or a licenced ecologist to inspect and relocate fauna before works.
If native fauna is encountered on site, allow the fauna to move away unharassed. Engage WIRES or a licenced ecologist if assistance is required to move fauna.
If any threatened species (flora or fauna) is discovered during the works, stop work immediately and notify the Sydney Water Project Manager. Work will only recommence once the impact on the species has been assessed and appropriate control measures implemented.
If any damage occurs to vegetation outside of the assessment area, notify the Sydney Water Project Manager and Environmental Representative so that appropriate remediation strategies can be developed.
Social and visual
Undertake works in accordance with Sydney Water Communications policies and requirements including: • notify impacted residents and businesses • erect signs to inform the public on the nature and duration of the work • treat community enquiries appropriately.
Maintain work areas in a clean and tidy condition.
Direct artificial light away from sensitive receivers where possible (e.g. residents, fauna or roadways).
Lighting to be constructed so that it is contained within Parry Park and constructed in accordance with *AS 4282–1997, Control of the obtrusive effects of outdoor lighting*.
Cumulative and future trends
Consult with the Australian National Sports Club, Council and any other stakeholders, including understanding any potential upcoming developments, to reduce impacts and coordinate works where practicable.

5.2.5 General environmental management

Table 5-7 Environmental mitigation measures – general environmental management

Mitigation measures
Sydney Water's Project Manager (after consultation with the environmental and community representatives and affected landowners) can approve temporary ancillary construction facilities (such as compounds and access tracks), without additional environmental assessment or approval if the facilities: • limit proximity to sensitive receivers

Mitigation measures

- do not disrupt property access
- have no impact to known items of non-Aboriginal and Aboriginal heritage
- are outside high risk areas for Aboriginal heritage
- use existing cleared areas and existing access tracks
- have no impacts to remnant native vegetation or key habitat features
- have no disturbance to waterways
- do not require additional safeguards beyond those included in the EIA
- do not disturb contaminated land or acid sulfate soils
- will be rehabilitated at the end of construction.

The Delivery Contractor must demonstrate in writing how the proposed ancillary facilities meet these principles. Any facilities that do not meet these principles will require additional environmental impact assessment.

The agreed location of these facilities must be shown on the CEMP site plan and appropriate environmental controls installed.

The Delivery Contractor should consider pre-mobilisation and post-demobilisation soil sampling on compound sites to confirm no residual impacts.

Should the proposal change from the REF, no further environmental assessment is required provided the change:

- remains within the assessment area for the REF and has no net additional environmental impact or
- is outside the assessment area for the REF but:
  - reduces impacts to biodiversity, heritage or human amenity or
  - avoids engineering (for example, geological, topographical) constraints and
  - after consultation with any potentially affected landowners and relevant agencies.

The Delivery Contractor must demonstrate in writing how the changes meet these requirements, for approval by Sydney Water's Project Manager in consultation with the environmental and community representatives.

Prepare a Construction Environmental Management Plan (CEMP) addressing the requirements of this environmental assessment. The CEMP should specify licence, approval and notification requirements. Before the start of work, all project staff and contractors will be inducted in the CEMP.

The CEMP must be readily available on site and include a site plan which shows:

- go/no go areas
- boundaries of the work area including locations of lay-down and storage areas for materials and equipment
- location of environmental controls (such as erosion and sediment controls, fences or other measures to protect vegetation or fauna, spill kits)
- location and full extent of any vegetation disturbance.

The CEMP will identify appropriate delineation with (e.g. metal fencing, flagging tape etc).

Delineate the approved assessment area before construction.

Prepare an Incident Management Plan (IMP) as part of the CEMP outlining actions and responsibilities for:

- predicted/onset of heavy rain during works
- spills
- unexpected finds (e.g. heritage, asbestos, hazardous waste)
- other potential incidents relevant to the scope of works.

Mitigation measures

All site personnel must be inducted into the IMP.

To ensure compliance with legislative requirements for incident management (e.g. *Protection of the Environment Operations Act 1997)*, Follow SWEMS0009 and attach SWEMS0009 to the CEMP.

Complaints to be managed in accordance with Sydney Water's Complaints Procedure and relevant Community Engagement Plan.

Assign single person with accountability for coordinating communication and information flow across contractors and consultants and provide the contact details of this person in the EWMS and/or CEMP.

6 Conclusion

Sydney Water has prepared this REF to assess the potential environmental impacts of the Parry Park Project. The proposal is part of Sydney Water's Waterway Health Improvement Program which aims to provide infrastructure solutions to improve water quality and biodiversity outcomes.

The main potential construction environmental impacts of the proposal include impacts from noise, traffic and access. During operation, there may be some minor potential impacts associated with traffic and access during maintenance. There will be positive social (and recreational), visual, biodiversity and drainage outcomes as a result of the proposal. Given the nature, scale and extent of impacts and implementation of the mitigation measures outlined in this REF, the proposal is unlikely to have a significant impact on the environment. Therefore, an environmental impact statement is not required under Division 5.1 of the EP&A Act. The REF considers how the proposal aligns with the principles of ESD. The proposal will result in positive long-term environmental improvements. The proposal will not result in the degradation of the quality of the environment and will not pose a risk to the safety of the environment.

References

Design Development Partners (DDP) (2026), 80% Concept Design Report

DDP (2025), Site Investigation Report

Appendices

Appendix A – Section 171 checklist

Section 171 Checklist	REF finding
Any environmental impact on a community	There may be short-term impacts on the community from noise, traffic and access. There would be environmental improvements by providing positive biodiversity, recreational and social outcomes to the local community.
Any transformation of a locality	The proposal would not result in a negative transformation of a locality but would provide positive biodiversity, recreational and social outcomes to the local community.
Any environmental impact on the ecosystems of the locality	The proposal would not result in adverse environmental impacts to ecosystems of the locality. The proposal would lead to environmental improvements by increasing biodiversity, providing habitat for fauna, and collect and treat stormwater before it enters Coxs Creek.
Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality	The proposal would not reduce these factors and would enhance recreational and environmental values for the site.
Any effect upon a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or any other special value for present or future generations	During construction, the proposal would temporarily affect the south-western portion of Parry Park which is used for social and recreational purposes. However in the long term, the proposal will improve the scientific, aesthetic and social outcomes of Parry Park for future generations.
Any impact on the habitat of any protected animals (within the meaning of the Biodiversity Conservation Act 2016)	The proposal would not have a negative impact on the habitat of protected animals. The proposal may lead to improvements in the habitat for the Green and Golden Bell Frog
Any endangering of any species of animal or plant or other form of life, whether living on land, in water or in the air	The proposal would not endanger any species but would enhance biodiversity by increasing habitat for the endangered Green and Golden Bell Frog.
Any long-term effects on the environment	The proposal would not have any negative long-term impacts on the environment but will have a long-term benefit by providing habitat for fauna, increase biodiversity, and provide recreational and social outcomes for the local community.
Any degradation of the quality of the environment	During construction there is the potential to degrade the quality of the environment due to the works. This would be temporary. Overall, the proposal would maintain and enhance the quality of the environment.
Any risk to the safety of the environment	The proposal would ensure the safety of the environment and would not exacerbate public health, contamination, bushfire, sea level rise, flood, extreme heat, urban heat and climate change considerations. The proposal would generally improve safety during flood and extreme rainfall events.

Section 171 Checklist	REF finding
Any reduction in the range of beneficial uses of the environment	The proposal would maintain and enhance the range of beneficial uses of the environment by providing a new recreational area for the local community.
Any pollution of the environment	Environmental mitigation measures will mitigate the potential for the proposal to pollute the environment. No pollution of the environment is expected.
Any environmental problems associated with the disposal of waste	Waste disposal will be in accordance with the environmental mitigation measures, and no environmental problems associated with the disposal of waste are expected.
Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply	The proposal will not affect demand on resources.
Any cumulative environmental effect with other existing or likely future activities	The proposal will not have any cumulative environmental effect with other existing or likely future activities.
Any impact on coastal processes and coastal hazards, including those under projected climate change conditions	The proposal will not have any impact on these factors.
Any applicable local strategic planning statements, regional strategic plans or district strategic plans made under the EP&A Act, Division 3.1	The Parry Park Master Plan identifies an option to create a wetland/naturalise the Cox Creek channel in Parry Park. The Masterplan and Sydney Water's Waterway Health Improvement Program strategically align on improving water quality, biodiversity and social outcomes.
Any other relevant environmental factors.	The proposal has been assessed against the factors listed above, and there are no other relevant environmental factors to consider.

Appendix B – Consideration of TISEPP consultation

TISEPP section	Yes	No
Section 2.10 Council related infrastructure or services – consultation with council		
Will the work:		
Potentially have a substantial impact on stormwater management services provided by council?		No
Be likely to generate traffic that will strain the capacity of the road system in the LGA?		No
Connect to, and have a substantial impact on, the capacity of a council owned sewerage system?		No
Connect to, and use a substantial volume of water from a council owned water supply system?		No
Require temporary structures on, or enclose, a public space under council's control that will disrupt pedestrian or vehicular traffic that is not minor or inconsequential?		No
Excavate a road, or a footpath adjacent to a road, for which the council is the roads authority, that is not minor or inconsequential?		No
Section 2.11 Local heritage - consultation with council		
Is the work likely to affect the heritage significance of a local heritage item, or of a heritage conservation area (not also a State heritage item) more than a minor or inconsequential amount?		No
Section 2.12 Flood liable land - consultation with council		
Will the work be on flood liable land (land that is susceptible to flooding by the probable maximum flood event) and will works alter flood patterns other than to a minor extent?		No
Section 2.13 Flood liable land - consultation with State Emergency services		
Will the work be on flood liable land (land that is susceptible to flooding by the probable maximum flood event) and undertaken under a relevant provision*, but not the carrying out of minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance? * (e) Div.14 (Public admin buildings), (g) Div.16 (Research/monitoring stations), (i) Div.20 (Stormwater systems)?	Yes	
Section 2.14 Development with impacts on certain land within the coastal zone – council consultation		
Is the work on land mapped as coastal vulnerability area and inconsistent with a certified coastal management program?		No

TISEPP section	Yes	No
Section 2.15 Consultation with public authorities other than councils		
Will the proposal be on land adjacent to land reserved under the *National Parks and Wildlife Act 1974* or land acquired under Part 11 of that Act? If so, consult with DPE (NPWS).		No
Will the proposal be on land in Zone C1 National Parks and Nature Reserves or on a land use zone that is equivalent to that zone? *If so, consult with DPE (NPWS).*		No
Will the proposal include a fixed or floating structure in or over navigable waters? *If so, consult TfNSW.*		No
Will the proposal be on land in a mine subsidence district within the meaning of the *Coal Mine Subsidence Compensation Act 2017*? If so, consult with *Subsidence Advisory NSW.*		No
Will the proposal be on land in a Western City operational area specified in the *Western Parkland City Authority Act 2018*, Schedule 2 and have a capital investment value of $30 million or more? If so, consult the Western Parkland City Authority.		No
Will the proposal clear native vegetation on land that is not subject land (ie non-certified land)? *If so, notify DPE at least 21 days prior to work commencing. (Requirement under s3.24 Chapter 3 Sydney Region Growth Centres - of the SEPP (Precincts – Central River City) 2021).*		No

Appendix C – TISEPP notification (clause 2.13)

Yameng Lai

From: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Sent: Thursday, 28 May 2026 11:11 AM
To: Yameng Lai
Cc: NSW SES Risk Reduction
Subject: [External] Response ID 3853 Re: Notification under Section 2.13 of the TISEPP - Sydney Water Parry Park Project

CAUTION: This email originated from outside the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good Morning Yameng,

Thank you for providing NSW SES the opportunity to review the proposed Sydney Water Parry Park Project.

NSW SES has assessed the proposal including any resultant impacts on flood risk and consequently has no further comment at this time.

Kind Regards
Kate

Kate Dawes
Planning and Research Officer

NSW STATE EMERGENCY SERVICE

E rra@ses.nsw.gov.au
Suite 5, Level 9, 1 Rider Boulevard, Gadigal, Rhodes, NSW, 2138
www.ses.nsw.gov.au

From: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Sent: Thursday, 21 May 2026 3:43 PM
To: Yameng Lai <Yameng.Lai@sydneywater.com.au>
Cc: NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Subject: ACK ID 3853 Re: Notification under Section 2.13 of the TISEPP - Sydney Water Parry Park Project

Good afternoon Yameng,

Thank you for the above referral which has been registered as ID 3853. Please quote this ID on any related future correspondence.

The referral will be assessed and if deemed applicable, a response will be forthcoming in due course.

Please note that staff may be involved in NSW SES Operations which could result in a delay in response times.

Kind regards.

Daniela

Daniela Mitreski
Program Support Officer | Emergency Risk Assessment | Emergency Management Directorate
NSW State Emergency Service – State Headquarters
E rra@ses.nsw.gov.au

93-99 Burelli Street Wollongong, NSW 2500
PO Box 6126 Wollongong, NSW 2500
www.ses.nsw.gov.au

OUR MISSION: SAVING LIVES AND CREATING SAFER COMMUNITIES.
OUR VISION: A TRUSTED VOLUNTEER-BASED EMERGENCY SERVICE, WORKING TOGETHER TO DELIVER EXCELLENCE IN COMMUNITY PREPAREDNESS AND EMERGENCY RESPONSE.
FOR EMERGENCY HELP IN FLOODS, STORMS AND TSUNAMI CALL THE NSW SES ON 132 500

The NSW SES acknowledges the traditional custodians of the lands on which we walk, work and live. We recognise their continuing connection to land, waters and culture and pay respect to Elders, past and present.

This message is intended for the addressee named and may contain confidential information. If you are not the intended recipient, please delete it and notify the sender. Views expressed in this message are those of the individual sender, and are not necessarily the views of the NSW State Emergency Service.

From: Yameng Lai <Yameng.Lai@sydneywater.com.au>
Sent: Thursday, 21 May 2026 2:45 PM
To: erm@ses.nsw.gov.au <erm@ses.nsw.gov.au>; NSW SES Risk Reduction <rra@ses.nsw.gov.au>
Subject: Notification under Section 2.13 of the TISEPP - Sydney Water Parry Park Project

EXTERNAL EMAIL: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Dear NSW SES,

We are writing to notify you in accordance with Section 2.13 of the State Environmental Planning Policy (Transport and Infrastructure) 2021.

Sydney Water is proposing to construction a wetland in flood-liable land at Parry Park, Lakemba. These works are permitted without consent under Section 2.136 and 2.137 of the TISEPP.

Attached for your information are:

- Excerpts from the **draft REF**
  - The proposal description
  - Water and Drainage impact assessment chapter

    - Water and Drainage mitigation measures
- Excerpt from the **80% Concept Design Report**
    - Figures showing the proposed works
    - Flood assessment chapter
    - Flood maps

In accordance with Section 2.13, please provide any comments within 21 days of this notice.

If you have any questions, please feel free to call or email me.

Thank you very much and have a good day.

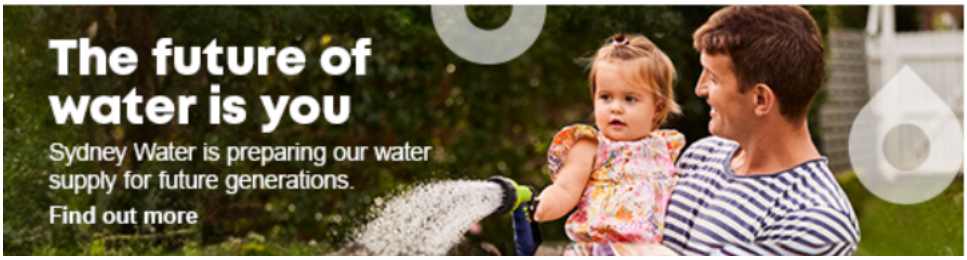
Kindest,

Yameng Lai (she/her)
Senior Environmental Scientist
Water and Environment Services

Mobile 0428 739 663
yameng.lai@sydneywater.com.au

Level 12, 1 Smith Street
Parramatta NSW 2150

Sydney WATER



Sydney Water respectfully acknowledges the traditional custodians of the land and waters on which we work, live and learn. We pay respect to Elders past and present.
Read more about our commitment to reconciliation.

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Appendix D – Noise technical memo

Construction noise and vibration memo

1 Executive summary

The potential noise and vibration impacts of Parry Park Waterway Health Improvement Project, Lakemba to be undertaken within standard construction hours is considered low to moderate, after implementation of mitigation measures contained in this memo.

The likelihood of noise impact for the proposal was assessed as medium-high risk using Appendix 1 from Sydney Water's Technical Practice Note. This memo assesses potential noise impacts and recommends mitigation measures to minimise impacts to the surrounding community. The document uses the TfNSW Construction and Maintenance Noise Estimator Tool and aligns with EPA's draft Construction Noise Guidelines and SWEMS0056.

Noisiest and most vibratory activities are predicted to impact receivers up to 75 m away for up to several months. These noise and vibration levels are for the unlikely worst-case scenario where equipment would be used continuously whereas the most likely scenario would use equipment intermittently or with periods of respite.

Project-specific mitigation measures will be implemented to mitigate potential impacts during construction. This would include community engagement in accordance with the Community and Stakeholder Action Plan.

2 Proposal details

2.1 Proposed scope of works

The scope of work is as described in Section 2 Proposal description of the REF.

2.2 Existing environment

2.2.1 Noise sensitive receivers

The site is surrounded by a mix of residential and recreational sensitive receivers. Figure 1 shows the proposal location in the south-west of Parry Park and the adjacent recreational receivers (playground, sports centre, passive park users) and residential receivers to the north, west and south.



Figure 1 Proposal location and surrounding area

2.2.2 Noise area category and background noise levels

The noise area category/area type was identified as R3 during standard daytime and evening hours, and R2 during night hours as the proposal area has the following features:

- Most closely matches the R3 scenario examples in the TfNSW estimator.
- The site is adjacent to Punchbowl Road.
- The site is about 50 m from the A3, which has a traffic volume of about 40,000 in each direction each day (Traffic Volume Viewer website, TfNSW).
- These volumes would be highest during the day and evening peaks and decrease at night.

For work during standard hours (OOHW), noise management levels (NMLs) are set at background + 5 dB(A). For work outside standard hours, the NMLs are set at background +10 dB(A). Table 2-1 shows the noise thresholds for R3 receptors and time of day.

Table 2-1 Background noise levels and noise management levels

Noise area category		R3
RBL or LA90 Background level (dB(A))	Day	50
	Evening	45
	Night	40
LAeq(15minute) Noise Management Level (dB(A))	Day	60
	Day (OOHW)	55
	Evening	50
	Night	45

2.3 Proposed construction schedule and work hours

Construction of the proposal is expected to start in late 2026 and be completed in mid-2028. Based on the definitions in Table 2-2, the work will be completed during standard daytime hours. The construction of a new water pipeline below Punchbowl Road into the existing network would occur during evening and night hours.

Table 2-2 Definition of different working hours

Time of day/night	Hours
Standard hours	Monday to Friday 7am to 6pm, Saturdays 8am to 1pm
Out of hours day	Saturday 7am to 8am and 1pm to 6pm, Sunday and public holidays 8am to 6pm
Out of hours evening	Daily 6pm to 10pm
Out of hours night	All other times

2.4 Proposed activities/ equipment (noisiest plant details)

Table 2-3 Proposed activities/equipment during construction

Activity	Tasks	Noisier equipment	Frequency of noisier equipment	Construction phase	Time of day
Activity 1	Cutting asphalt or concrete (most likely in the existing ANSC car park)	Concrete saw	Intermittent (on and off for short periods)	Site investigation, site establishment	Day
Activity 2	Excavation and earthworks, construction (across the majority of the proposal area)	Concrete truck, excavators, generators	Continuous and intermittent	Main construction period	Day
Activity 3	Cutting asphalt or concrete (across Punchbowl Road)	Concrete saw, generators	Continuous and intermittent	Main construction period	Night

3 Impact assessment

The TfNSW Construction and Maintenance noise estimator tool (TfNSW, 2025) (noise estimator tool) has been used to predict construction noise and vibration levels at different distance for different types of receivers.

The existing noise environment is influenced by regular traffic along Punchbowl Road and the A3. Other local sources of noise include a car mechanic on Punchbowl Road, local traffic and Parry Park Play Space and sports fields users.

3.1 Methodology

Table 3-1 shows the inputs for the noise estimator tool.

Table 3-1 Noise estimator tool inputs

Activity	Noise area category	Hours of work	Representative noisiest plant	Line of sight
Activity 1	R3	Day	Concrete Saw	Yes – Australia National Sports Club, residents to the north and south, Parry Park users No – residents further from the proposal area
Activity 2	R3	Day	13.5T excavator*	Yes – Australia National Sports Club, residents to the north and south, Parry Park users No – residents further from the proposal area
Activity 3	R2	Night	Concrete Saw	Yes – Australia National Sports Club, residents to the north and south, Parry Park users No – residents further from the proposal area

*A review of 'concrete truck', 'concrete pump', '13.5T excavator' and 'power generator' in the noise estimator tool showed a 13.5T excavator to have the highest noise impact. Thus, it has been chosen to conservatively represent the noise level across Activity 2.

3.2 Residential receivers

Residential receivers are those to the north of the proposal area, along Koala Road, to the west of the proposal area, west of the A3, and to the south of Punchbowl Road. The Enchanted Castle Child Care Centre is on Koala Road to the north of the proposal area. While there is no available information online, its presumed operating hours would be around 7am to 6pm which corresponds with daytime construction hours.

Table 3-2 and Table 3-3 provide a summary of the noise estimator tool outputs based on the plant identified in Section 2.4 and the methodology outlined in Section 3.1.

Table 3-2 Affected distance (metres) for impacts to residential receivers (day)

Activity	LAeq(15minute) noise level above background (LA90)				
	5 to 10 dB(A) Noticeable	10 to 20 dB(A) Clearly audible	20 to 30 dB(A) Moderately intrusive	>30dB(A) Highly intrusive	LAeq(15minute) 75dB or greater Highly affected
Activity 1	NA	NA	75 m (LOS)	45 m (LOS)	45 m (LOS)
Activity 2	NA	NA	35 m (LOS)	25 m (LOS)	25 m (LOS)
Recommended additional mitigation measures*			Notification (N)	N Phone Call (PC) Respite Offer (RO)	N, PC, RO

*Refer to Section 3.8 for further details

Table 3-3 Affected distance (metres) for impacts to residential receivers (night)

Activity	LAeq(15minute) noise level above background (LA90)					
	5 to 10 dB(A) Noticeable	10 to 20 dB(A) Clearly audible	20 to 30 dB(A) Moderately intrusive	>30dB(A) Highly intrusive	LAeq(15minute) 75dB or greater Highly affected	LAmax 65dB Sleep disturbance
Activity 3	805 m (LOS) 360 m (NLOS)	545 m (LOS) 240 m (NLOS)	240 m (LOS) 105 m (NLOS)	105 m (LOS) 35 m (NLOS)	35 m (LOS)	75 m
Recommended additional mitigation measures*	N	N Respite Period 2 (R2) Duration Respite (DR)	N, PC, R2, DR Specific Notifications (SN)	N, PC, SN, R2, DR Alternative Accommodation (AA)	N, PC, RO	NA

*Refer to Section 3.8 for further details

3.2.1 Activity 1

The nearest residents are to the south of Punchbowl Road, about 30 m from the proposal area. These residents have direct line of sight (LOS) to Activity 1 and are categorised as ‘highly affected’ (Table 3-2). During the site

investigation and site establishment phases, Activity 1, the concrete saw, would be used intermittently and only when breaking concrete/asphalt is required. As such, the potential noise impacts would be temporary and mitigation measures would be implemented to manage residual impacts.

Other residents with direct LOS to Activity 1 are to the north, along Koala Road and are at least 70 m from the carpark. These residents may experience 'Noticeable', 'Clearly audible' or 'Moderately intrusive' noise impacts. Given their distance from Activity 1 and the intermittent use of the concrete saw, the potential noise impacts would be minimal and temporary. Mitigation measures would be implemented to manage residual impacts.

3.2.2 Activity 2

The nearest residents to the south of Punchbowl Road also have direct LOS to Activity 2. These residents are categorised as 'moderately intrusive' for Activity 2 (Table 3-2). During the main construction phase, Activity 2, the use of plant and equipment, would occur throughout standard construction hours. Activity 2 would cause a short-term and minor rise in the background noise environment. Given the existing noise environment caused by traffic on Punchbowl Road and the A3, the noise impacts of Activity 2 would be minor to moderate. Mitigation measures would be implemented to manage residual impacts.

Other residents with a direct LOS to Activity 2 are to the west, about 70 m from the proposal area. These residents may experience 'Noticeable' or 'Clearly audible' noise impacts. Given their distance from Activity 2 and the existing noise environment, the potential noise impacts of Activity 2 would be minor and managed under the mitigation measures.

3.2.3 Activity 3

The residents to the south of Punchbowl Road also have direct LOS to Activity 3 and are categorised as 'highly affected' or 'highly intrusive' (Table 3-3). A number of residents in the wider surrounding area would also experience 'noticeable', 'clearly audible' and 'moderately intrusive' noise impacts. Works would include using a concrete saw to cut open existing asphalt and concrete. This would be used intermittently, would not occur beyond 12am, and only when opening concrete/asphalt is required. Once open, less noise-intensive equipment would be used to complete the pipe installation. Overall impacts would be moderate, short term and complete within 2 weeks. Mitigation measures would be implemented to manage residual impacts.

3.3 Recreational receivers

Recreational receivers are the users of Parry Park such as users of the Australia National Sports Club (ANSC), Parry Park Play Space and local visitors. There is a Scouts Hall to the north of the proposal area however a review of available information online indicates that this hall is not used.

Table 3-4 and Table 3-5 provide a summary of the noise estimator tool outputs based on the plant identified in Section 2.4 and the methodology outlined in Section 3.1.

Table 3-4 Affected distance (metres) for impacts to non-residential receivers (day)

Activity	Land use	10-20 dB(A) above NML	Highly affected – 75 dB(A) or above
Activity 1	**Active recreation**	NA	45 m (LOS)
	Passive recreation	70 m (LOS)	45 m (LOS)
Activity 2	**Active recreation**	NA	25 m (LOS)
	Passive recreation	35 m (LOS)	25 m (LOS)
Recommended additional mitigation measures*		N	N, PC, RO

*Refer to Section 3.8 for further details

Table 3-5 Affected distance (metres) for impacts to non-residential receivers (night)

Activity	Land use	10-20 dB(A) above NML	Highly affected – 75 dB(A) or above
Activity 3	**Active recreation**	NA	35 m (LOS)
	Passive recreation	60 m (LOS)	35 m (LOS)
Recommended additional mitigation measures*		N	N, PC, RO

*Refer to Section 3.8 for further details

3.3.1 Activity 1

The nearest active and passive recreational receivers are the ANSC and Parry Park Play Space. These receivers have direct LOS to Activity 1.

While the ANSC building is about 20 m from Activity 1, categorising it as 'highly affected' in the noise estimator tool (Table 3-4), a review of aerial satellite imagery (NearMap) shows that daytime carpark use appears low. A review of available game and club timetables at ANSC (ANSC indoor soccer, Western Ravens Volleyball Club, Ascent Volleyball Club) show that the centre is generally used on weekday evenings and nights, and all day on the weekends. Some sport sessions during the weekday start at 5pm or 6pm where there may be some overlap with Activity 1. Thus, the use of the Sports Club during the majority of standard daytime hours is expected to be low and potential noise impacts to recreational receivers would likely be minimal and temporary.

The Parry Park Play Space (60 m from Activity 1) is similarly expected to have low numbers of visitors during the majority of standard daytime hours. Visitors may include children from the Enchanted Castle Child Care Centre during the day, and children and youth in the afternoon and evening. During the site investigation and site establishment phases, Activity 1, the concrete saw, would be used intermittently and only when breaking concrete/asphalt is required. As such, the potential noise impacts would be temporary and mitigation measures would be implemented to manage residual impacts.

3.3.2 Activity 2

The nearest recreational receivers also have direct LOS to Activity 2. Similarly to Section 3.3.1, noise impacts to users of the ANSC are likely to be minimal and temporary.

Visitors to the Parry Park Play Space during daytime construction hours would experience a temporary rise in background noise for several months. Given the existing noise environment caused by traffic on Punchbowl Road and the A3, the noise impacts of Activity 2 would not be significant. Mitigation measures would be implemented to manage residual impacts.

3.3.3 Activity 3

The only active recreation receivers are the ANSC which is about 60 m away from Activity 3 and there are unlikely to be many passive recreational receivers within 60 m from Activity 3. Therefore potential impacts to recreational receivers at night would be unlikely and minimal.

3.4 Businesses

Nearby businesses are a car mechanic on Punchbowl Road and a mislabelled 'Sushi Izu Menai' restaurant to the north of the proposal area. The website confirms that there is no restaurant in Lakemba and the 'Sushi Izu Menai' shop is at a different address in Menai. Given the existing noise environment and the noise generated from the car mechanic, noise from the proposal is unlikely to significantly impact the business.

3.5 Cumulative

Given the existing noise environment influenced by the intersection of two busy roads, the proposal would have a minor and temporary impact on background noise levels during construction. There are no other major sources of noise, with train lines and industrial areas being over 800 m from the proposal area. Consultation with affected receivers would occur prior to works starting and appropriate mitigation measures would be implemented to avoid, minimise and mitigate impacts.

3.6 Sleep disturbance

Receivers who may be affected by sleep disturbance during Activity 1 and 2 during the day include one child care centre within 220 m of the proposal area. Consultation with the Enchanted Castle Child Care Centre would occur to minimise sleep disturbance during the day such as scheduling deliveries outside of "nap time." Works would occur during standard work hours only and would generally not cause sleep disturbance.

Sleep disturbance may be experienced during Activity 3 which has an affected distance of 75 m. Works during evening and night hours may include using a concrete saw to cut open existing asphalt and concrete. These would be completed before 12 am. Less noise-intensive equipment would be used to complete the pipe installation. Works would be short term and complete within 2 weeks.

Recommended mitigation measures in section 4 of this memo would mitigate sleep disturbance impact.

3.7 Vibration

The proposal will require the use of some vibratory equipment including handheld tools and excavators. Based on the TfNSW estimator tool, small to large excavators represent the likely range of vibratory impacts. Table 3-6 summarises the recommended minimum working distances.

Table 3-6 Minimum working distances

Plant item	Rating / Description	Minimum working distance		
		Cosmetic damage		Human comfort
		Light-framed structure (BS 7385)	Heritage and other sensitive structures (DIN 4150)	EPA's Vibration Guideline
Small Hydraulic Hammer	300 kg - 5 to 12t excavator	2 m	5 m	7 m
Medium Hydraulic Hammer	900 kg – 12 to 18t excavator	7 m	19 m	23 m
Large Hydraulic Hammer	1600 kg – 18 to 34t excavator	22 m	60 m	73 m

3.7.1 Cosmetic damage

There are several 'light-framed structures' near the proposal area. Where minimum working distances are unable to be maintained, cosmetic damage to Coxs Creek, other stormwater infrastructure and the retaining wall along Punchbowl Road may occur. Where possible, minimum working distances would be maintained.

The ANSC building and residential buildings are over 30 m from the main construction area. Minimum working distances will be maintained and cosmetic damage from vibratory equipment is unlikely to occur.

3.7.2 Human comfort

Vibratory impacts to 'human comfort' would occur where a large excavator is used. Receivers in the ANSC building be within the 'human response' working distances when a large excavator is used the eastern-most edge of the main construction area. Similarly, residential receivers to the north-west of the proposal may be within the 'human response' working distances when a large excavator is used at the western-most edge of the main construction area. As such, any vibratory impacts to human comfort would be temporary and short-term, or could be avoided through using a small to medium sized excavator.

Visitors of the Parry Park Play Space and residential receivers to the south of Punchbowl Road would be within 'human comfort' working distances of a large excavator for the majority of the work. Vibratory impacts to human comfort could be avoided through using a small to medium sized excavator.

3.8 Mitigation measures

To minimise potential noise impacts all reasonable and feasible mitigation measures were considered for the project (Appendix, Section 5.2).

Table 3-7 outlines the mitigation measures which will be implemented for the project, including:

- relevant mitigation measures from SWEMS0019.07
- recommended additional mitigation measures from the TfNSW noise estimator
- adopted reasonable and feasible measures (Appendix, Section 5.2).

Table 3-7 Proposed project-specific mitigation measures

Mitigation measure	Source
If works start more than 12 months from the completion of this memo – the Sydney Water project team and Delivery Contractor are to review the proposal details and existing environment, and re-assess if the noise impacts have changed.	General
Works must comply with the EPA Construction Noise Guideline (Draft, 2021), including scheduling work and deliveries during standard daytime working hours of 7am to 6pm Monday to Friday and 8am to 1pm Saturday. No work to be scheduled on Sunday nights or public holidays. Any proposed work outside of these hours must be justified. The Proposal will also be carried out in accordance with: • Sydney Water's Noise Management Procedure SWEMS0056 • Noise Policy for Industry (EPA, 2017). All reasonable and feasible noise mitigation measures should be justified, documented and implemented on-site to mitigate noise impacts.	SWEMS0019.07
Incorporate standard daytime hours noise management safeguards into the CEMP, including but not limited to: • identify and consult with the potentially affected residents prior to commencement of works. This should: - describe the nature of works, the expected noise impacts, approved hours of work, duration, complaints handling and contact details - determine need for, and appropriate timing of respite periods (e.g. times identified by the community that are less sensitive to noise such as mid-morning or mid-afternoon for works near residences). • implement a noise complaints handling procedure. • do not warm-up plant or machinery near residential dwellings before the nominated working hours. • select appropriate plant for each task, to minimise the noise impact (e.g. all stationary and mobile plant will be fitted with residential type silencers). • do not use engine brakes when entering or leaving the work site(s) or within work areas. • regularly inspect and maintain equipment in good working order.	SWEMS0019.07

Mitigation measure	Source
• arrange work sites where possible to minimise noise (e.g. generators away from sensitive receivers, site set up to minimise use of vehicle reversing alarms, site amenities and/ or entrances away from noise sensitive receivers). • use natural landforms/ mounds or site sheds as noise barriers. • schedule noisy activities around times of surrounding high background noise (local road traffic or when other noise sources are active).	
If works beyond standard daytime hours are needed, the Delivery Contractor would: • justify the need for out of hours work (OOHW) and why it is not possible to carry out the works during standard daytime hours • consider potential noise impacts and implement the relevant standard daytime hours mitigation measures • follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01) • document consideration of all reasonable and feasible measures, and document reasonable and feasible measures to be implemented • identify additional community notification requirements and outcomes of targeted community consultation • seek approval from the Sydney Water Project Manager in consultation with the environment and community engagement representatives.	SWEMS0019.07
As night works are needed, the Delivery Contractor would: • justify the need for night works • consider potential noise impacts and implement the relevant standard daytime hours mitigation measures • follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01) • document consideration of all reasonable and feasible measures, and document reasonable and feasible measures to be implemented • identify community notification requirements (ie for scheduled night work (not emergency works)) • notify all potentially impacted residents and sensitive noise receivers not less than one week prior to commencing night work • seek approval from the Sydney Water Project Manager in consultation with the environment and community engagement representatives.	SWEMS0019.07
If works on Sundays or public holidays are required, the Delivery Contractor would: • justify why all other times are not feasible • consider potential noise impacts and implement the relevant standard daytime hours mitigation measures • follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01) • document consideration of all reasonable and feasible measures, and document reasonable and feasible measures to be implemented • identify community notification requirements	SWEMS0019.07

Mitigation measure	Source
• seek approval from the Sydney Water Project Manager in consultation with the environment and community engagement representatives.	
Conduct a dilapidation survey / asset condition assessment prior to works which have potential to damage existing structures.	SWEMS0019.07
Monitor compliance with the recommended vibration levels in DIN 4150-3 1999: Structural Vibration – Part 3; Effects of vibration on structures.	SWEMS0019.07
Consider less vibration intensive methodologies where practicable and use only the necessary sized and powered equipment.	SWEMS0019.07 Reasonable and feasible measures (Appendix, section 5.2)
Conduct attended noise and vibration monitoring and confirm Rated Background Levels.	SWEMS0019.07 Reasonable and feasible measures (Appendix, section 5.2)
Limit truck routes to major roads, and limit truck deliveries to within standard construction hours where feasible, or within agreed hours in consultation with affected stakeholders (including sensitive receivers such as nearby childcare centres).	SWEMS0019.07
Site buildings and/or containers should be positioned between noisy equipment and the affected receivers.	SWEMS0019.07 Reasonable and feasible measures (Appendix, section 5.2)
Install temporary noise barriers at work fronts or around stationary equipment including during night works.	Reasonable and feasible measures (Appendix, section 5.2)
Noisy works and equipment (e.g. concrete saw) to be completed before 10pm where possible and to stop by 12am	Reasonable and feasible measures (Appendix, section 5.2)
Do not work within minimum vibration working distances where possible.	SWEMS0019.07
Conduct letterbox drops, doorknocking, phone calls and provide respite to affected stakeholders in accordance with the recommended distances of the TfNSW Construction and Maintenance noise estimator tool and 'Reasonable and Feasible' measures.	TfNSW Construction and Maintenance noise estimator tool
Continue engagement with affected stakeholders (including sensitive receivers such as nearby childcare centres) throughout the works including providing project updates, notifying of out of hours works, and responding to community complaints.	Reasonable and feasible measures (Appendix, section 5.2)
Prepare a daily register of planned activities on site.	Reasonable and feasible measures (Appendix, section 5.2)

4 Conclusion

The potential noise and vibration impacts of Parry Park Waterway Health Improvement Project, Lakemba to be undertaken within standard construction hours is considered low to moderate, after implementation of mitigation measures contained in this memo.

Noisiest and most vibratory activities are predicted to impact receivers up to 75 m away for up to several months. These noise and vibration levels are for the worst-case scenario where equipment would be used continuously whereas the most likely scenario would use equipment intermittently or with periods of respite.

Project-specific mitigation measures will be implemented to mitigate impacts during construction. This would include community engagement in accordance with the Community and Stakeholder Action Plan.

Prepared by: Yameng Lai, Environmental Scientist, Sydney Water

Date: 28/03/2026

Reviewed by: Deana Filipas, Senior Environmental Scientist, Sydney Water

Date: 13/05/2026

Construction noise and vibration memo

5 Appendix

5.1 Figures



Figure 5-1 Residential receivers within affected distance during Activity 1 Standard Hours - Day

Construction noise and vibration memo



Figure 5-2 Residential receivers within affected distance during Activity 2 Standard Hours - Day

Construction noise and vibration memo

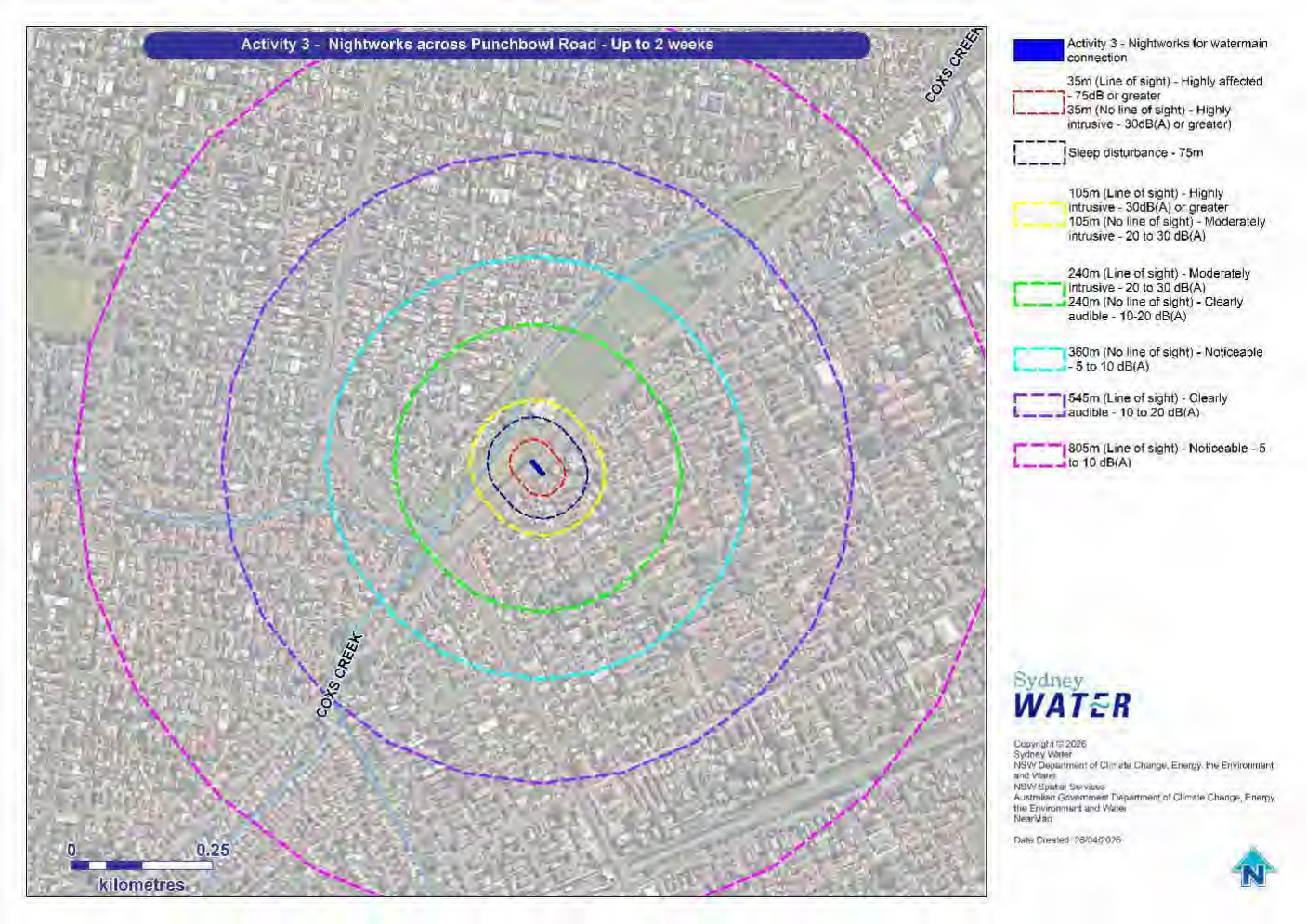


Figure 5-3 Residential receivers within affected distance during Activity 3 Out of Hours - Night

5.2 Reasonable and Feasible assessment

A Reasonable and Feasible Assessment has been completed to determine the appropriate additional mitigation measures. Additional measures recognised in this assessment has been included in Table 5-1 below.

The adopted mitigation measures from the Reasonable and Feasible Assessment should form part of the CEMP and/or NVMP, and any changes to the mitigation option from the assessment would be documented with sufficient justification as to why changes are required.

Table 5-1 Reasonable and feasible table

Mitigation option	Feasible (can it be done)	Reasonable (should it be done)	Adopted/ partially adopted/ not adopted	Justification or comment	Mitigation measure adopted (Y/N)
Planning the work					
Consideration of alternatives / options	*Yes*	*Yes*	*Partially Adopted*	*Delivery and noisy work timing to be adjusted in consultation with affected stakeholders*	*Y*
Do nothing	*No*	*No*	*Not Adopted*	*Not acceptable outcome*	*N*
Conduct the works during standard daytime hours	*Yes*	*Yes*	*Partially Adopted*	*Work in Punchbowl Road is required to connect an existing water pipeline to the site. Punchbowl Road is classified as a state road so works would likely occur during evening and night hours.*	*Y*
Conduct the works during the evening and night	*Yes*	*Yes*	*Partially Adopted*	*Work in Punchbowl Road is required to connect an existing water pipeline to the site. Punchbowl Road is classified as a state road so works would likely occur during evening and night hours.*	*Y*
Consultation/ notifications/ complaints management					
Community consultation prior to works	*Yes*	*Yes*	*Adopted*	*The surrounding environment is predominately residential.*	*Y*

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Mitigation option	Feasible (can it be done)	Reasonable (should it be done)	Adopted/ partially adopted/ not adopted	Justification or comment	Mitigation measure adopted (Y/N)
Consultation with residents during works	*Yes*	*Yes*	*Adopted*	*The surrounding environment is predominately residential.*	*Y*
Project updates	*Yes*	*Yes*	*Adopted*	*The surrounding environment is predominately residential.*	*Y*
Notification to residents prior to out of hours work	*Yes*	*Yes*	*Adopted*	*The surrounding environment is predominately residential. The ANSC predominately operates during 'out of hours' work hours.*	*Y*
Ongoing community complaints management	*Yes*	*Yes*	*Adopted*	*The surrounding environment is predominately residential.*	*Y*
Daily register of planned activities on site	*Yes*	*Yes*	*Adopted*	*To assist with ongoing community engagement activities.*	*Y*
Selection of construction methodology/ plant and equipment					
Underbore the total alignment	*N/A*	*N/A*	*N/A*	*Not a pipeline project*	*N/A*
Two work fronts	*N/A*	*N/A*	*N/A*	*Not a linear project*	*N/A*
Smaller excavator	*Yes*	*Yes*	*Partially Adopted*	*To reduce ongoing impacts to surrounding receivers. Adopted where possible without increasing overall construction timeframes.*	*Y*
Noise and vibration verification/monitoring					
Attended noise and vibration monitoring	*Yes*	*Yes*	*Adopted*	*To reduce ongoing impacts to surrounding receivers.*	*Y*
Unattended continuous noise monitoring	*Yes*	*No*	*Not Adopted*	*To be managed through ongoing community*	*N*

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Mitigation option	Feasible (can it be done)	Reasonable (should it be done)	Adopted/ partially adopted/ not adopted	Justification or comment	Mitigation measure adopted (Y/N)
				complaints management measures.	
HSEQ Site Presence	*Yes*	*Yes*	*Adopted*	*To reduce ongoing impacts to surrounding receivers.*	*Y*
Noise attenuation at source/site					
Noise barriers at work front	*Yes*	*Yes*	*Adopted*	*To reduce ongoing impacts to surrounding receivers.*	*Y*
Noise barriers along alignment	*N/A*	*N/A*	*N/A*	*Not a linear project*	*N/A*
Purpose built noise wall	*No*	*No*	*Not Adopted*	*Would increase construction timeframes and noise impacts.*	*N*
Respite periods					
Duration respite periods	*Yes*	*No*	*Not Adopted*	*Would increase construction timeframes*	*N*
Respite periods – Noisy works completed prior to midnight	*Yes*	*Yes*	*Adopted*	*Noisy works, e.g. concrete saw cutting, would be complete before 12am to reduce sleep impacts.*	*Y*
Respite periods for high impact noise works – other options (such as three hour blocks with a one hour respite period)	*N/A*	*N/A*	*N/A*	*No continuous high noise impact works are proposed*	*N/A*
Respite – Alternate Accommodation	*Yes*	*No*	*N/A*	*Night works would be complete within 2 weeks.*	*N*
Consultation for high impact noise works	*Yes*	*Yes*	*Partially Adopted*	*No long term high noise impact works proposed*	*Y*

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Mitigation option	Feasible (can it be done)	Reasonable (should it be done)	Adopted/ partially adopted/ not adopted	Justification or comment	Mitigation measure adopted (Y/N)
Architectural treatments at properties – i.e. double glazing, soundproofing, door/window sealing	*No*	*No*	*Not Adopted*	*No long term high noise impact works proposed*	*N*

Appendix E – Aboriginal Heritage Due Diligence

Aboriginal heritage information must not be made publicly available or be published in any form or by any means by Sydney Water or our contractors / joint ventures, unless written approval has been provided to Sydney Water from DPE's AHIMS Registrar .

For publicly displayed REFs, all Aboriginal heritage information that identifies individual sites must be removed.

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28 April 2026

Yameng Lai
Environmental Scientist
Environment & Heritage Services
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Dear Yameng,

RE: Aboriginal heritage due diligence assessment for the Parry Park Water Sensitive Urban Design (WSUD) Project, Sydney, NSW

1.0 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Sydney Water Corporation (Sydney Water) to undertake an Aboriginal heritage due diligence assessment (AHDD) to support the proposed construction of a wetland in the Sydney suburb of Lakemba, New South Wales (NSW) (the 'Project area'; Figure 1).

The purpose of this assessment is to identify potential impacts to Aboriginal heritage values from the proposed works and to provide Sydney Water with appropriate management advice. The contents of this letter report have been compiled with reference to Heritage NSW's *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (the Code of Practice) (DECCW, 2010). This code has been developed to assist proponents in exercising due diligence when carrying out activities that may harm Aboriginal objects.

2.0 Proposed Activity

AECOM understands that Sydney Water is proposing to deliver a Water Sensitive Urban Design (WSUD) asset within Parry Park, Lakemba, as part of the broader Waterway Health Improvement Program (WHIP). The Project aims to improve water quality and ecological outcomes within the Cooks River catchment, specifically targeting Coxs Creek, which currently flows through Parry Park as a concrete-lined channel. The works are also intended to align with the Parry Park Masterplan (2018) and enhance community amenity.

The Project involves the construction of a wetland system and associated infrastructure within the south-western portion of Parry Park, including a water recirculation system, Green and Golden Bell Frog habitat, and new drainage infrastructure such as a Gross Pollutant Trap. Ancillary features include pathways, fencing, a permanent maintenance access track, and landscaped elements such as plantings, seating, lookout areas and artwork.

Construction activities are expected to involve bulk earthworks and excavation to establish the wetland basin and associated drainage infrastructure, installation of stormwater and potable water services, and landscaping works. Site establishment would include construction of a temporary access track and ancillary facilities (e.g., site sheds and laydown areas) within the Project area, with access likely provided via Punchbowl Road and the adjacent carpark.

Key ground surface disturbances associated with the works are expected to include:

- Bulk earthworks associated with construction of the wetland basin and drainage infrastructure
- Excavation and regrading to establish new landforms and flow paths
- Removal or trimming of vegetation within the construction footprint
- Installation of pathways, access tracks, and associated park infrastructure
- Establishment of temporary construction areas, including access routes and laydown areas.

3.0 Assumptions and Limitations

Information on previously recorded Aboriginal sites within and surrounding the Project area was obtained by AECOM through a search of the Aboriginal Heritage Information Management System (AHIMS) database and the NSW State Heritage Inventory (SHI), as well as a desktop review of relevant previous Aboriginal heritage investigations. It is noted that coordinate errors are a common

feature of the AHIMS database, along with duplicate site entries, incorrect site statuses and types, and omissions or errors in site content. Given these issues, all Aboriginal site data sourced from the AHIMS database for this assessment was cross-checked and validated against the information provided in original assessment reports and lodged site cards (where available).

Predictions regarding the likelihood of subsurface archaeological deposits within the Project area have been made in this report based on existing environmental and archaeological datasets, along with field observations. However, it should be noted that such deposits can occur in any environmental context.

4.0 Relevant Legislation and Policy

4.1.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by Heritage NSW, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Secretary of the Department of Planning, Housing and Infrastructure (DPHI) responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places', defined under the Act as follows:

- an *Aboriginal object* is any deposit, object or material evidence (that is not a handicraft made for sale) relating to the Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains)
- an *Aboriginal place* is a place declared so by the Minister administering the NPW Act because the place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them and includes a 'strict liability offence' for such harm. A 'strict liability offence' does not require someone to know that it is an Aboriginal object or place they are causing harm to in order to be prosecuted. Defences against the 'strict liability offence' in the NPW Act include the carrying out of certain 'Low Impact Activities', prescribed in Clause 58 of the *National Parks and Wildlife Amendment Regulation 2019* (NPW Regulation), and the demonstration of due diligence.

An Aboriginal Heritage Impact Permit (AHIP) issued under Section 90 of the NPW Act is required if impacts to Aboriginal objects and/or places cannot be avoided. An AHIP is a defence to a prosecution for harming Aboriginal objects and places if the harm was authorised by the AHIP and the conditions of that AHIP were not contravened. Applications for an AHIP must be accompanied by assessment reports compiled in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010b). Applications must also provide evidence of consultation with Aboriginal communities. Consultation is required under Part 8A of the NPW Regulation and is to be conducted in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a). AHIPs may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons.

Section 89A of the NPW Act requires notification of the location of Aboriginal sites within a reasonable time, with penalties for non-notification. Section 89A is binding in all instances.

Figure 1 Project area



5.0 Data Sources

Information regarding the known and potential Aboriginal heritage values of the Project area was obtained from:

- A review of the landscape context of the Project area and surrounds
- Searches of the AHIMS database and NSW State Heritage Inventory (SHI)
- A review of the findings of past Aboriginal heritage investigations within and surrounding the Project area
- A visual inspection of the Project area by AECOM Principal Heritage Specialist Geordie Oakes on 6 March 2026.

6.0 Landscape Context

Consideration of the landscape context of the Project area is based on the principle that the nature and distribution of Aboriginal archaeological materials are closely linked to environmental conditions. Factors such as topography, geology, hydrology and local resources influenced patterns of movement and land use, including the availability of campsites, water, food resources and raw materials. An understanding of historical and contemporary land use, together with geomorphic processes such as erosion and aggradation, is also critical to assessing the formation, integrity and subsurface potential of archaeological deposits.

Key observations from a review of the landscape context of the Project area are presented in Table 1.

Table 1 Review of landscape context of the Project area

Environmental Variable	Key Observations
Topography	The Project area has undergone extensive modification from the original channelisation of Coxs Creek as well as general urban development. Prior to these activities, the area likely comprised low-lying alluvial flats associated with Coxs Creek. Elevations within the Project area range from 22 metres (m) Australian Height Datum (AHD) around Coxs Creek to 24 m AHD near Punchbowl Road, resulting in a total local relief of 2 m. Slope gradient ranges from level to gently inclined (3–10%).
Hydrology	The Project area lies directly adjacent to a concrete-lined, 2nd order section of Coxs Creek, a tributary of the Cooks River. Prior to urban development, the creek is likely to have flowed through low-lying wetlands and paperbark swamps, and may have comprised a chain-of-ponds system in the vicinity of the Project area. With suburban expansion from around 1900, the creek was progressively modified for drainage purposes, including straightening, realignment, piping of sections and conversion to a concrete-lined stormwater channel. Existing archaeological survey data for the Sydney region indicate a strong trend for the presence of open artefact sites along watercourses, specifically, on creek banks and 'flats' (i.e., flood/drainage plains), terraces and bordering lower slopes (Kohen, 1986). Although this distribution pattern can be attributed in part to geomorphic dynamics and archaeological sampling bias, with extensive fluvial erosion activity along watercourses resulting in higher levels of surface visibility and, by extension, concentrated survey effort, an occupational emphasis on watercourses is supported by the results of numerous subsurface investigations (e.g., AECOM, 2013b, 2015; AMBS, 2000; Craib et al. 1999; GML, 2012; Jo McDonald CHM, 2001, 2003, 2005a, 2006a, 2006b, 2007, 2009a, 2009b). Collectively, these investigations have demonstrated that assemblage size and complexity tend to vary significantly in relation to stream order and landform, with larger, more complex assemblages concentrated on elevated, low gradient landform elements adjacent to higher order watercourses (≥3rd order). Outside of these contexts, surface and subsurface artefact distributions have typically been found to be sparse and discontinuous and are often referred to as 'background scatter'.

Environmental Variable	Key Observations
Geology	Reference to the 1:100,000 Geological Map Sheet for Sydney (9130) indicates that the surface geology of the Project area is mapped as Ashfield Shale (Rwa). This formation represents the lowermost unit of the Middle Triassic Wianamatta Group and consists of a 'sequence of dark-grey to black, sideritic claystone–siltstone which grades upwards into a fine sandstone–siltstone laminate' (Bembrick et al., 1991: 17). The formation has a minimum thickness of 44.6 m and maximum thickness of 61.6 m (Bembrick et al., 1991: 17).
Soils	Soils within the Project area have been mapped by Hazelton & Tille (1993) as belonging to the Blacktown soil landscape. Soils of the Blacktown soil landscape have been characterised by Bannerman and Hazelton (1990) as hard setting mottled texture contrast soils, with red and brown podzolic soils on crests grading to yellow podzolic soils on lower slopes and in drainage lines. Dominant 'A' horizon soils comprise friable and hard setting loams with pH levels ranging from neutral (pH 7.0) to moderately acidic (pH 5.0).
Flora & Fauna	Extant vegetation within the Project area has been completely cleared since at least the early twentieth century, with all standing vegetation cleared prior to 1943. The area is now largely a mixture of native and exotic grasses and planted tree lines. Prior to European settlement, the vegetation of the Project area is likely to have comprised Shale Plains Woodland (Tozer, 2003), which was once widespread across the Sydney region.
Land Disturbance	Historical aerial photographs and field observations indicate that land within the Project area has been highly disturbed as a result of modification of the creek channel and urban development. See Section 7.0 for a detailed discussion.
Archaeological sensitivity	On the basis of the above desktop review, the archaeological sensitivity of the Project area is assessed as low. Although the Project area is located adjacent to Coxs Creek, a setting typically associated with increased archaeological potential, the watercourse has been extensively modified and now comprises a concrete-lined 2nd order channel. The potential for intact archaeological deposits has been substantially reduced by extensive disturbance associated with the channelisation of Coxs Creek and surrounding urban development, which has likely removed or significantly altered original soil profiles. The Project area has also been fully cleared of native vegetation since at least the early twentieth century. Accordingly, the likelihood of encountering intact Aboriginal artefact sites is considered low. The potential for other site types, such as culturally modified trees, is also low.

7.0 Historical Land Use

A review of parish maps and historic aerial photographs of the Project area dated between 1890 and 2009 (Figure 2) indicates a range of activities and associated ground surface impacts within and surrounding the Project area. These include:

- Parish mapping from the 1890s and early 1900s indicates that the Project area was originally associated with Coxs Creek, which followed a more sinuous alignment through a low-lying landscape approximately 50 m to the north of the current alignment. By the early twentieth century, the creek had been modified and partially formalised, reflecting early drainage works associated with surrounding subdivision and urban development.
- The earliest available aerial photography (1943) shows the Project area to be largely cleared of native vegetation and comprising open, undeveloped land, with the creek corridor already modified. Surrounding residential development is evident, indicating that vegetation clearance and initial ground disturbance likely occurred prior to this time.
- Subsequent aerials (1961–1978) show the area remaining largely as open grassed land, with increasing urban consolidation in surrounding areas and progressive formalisation of the

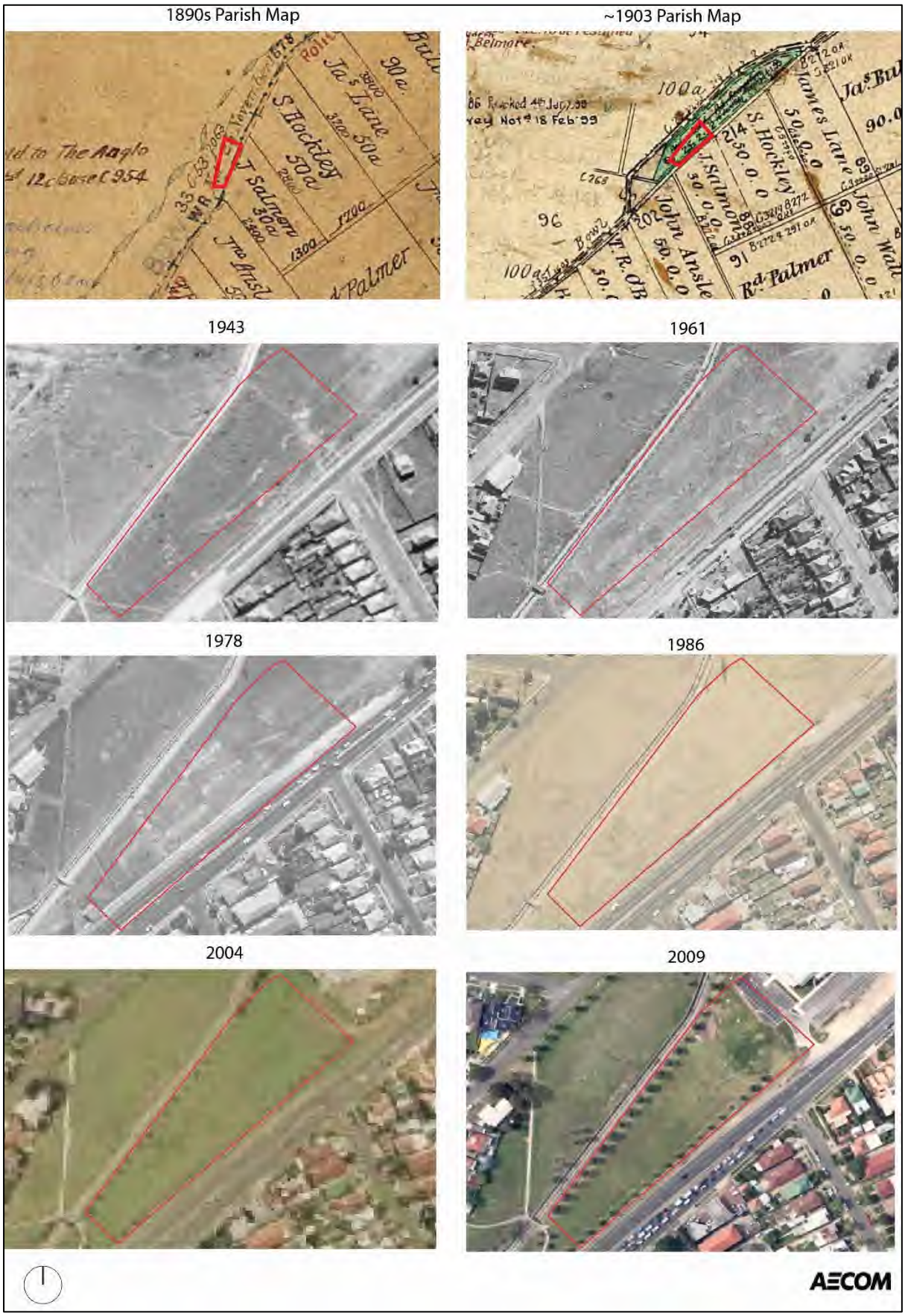
creek corridor and adjacent road infrastructure. By 1986, the Project area appears to have been incorporated into managed open space, likely associated with parkland use, with continued maintenance of a grassed surface.

- Later aerials (2004–2009) indicate the establishment of the modern park layout, including maintained grassed areas and tree planting along boundaries, as well as upgrades to adjacent road infrastructure. With the exception of the sports club constructed around 2004 on the eastern boundary of the Project area, no substantial built structures are evident, with land use dominated by open recreational space.

In addition to the above, Sydney Water commissioned geotechnical investigations within the Project area comprising nine boreholes, test pits and hand augurs. These investigations identified a layer of fill (0–0.3 m) within the Project area consisting of clayey sands with minor gravel and organic material, likely associated with park construction. This overlaid alluvial soils (0.2–3.3 m) comprising predominantly clay with minor sand and gravel, generally exhibiting low plasticity and firm to very stiff consistency, with variable moisture content.

Collectively, the available evidence indicates that the Project area has been subject to extensive disturbance associated with vegetation clearance, creek modification and ongoing landscaping and maintenance as parkland. These activities are likely to have resulted in the disturbance or removal of original soil profiles and any associated archaeological deposits. Accordingly, the integrity of any surviving archaeological material is expected to be low, with a reduced likelihood of surface expressions of artefacts, intact subsurface deposits or culturally modified trees being present.

Figure 2 Historical aerial photographs of the Project area (Source: NSW Spatial Collaboration Portal 2026)



8.0 Aboriginal Heritage

8.1 AHIMS Sites

The AHIMS database, administered by Heritage NSW, contains records of all Aboriginal objects reported to the Secretary of the Department of Planning, Housing and Infrastructure in accordance with Section 89A of the *National Parks and Wildlife Act 1974*. It also contains information about Aboriginal places that have been declared by the Minister to have special significance with respect to Aboriginal culture. Previously recorded Aboriginal objects and declared Aboriginal places are collectively referred to as 'Aboriginal sites'.

A search of the AHIMS database was undertaken on 10 February 2026 for a 5 x 5 kilometre (km) area centred on the Project area (Search ID#1098569). [redacted]

This information has been redacted to protect sensitive Aboriginal heritage information

Table 2 AHIMS search results

[redacted]

8.2 State Heritage Inventory

A search of the State Heritage Inventory (SHI) was undertaken on 19 March 2026. No Aboriginal sites or places were identified within or immediately surrounding the Project area.

8.3 Previous Aboriginal Heritage Investigations

Few Aboriginal heritage assessments have been undertaken in the Lakemba area with only two recently completed assessments, both of which did not identify any Aboriginal heritage (Comber Consultants Pty Ltd, 2019; Stening, 2021). Nonetheless, key observations drawn from a review of the local and regional archaeological context of the Project area are as follows:

- Available radiometric dates indicate that Aboriginal people have occupied the Sydney Region, including the Cumberland Plain, since the late Pleistocene. However, 'early' (i.e., late Pleistocene / early Holocene) occupational evidence remains rare, with the overwhelming majority of sites identified to date likely of mid-to-late Holocene antiquity
- Surface and subsurface distributions of stone artefacts (i.e., open artefact sites) are the most common and widely distributed form of Aboriginal archaeological site in the region
- Existing archaeological survey data for the region, including land within and surrounding the Project area, indicate a strong trend for the presence of open artefact sites along watercourses, specifically, on creek banks and 'flats' (i.e., flood/drainage plains), terraces and bordering lower slopes
- Regional and local datasets indicate that assemblage size and complexity tend to vary significantly in relation to stream order and landform, with larger, more complex assemblages concentrated on elevated, low gradient landform elements adjacent to higher order watercourses

- Flaked stone artefact assemblages from excavated and surface collected/recorded open artefact sites in the region attest to the exploitation of a diverse range of lithic raw materials. However, two rock types - silcrete and silicified tuff (also known as indurated mudstone) - dominate the region's existing stone artefact record
- Unless severely disturbed through historical or recent land use activities, all landform elements across the region retain potential for the presence of Aboriginal archaeological materials, albeit of highly variable character and extent
- No previously recorded Aboriginal sites are located directly within or adjacent to the Project area.

9.0 Visual Inspection

A visual inspection of the Project area was completed on 6 March 2026 by Geordie Oakes (AECOM Principal Heritage Specialist). The purpose of the inspection was to assess whether the proposed works will, or are likely to, harm any Aboriginal objects or sites. During the inspection, notes were taken on Ground Surface Visibility (GSV), Ground Integrity (GI, i.e., land condition), archaeological sensitivity and impact risk. Impact risk was assessed based on archaeological sensitivity, as well as the nature of proposed Project-related impacts. The results of the inspection included the following:

- GSV across the Project area was variable, with areas of high visibility associated with clearing, disturbance, access tracks and erosion, with low visibility in other areas due to vegetation (grass) cover (Figures 3 to 6)
- No Aboriginal objects, sites or places were identified within the Project area during the inspection
- Ground surface disturbances were noted across the Project area including areas of cut and fill, existing water infrastructure and erosion
- Land surrounding Coxs Creek, in particular, was inspected, with no Aboriginal objects or areas of archaeological sensitivity identified. The creek banks were highly modified, with evidence of channelisation, erosion control works and reshaping associated with the creek's realignment
- Vegetation within the corridor primarily comprises introduced grasses and planted trees
- Consistent with the examined aerial imagery and geotechnical investigations, the visual inspection confirmed that land within the Project area is highly disturbed. Accordingly, the risk of harming Aboriginal objects is assessed as low.



Figure 3 View southwest across the Project area (Source: AECOM 2026)



Figure 4 View northeast along Coxs Creek (Source: AECOM 2026)



Figure 5 View east showing existing water infrastructure within the Project area (Source: AECOM 2026)



Figure 6 View east of the existing site access (Source: AECOM 2026)

10.0 Key Findings

The key findings of this Aboriginal archaeological due diligence assessment are as follows:

- No new Aboriginal objects/sites were identified during the site inspection
- The archaeological sensitivity of the Project area is assessed as low. This assessment is based on extensive historical disturbance documented through aerial imagery and confirmed during field inspection
- On this basis, the likelihood of the Proposed Activity resulting in harm to Aboriginal objects is considered low.

Table 3 provides a summary of the key questions asked as part of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010:10). Should the answer to Question 4 be 'yes', further investigation and impact assessment is required.

Table 3 Due diligence questionnaire

No.	Due Diligence Question	Response
1	*Will the activity disturb the ground surface (or culturally modified trees)?*	Yes
2a	*Are there any relevant confirmed site records or other associated landscape feature information on AHIMS?*	No
2b	*Are there any other sources of information of which a person is already aware?*	No
2c	*Are there any landscape features that are likely to indicate presence of Aboriginal objects?*	No
3	*Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?*	N/A
4	***Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?***	***No***

11.0 Recommendations

On the basis of the above findings, the following recommendations are made:

1. No further Aboriginal heritage assessment or approvals are considered warranted for the Proposed Activity.
2. In the event that Aboriginal objects/sites, including possible human skeletal material (remains), are identified during the proposed activity, all works in the area must cease immediately and the relevant provision of Sydney Water's Environmental Management System (SWEMS009) should be followed. The stop work procedure should be included within the Project's construction management plan.

Kind regards,



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