

# Review of Environmental Factors Multi-program - Category B

Critical Watermain Renewal T34-S01, Lakemba St, Lakemba.

## 1 Determination

This Review of Environmental Factors Multiprogram - Category B (Category B REF) is to be read in conjunction with the Review of Environmental Factors Multi-program pipeline and related infrastructure replacement, repair and upgrades (Multi-program REF) August 2025. Together, both documents assess the potential environmental impacts of Critical Watermain Renewal T34-S01, Lakemba Street, Lakemba. These documents were 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 Category B REF and Multi-program REF. Additional environmental impact assessment may be required if the scope of work or work methods described in either the Multi-program REF or this Category B REF change significantly following determination.

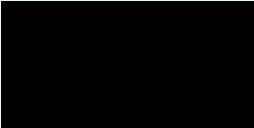
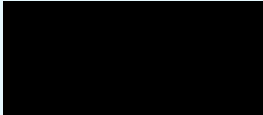
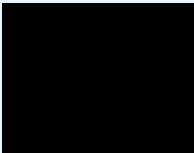

### Decision Statement

The main potential construction environmental impacts of the proposal include noise, heritage, and traffic and access. 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 Category B REF and the Multi-program 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.

### 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 by:	Endorsed by:	Approved by:
 Aaron Panozzo REF author Sydney Water Date: 18/12/2025	 John Eames Senior Environmental Scientist Sydney Water Date: 18/12/2025	 Melissa Navaro Project Manager Sydney Water Date: 19/12/2025	 Murray Johnson Senior Manager Environment and Heritage Sydney Water Date: 21/01/2026

## 2 Proposal Summary

Table 1 Description of proposal

Aspect	Detailed description
<b>Location</b>	<p>The proposal is in the roadway and footpath of Lakemba St between Oxford Street and Garrong Road with connection works into Yerrick Road, Barremma Road and Benaroon Road. The proposal is in the suburb of Lakemba and in the Canterbury-Bankstown Local Government Area (LGA). It is located on land zoned as R3 (medium density residential) with E4 (general industrial) land located on the north side of Lakemba St for the eastern half of the alignment.</p> <p>The proposed main compound is at Potts Hill Reservoir.</p> <p>An auxiliary site compound would be at the slip road to Benaroon Road.</p> <p>The proposal and environmental constraints are shown in Figure 1.</p>
<b>Approved REF</b>	<p>Review of Environmental Factors Multi-program pipeline and related infrastructure replacement, repair and upgrades (Multi-program REF) (August 2025).</p>
<b>Proposal description</b>	<p>The proposal is part of the Critical Watermain Renewal program as detailed in the Multi-program REF.</p> <p>The proposal involves the renewal of 580 metres (m) of watermains along Lakemba Street, Lakemba. This new pipeline would include connection works into Yerrick Road, Barremma Road and Benaroon Road (refer Figure 1). The project would use a conventional trench and lay methodology.</p> <p>The proposed methodology includes:</p> <ul style="list-style-type: none"><li>• Site establishment:<ul style="list-style-type: none"><li>○ investigations e.g. potholing and soil sampling, compound setup, material deliveries, and installing traffic and environmental controls.</li></ul></li><li>• Excavation pipe laying works:<ul style="list-style-type: none"><li>○ saw cutting and excavating to a depth of 3 m with a width of 1 m</li><li>○ preparing and welding pipes</li><li>○ transporting pipes to site</li><li>○ conventional lay of pipeline</li><li>○ backfilling</li><li>○ removing traffic control and installing road plates over any open excavations (between each shift).</li></ul></li><li>• Connection works:<ul style="list-style-type: none"><li>○ connect new pipeline to existing watermain at either end on Lakemba St, as well as on Yerrick Rd, Barremma Rd and Benaroon Rd</li><li>○ ozone and pressure testing.</li></ul></li></ul>

## Aspect

## Detailed description

- Site demobilisation:
  - temporarily reinstating road pavement
  - demobilising site including resurfacing, and demobilising compound.

The main site compound would be used for compound operations including, equipment and material storage, amenities, staff parking and preparation.

The auxiliary compound would be used for equipment and material storage and parking only. Any deliveries made to the compound would be done during the day.

The following plant/equipment would be used:

- excavators (up to 13.5t)
- skip bins
- concrete saws
- generators
- jackhammers
- tip trucks
- air compressors
- light vehicles
- plate compactors
- vacuum truck
- concrete agitator trucks
- street sweepers
- compactor.

## Proposal timing

The proposal is expected to occur during both standard daytime construction hours and out of hours and take approximately 8 months commencing April 2026.

To reduce the impact on traffic during the day, the proposal will involve night works on Lakemba Street with day works on side streets. The proposal is proposed to be undertaken using a 2-1-2 method to reduce impact on surrounding residents. This means 2 nights at one location, one night at an alternate location, and 2 nights at the original location. This work pattern will require community acceptance prior to work commencing.

The proposal will involve day works during standard daytime construction hours on side streets (Yerrick Rd, Barremma Rd, and Benaroon Rd).

Standard daytime hours include:

- Monday to Friday - 7am to 6pm

Non-standard night hours include:

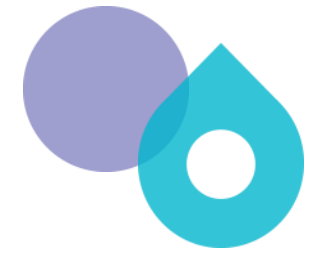


Aspect	Detailed description
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- Monday to Friday - 8pm to 5am

The main compound and auxiliary compound would be used during both day and night hours for the activities described above.







**Legend**

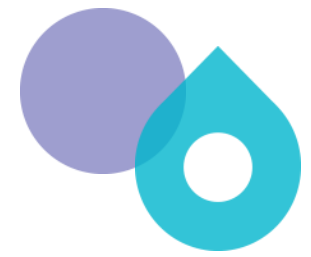
-  Connection to existing network
-  Indicative alignment
-  Auxiliary compound
-  Local heritage

**Inset map**

-  Site compound location
-  Alignment location



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 NSW Spatial Services  
 Australian Government Department of Environment  
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Figure 1 Proposal features and constraints



Sydney  
**WATER**

Legend

-  Site compound
-  State heritage curtilage

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NSW Spatial Services  
Australian Government Department of Environment

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Figure 1 Site compound at Potts Hill Reservoir



### 3 Consultation

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, proposal 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.

Community consultation will be undertaken in advance of the commencement of works to inform nearby residents and businesses of anticipated noise impacts and disruptions to traffic and property access. Where access to private residential properties is required consultation with residents prior to access will be undertaken.

Consultation with council will be ongoing to manage any traffic and access impacts.

#### Consultation required under State Environmental Planning Policies and other legislation

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. This requirement is specified in the State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP).

Consultation was required under section 2.10 (e) and (f) as the proposal is likely to require temporary structures on council owned land and involves excavation on a council owned road or footpath. Further detail is provided in Appendix B. Canterbury-Bankstown Council was consulted on 25 September 2025. A response was received on 1 October 2025, included in Appendix E. Council raised no objections to the proposal but provided some conditions.

## 4 Legislative requirements

Table 2 considers the additional legislative requirements beyond those already assessed in the Multi-program REF.

**Table 2** Consideration of additional environmental legislation relevant to the proposal

Legislation	Additional considerations
<i>Heritage Act (1977)</i>	There is one State heritage listed item that may be impacted by the proposal. A site-specific exemption (section 57) was completed for the main site compound at Potts Hill Reservoir (1 & 2). This determined that the proposed works would not impact the significance of this heritage item. Refer section 5 and Appendix C for details.

## 5 Additional environmental impacts and mitigation measures

The tables below list the additional environmental impacts that could result from the proposal and the additional mitigation measures. All other environmental impacts and mitigation measures identified in the Multi-program REF remain the same and will be incorporated into the Contractor's Construction Environmental Management Plan (CEMP).

Operational impacts from the proposal are anticipated to be negligible as the proposal will be buried after completion and the surface will be restored to pre-construction condition.

**Table 3** Environmental impacts table

Aspect	Additional impacts	Additional mitigation measures
<b>Topography, geology and soils</b>	<p>Potential impacts to topography, geology and soils from works are expected to be moderate due to excavations. The works will involve excavating up to a depth of 3 m for the 580 m alignment.</p> <p>Potential impacts would be minimised by progressively excavating along the alignment and backfilling excavated areas. Excavated material will be transported offsite to a licensed waste disposal facility. Any open excavations would be covered with road plates between night shifts. The work site will be restored to original or better condition. Therefore, impacts to topography, geology and soils resulting from works are expected to be short-term and moderate.</p> <p>The nearest known contaminated site is about 350 metres to the southeast, no impacts to this site are anticipated.</p>	<p><i>No additional mitigation measures are required. Apply the measures outlined in the overarching REF.</i></p>
<b>Water and drainage</b>	<p>There are no drainage lines or waterways nearby to the proposal. The nearest waterway is an unnamed tributary of the Cooks River located about 350 metres to the east.</p>	<p>Additional mitigation measures:</p> <ul style="list-style-type: none"> <li>• If the potential for intercepting groundwater</li> </ul>

Aspect	Additional impacts	Additional mitigation measures
	<p>Surface water runoff would drain into the local stormwater system. The proposal is not located on flood prone land.</p> <p>Exposed soil or other material within the construction corridor may travel offsite into stormwater drains during high rainfall events. However, as the excavations would progress along the alignment linearly and would be properly covered and managed, these impacts are expected to be minor.</p> <p>There is no publicly available groundwater data within 1km of the proposal. Boreholes located about 2.3 km to the northwest indicate groundwater to be between 3 and 5 metres. Due to the distance to the nearest waterway as well as the depth of excavations groundwater is unlikely to be encountered. Dewatering of drinking water within the new pipelines during commissioning will be managed in accordance with Sydney Water's Water Quality Management During Operational Activities Policy (D0001667).</p>	<p>is identified after the REF is determined, Sydney Water will obtain a groundwater Water Supply Works Approval. The Delivery Contractor is responsible for:</p> <ul style="list-style-type: none"> <li>○ providing expert hydrogeological technical information to obtain the approvals</li> <li>○ preparing a Dewatering Management Plan</li> <li>○ complying with the conditions of the approvals (such as protecting water quality; minimising aquifer extraction volumes, monitoring extraction with flow meters and recording volumes).</li> </ul>
<p><b>Flora and fauna</b></p>	<p>Impacts to flora and fauna are expected to be minor and inconsequential as the proposal is located within previously disturbed, highly urbanised land.</p> <p>There is no mapped native vegetation nearby to the proposal and the nearest threatened fauna species (Grey-headed Flying-fox) is located about 160 metres to the west.</p> <p>There are some planted mature trees along the alignment located within the road verge. No tree removal is planned for the proposal.</p>	<p><i>No additional mitigation measures are required. Apply the measures outlined in the overarching REF.</i></p>
<p><b>Heritage</b></p>	<p><i>Aboriginal heritage</i></p> <p>There are no registered Aboriginal Heritage Information Management Systems (AHIMS) sites located nearby to the proposal. [REDACTED]. While excavations are included, the proposal is located within previously disturbed land. Impacts to Aboriginal heritage are not anticipated.</p> <p><i>Non-Aboriginal Heritage</i></p>	<p>Additional mitigation measure:</p> <ul style="list-style-type: none"> <li>• All controls and conditions identified in the s57 exemption for Potts Hill Reservoirs 1 &amp; 2 and Site will be adhered to for the duration of the proposal.</li> </ul>

Aspect	Additional impacts	Additional mitigation measures
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The proposal is located within the Canterbury-Bankstown LGA. One local heritage item is listed in the vicinity of the proposal under the Canterbury-Bankstown Local Environmental Plan 2023:

- Inter war factory building – SEC Plating Pty Ltd.

This item is on Lakemba Road, adjacent to the proposed new pipeline. The works are outside the curtilage of this item and limited to the roadway and existing disturbed areas.

Therefore, impacts to this heritage item are not anticipated. Potential impacts as a result of vibration are not anticipated, see noise and vibration section.

The site compound is within the curtilage of Potts Hill Reservoirs 1 & 2 and Site (01333) which is listed on the State Heritage Register (SHR). Potential impacts to this heritage item are not likely as the no ground disturbance is included in the operations and whilst the compound has been extended for these works it was previously being used as a compound for another project.

A site-specific exemption (section 57 exemption under the Heritage Act 1977) was completed for this heritage item. This determined that the proposed works would not impact the significance of this heritage item (refer Appendix C).

<p><b>Noise and vibration</b></p>	<p>A noise assessment memo (refer Appendix D) was completed for the proposed works as they require the use of noisy equipment and machinery.</p> <p>The proposed works are located within road corridors on land zoned as R3 (medium density residential). The main site compound is located at Potts Hill Reservoir with land zoned as SP2 (Infrastructure).</p> <p>The existing noise environment around the proposal area consists of road traffic along Lakemba Street and nearby roads. The nearest sensitive receivers are residential properties along Lakemba Street and adjoining roads. These receivers have line of sight to the works. Residential properties located further down adjoining roads and on other nearby streets have no line of site to the works onsite as they are shielded by other properties closer to the works.</p> <p>Noise from excavation works, onsite personnel, construction equipment and vehicle movements may impact nearby sensitive receivers. These noises will generally occur from 8 pm to 5 am, Monday to Friday, however some works will be completed during standard day hours (refer table 1). Works along the alignment will involve the use of noisy equipment</p>	<p>Additional mitigation measures:</p> <ul style="list-style-type: none"> <li>• prepare a construction noise and vibration management plan (CNVMP) before the work starts</li> <li>• employ noise containment methods (e.g. noise blankets / walls / barriers)</li> <li>• employ attended monitoring onsite to evaluate construction noise and where appropriate, vibration levels to evaluate whether mitigation measures are adequate or require revision, and to address complaints</li> </ul>
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Aspect	Additional impacts	Additional mitigation measures
	<p>including excavators, vacuum trucks, concrete saws, and jack hammers. The use of concrete saws (noisiest tool) will be limited to before midnight to minimise noise disturbance. Noise generated from works at the site compound will involve vehicles entering and leaving the compound and the use of generators during the day for welding. Noise barriers will be installed around the entire boundary of the site compound to minimise noise impacts.</p> <p>The likelihood of noise impacts from the proposal was reviewed against relevant risk factors from the EPA's Draft Construction Noise Guideline (2020). The review indicated that the construction noise impacts would be of medium high risk and therefore a quantitative noise impact assessment was undertaken. The Transport for NSW (Transport) Construction and Maintenance Noise Estimator Tool (Transport, 2022) was used for the assessment. The review indicated that noise impacts resulting from the proposal will be medium – high risk due to the following factors:</p> <ul style="list-style-type: none"> <li>• The duration of standard day works and out of hours work exceeds one month, would occur from 8 pm to 5 am, and would be within 50 m of nearby residential properties.</li> <li>• The works are proposed to be carried out in a 2-1-2 shift pattern along the alignment. Works will occur at one location along the alignment for 2 consecutive days, be moved away to a different location for one day and then back to the first location for 2 more days. This would offer respite to nearby sensitive receivers. The TfNSW noise estimator tool (refer to Appendix C) was run using a worst-case scenario (concrete saw). The recommended respite period 2 (R2), includes recommendations for respite such as 2 nights on, one week off and high noise generating works being completed by midnight. As such, it is recommended that community consultation is undertaken with affected sensitive receivers to agree a work pattern that allows the works to progress in a timely fashion in a manner that is acceptable to the community. To satisfy noise conditions, day shifts and night shifts will not be completed sequentially in the same area.</li> <li>• Excavators and tipper trucks would be used for the duration of the works, with regular waste disposal throughout the duration of the proposal and regular deliveries made to site and the site compound.</li> </ul>	<ul style="list-style-type: none"> <li>• monitor compliance with the recommended vibration levels in DIN 4150-3 1999: Structural Vibration – Part 3; Effects of vibration on structures</li> <li>• restrict use of the auxiliary compound at night to material and equipment storage and parking. Deliveries to site would be in standard daytime working hours and vehicle movements limited where possible.</li> </ul> <p>The following measures would be adopted as per Table 8 of the noise memo:</p> <ul style="list-style-type: none"> <li>• notify receivers of potential noise impacts prior to the commencement of works via letter, specific notifications, phone calls</li> <li>• offer respite period 2 and where possible ensure all noisy / annoying work will be completed before midnight</li> <li>• offer duration respite where justifiable and accepted by the community to shorten the project duration by increasing the number of shifts per week</li> <li>• confirm the favored respite and construction shift pattern before construction begins, informed by community consultation with affected receivers.</li> </ul>

Aspect	Additional impacts	Additional mitigation measures
	<ul style="list-style-type: none"> <li>• Works would involve the use of light, medium and heavy vehicles.</li> </ul> <p>For the assessment, the works would be separated into the following categories to appropriately recommend mitigation measures:</p> <ul style="list-style-type: none"> <li>• Category 1, Noisy works – using concrete saw as the noisiest plant. Includes investigation works and road excavation works.</li> <li>• Category 2, Other works – using an excavator as the noisiest plant. Includes pipe laying works and connection works.</li> </ul> <p>Appendix D shows the outputs of the noise estimator tool with figures identifying affected receivers as well as receivers likely to experience sleep disturbance. Potential impacts for category 1 works include:</p> <ul style="list-style-type: none"> <li>• highly intrusive noise would be experienced by receivers within 45 metres of the construction works. All receivers at this distance have line of sight</li> <li>• moderately intrusive noise would be experienced by receivers within 75 metres of construction works.</li> </ul> <p>Potential impacts for category 2 works include:</p> <ul style="list-style-type: none"> <li>• highly intrusive noise would be experienced by receivers within 25 metres of the construction works. All receivers at this distance have line of sight</li> <li>• moderately intrusive noise would be experienced by receivers within 35 metres of construction works.</li> </ul> <p>Given the outputs of the noise estimator tool, the risk rating of potential noise emissions are Risk Level 3 (medium - high) and therefore do not warrant specialist assessment. Impacts to nearby sensitive receivers are expected to range from moderate – high depending on their line of sight and distance from the site. Additional safeguards and mitigation measures have been identified to manage noise and vibration impacts (see additional mitigation measures in Table 4.2 and Table 4.3 in Appendix D).</p> <p><i>Vibration</i></p> <p>The proposal will require the use of some vibratory equipment including jackhammers. The Transport noise estimator tool summarises the minimum working distances and potential vibration impacts from the use of jackhammers.</p>	

Aspect	Additional impacts	Additional mitigation measures
	<p>Vibration related impacts are not anticipated to nearby structures (heritage and otherwise) or receivers as they do not fall within the minimum working distances (refer Appendix D).</p>	
<p><b>Air and energy</b></p>	<p>There is the potential for impacts to air quality from construction activities and vehicles emissions. These would be from dust caused by vehicle movements and ground disturbance occurring onsite. Sensitive receivers include nearby residents and pedestrians. These impacts are expected to be minor.</p>	<p><i>No additional mitigation measures are required. Apply the measures outlined in the overarching REF.</i></p>
<p><b>Waste and hazardous materials</b></p>	<p>The proposed works have the potential to generate waste from:</p> <ul style="list-style-type: none"> <li>• general construction waste such as excess concrete, paper, plastic and metal</li> <li>• domestic waste including food scraps, plastic and paper containers generated by construction site personnel</li> <li>• excavation spoil from the disturbed roadway.</li> </ul> <p>Preliminary desktop investigations identified one contaminated site (notified to the EPA) 350m from the proposal. No impacts to this site are anticipated.</p>	<p><i>No additional mitigation measures are required. Apply the measures outlined in the overarching REF.</i></p>
<p><b>Traffic and access</b></p>	<p>The proposal is located on public roads (Lakemba Street, Benaroon Road, Yerrick Road, and Barremma Road). Works on Lakemba Street will occur between 8pm and 5am, Monday to Friday, and works in the side streets (Yerrick, Barremma and Benaroon Roads) will occur during standard hours, Monday to Friday. Lakemba is a regional road (NSW Road Network Classifications, 2025).</p> <p>During night works on Lakemba Street there will be partial road closures, temporary disruptions to private driveway and residential property access, and blocked access to street parking. These disruptions will only occur between 8pm and 5am (as per the ROL) and traffic and access will be restored at the end of each shift.</p> <p>During day works on the side streets there would be partial road closures, temporary disruptions to private driveways and residential property access. These disruptions will occur during standard day hours (as per the ROL) and traffic and access will be restored at the end of every shift.</p>	<p>Additional mitigation measures:</p> <ul style="list-style-type: none"> <li>• the contractor must obtain a Road Occupancy Licence (ROL) from council</li> <li>• consultation with council will be ongoing to manage road closures and traffic impacts.</li> </ul>



Aspect	Additional impacts	Additional mitigation measures
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Mitigation measures in the overarching REF will manage access to properties for local residents, businesses and public facilities.

Any road closures and detours will be completed in consultation with council and managed under the TMP.

The proposed works will involve a mix of light, medium and heavy vehicles including worker vehicles. An increase in traffic may occur due to workers travelling to site daily, regular waste disposal, and regular deliveries to site for the duration of the proposal. The main site compound will be in use during both the day and at night. However noisy activities will be restricted to standard hours where possible.

The auxiliary compound will include the complete closure of the slip road from Lakemba Street into Benaroon Road and would be in use at all times of the day, however, this will be only used for equipment and material storage and parking. While this will include a total road closure, traffic disruptions would be minor as access into Benaroon Road would be available via the roundabout adjacent to the compound.

Given that disruptions to traffic and access and the construction area will mainly occur during night works and would be restored at the end of each shift, impacts are expected to be moderate and short term. Day works would make up a smaller component of the works and would be contained to the side streets off Lakemba Street.

<p><b>Social and visual</b></p>	<p>The proposed works may impact social and visual amenity because of noise and air quality impacts.</p> <p>Visual impacts associated with the proposed works are anticipated to be low-moderate as:</p> <ul style="list-style-type: none"> <li>• some residential and non-residential receivers will have line of sight to the proposed works</li> <li>• the majority of works will only occur between 8pm and 5am, Monday to Friday and there will be no works on weekends or public holidays</li> <li>• construction in the side streets (Yerrick, Barremma and Benaroon Road) will occur during standard day hours, Monday to Friday and there will be no works on weekends or public holidays</li> <li>• the site will be progressively restored as works move along the alignment.</li> </ul>	<p><i>No additional mitigation measures are required. Apply the measures outlined in the overarching REF.</i></p>
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Aspect	Additional impacts	Additional mitigation measures
	<p>While not in use, large vehicles and machinery will be parked in the site compound (refer Figure 2). These vehicles and machinery would be visible to nearby receivers while in use.</p> <p>Therefore, the social and visual impacts of the works are expected to be temporary and minor.</p>	
<p><b>Cumulative and future trends</b></p>	<p>A review of the NSW Major Projects portal identified one major project in the vicinity of the proposed works that may have a cumulative impact. Consultation with council also identified three additional planned works in the surrounding area.</p> <p>The Canterbury-Bankstown Bulldogs Centre of Excellence (CoE), which is State Significant Development, is located within one kilometre of the proposed works to the south-east in Belmore. Construction related works were set to commence in mid-2025 and continue for 16 months.</p> <p>Planned works by Canterbury-Bankstown Council began in mid 2025 and are expected to be complete by mid-2026, these works include:</p> <ul style="list-style-type: none"> <li>• Lakemba St regional road rehabilitation</li> <li>• Bus stop construction on Burwood St at Lakemba St</li> <li>• Wangee Rd play space stage 1 design.</li> </ul> <p>Cumulative impacts from this development may include an increase in road traffic because of construction vehicles, as well as noise and air quality impacts from construction activities. As the proposal is expected to commence in April 2026, there may be some cross over until these projects are completed. The majority of the proposed works will be carried out between 8pm and 5am Monday to Friday. However, as some works will be carried out as standard day works there may be minor cumulative impacts.</p>	<p>Additional mitigation measures:</p> <ul style="list-style-type: none"> <li>• Council has identified planned works in the area during consultation (refer Appendix E). The Sydney Water Project Manager will continue to work with council to ensure the proposal does not impact council works.</li> </ul>

**Table 4 Environmental mitigation measures**

<b>General</b>	
1.1	<p>Should the proposal or methodology change from the EIA, no further environmental assessment is required provided the change:</p> <ul style="list-style-type: none"> <li>• remains within the assessment/study area for the EIA and has no net additional environmental impact or</li> <li>• is outside the assessment/study area for the EIA but:               <ul style="list-style-type: none"> <li>- reduces impacts to biodiversity, heritage or human amenity or</li> <li>- avoids engineering (for example, geological, topographical) constraints and</li> <li>- after consultation with any potentially affected landowners and relevant agencies.</li> </ul> </li> </ul> <p>The 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.</p>
1.2	<p>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 Environmental Works Method Statement and/or CEMP.</p>
1.3	<p>Ensure that council recommendations are strictly adhered to where possible. Any impacts to council infrastructure assets (footpath, kerb, road facilities) will be discussed with council beforehand.</p>



## 6 Conclusion

This Category B REF outlines potential environmental impacts associated with noise, heritage, traffic and access as part of the CWM Lakemba Street, Lakemba proposal. Any additional environmental impacts are considered negligible/ minor and potential impacts can be mitigated through implementation of the measures outlined in this Category B REF and the Multi-program REF. The proposal is not likely to significantly impact the environment.

Publication Number: SW 168 04/26

## Appendix A – Section 171 checklist

Requirements in addition to the Multi-program REF are considered in the table below.

Section 171 checklist	REF finding
<p>Any environmental impact on a community</p>	<p>There may be impacts on the community from potential noise, air emissions and dust generation due to vehicle movements, excavation and noisy equipment use at the site. These impacts are expected to range from moderate to high depending on the proximity of receivers to the proposed works and can be ameliorated by applying the mitigation measures in the REF.</p> <p>There will be disruptions to traffic and access due to partial road closures and traffic generated by construction vehicles and activities. Impacts are expected to be short-term and moderate as works will primarily be undertaken at night.</p> <p>There will be environmental improvements by providing a reliable water service to the local community.</p>
<p>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</p>	<p>The main site compound will be located within the curtilage of Potts Hill Reservoirs 1 &amp; 2 which is a State Heritage listed item. A site-specific exemption (section 57) has been completed and determined that the works will not have an adverse impact on this item.</p>

## Appendix B – Consideration of TISEPP consultation

TISEPP section	Yes	No
<b>Section 2.10, council related infrastructure or services – consultation with council</b>		
Will the work:		
Potentially have a substantial impact on stormwater management services provided by council?		X
Be likely to generate traffic that will strain the capacity of the road system in the LGA?		X
Connect to, and have a substantial impact on, the capacity of a council owned sewerage system?		X
Connect to, and use a substantial volume of water from a council owned water supply system?		X
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?	X	
Excavate a road, or a footpath adjacent to a road, for which the council is the roads authority, that is not minor or inconsequential?	X	
<b>Section 2.11, local heritage – consultation with council</b>		
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?		X
<b>Section 2.12, flood liable land – consultation with council</b>		
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?		X
<b>Section 2.13, flood liable land – consultation with State Emergency Services</b>		
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)?		X
<b>Section 2.14, development with impacts on certain land within the coastal zone– council consultation</b>		
Is the work on land mapped as coastal vulnerability area and inconsistent with a certified coastal management program?		X
<b>Section 2.15, consultation with public authorities other than councils</b>		
Will the proposal be on land adjacent to land reserved under the <i>National Parks and Wildlife Act 1974</i> or land acquired under Part 11 of that Act? <i>If so, consult with DPE (NPWS).</i>		X
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? <i>If so, consult with DPE (NPWS).</i>		X
Will the proposal include a fixed or floating structure in or over navigable waters? <i>If so, consult TfNSW.</i>		X
Will the proposal be on land in a mine subsidence district within the meaning of the <i>Coal Mine Subsidence Compensation Act 2017</i> ? <i>If so, consult with Subsidence Advisory NSW.</i>		X
Will the proposal be on land in a Western City operational area specified in <i>the Western Parkland City Authority Act 2018</i> , Schedule 2 and have a capital investment value of \$30 million or more? <i>If so, consult the Western Parkland City Authority.</i>		X
Will the proposal clear native vegetation on land that is not subject land (ie non-certified land)? <i>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).</i>		X



**Appendix C – Section 57 site specific exemption**





# Section 57(2) Exemption Record of Use

## Standard Section 57(2) Exemption: #2526\_S57\_0002

Potts Hill – ongoing/reuse of existing Compounds and extension of size

### 1. Purpose

This document has been prepared as a record of the heritage impact assessment undertaken for proposed works to a heritage item listed on the NSW State Heritage Register, in accordance with the **Standard Exemptions** under Section 57(2) of the *Heritage Act 1977* in Government Gazette No 262, 17 June 2022.<sup>1</sup>

This document has been prepared for the following Sydney Water representative:

**Name:** John Eames

**Title:** Senior Environmental Scientist

**Contact:** john.eames@sydneywater.com.au

### 2. Heritage Context

The proposed works relate to the heritage item described as **Potts Hill Reservoirs 1 & 2 and Site**, which is listed on the NSW Heritage Register as **Item #01333** (Figure 1) and comprises a pair of water storage reservoirs (one now disused), with surrounding lands, inlet pipelines and the outlet works - which connect the stored water to the distribution network, including the Pressure Tunnel, City Tunnel and the Pott Hill WPS (WP0004) - consisting of outlet tower, pipelines, valve house and valves, scour lines and valves, and the other metering, screening and control installations.

The current Statement of Significance for the heritage item is included hereunder:

*The Potts Hill Water Supply Reservoirs were an integral part of the Upper Nepean Water Supply Scheme, which was crucial to the development and growth of Sydney from the late nineteenth century. The expansion of the complex, including the construction of Reservoir No. 2, demonstrates the growth of the City of Sydney and surrounding suburbs for more than a century. The construction of the Reservoirs was a major achievement in hydraulic technology and associated construction methods for the time and today, the site continues to feature substantial physical evidence of these achievements, including extensive areas of subsurface water reticulation. The complex includes the inlet for an early twentieth-century high pressure tunnel, which was an outstanding engineering feat and was the third largest water supply tunnel in the world for its time. The Reservoirs continue in an important functional role as a distribution centre for Sydney's water supply.*

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<sup>1</sup> <https://gazette.nsw.gov.au/gazette/2022/6/2022-262.pdf>

*The Potts Hill Reservoirs are situated within a distinctive and attractive cultural landscape, combining functional industrial design, typical turn-of-the-century built features and both natural and exotic plantings.*

*The two reservoirs in combination are rare because of their size, method of construction and proximity. The Potts Hill Reservoirs are an important element in the history of Sydney Water and the site continues to be held in affection and esteem by many generations of Water Board workers. The components of the site which are the most important in terms of the heritage values of the site are: The Carrier Canal and Associated items; Reservoir No.1 and associated items; The telescopic valve tower on the 1200mm Eastern Crossover; Pressure Tunnel Inlet; Pressure Tunnel Access Shaft Building; Suction Well; Surge Tank and Reflux Valve on No.1 Main; No.1 Supply Main Pipeline; No.2 Supply Main pipeline; the Pressure Tunnel; and Landscape Elements.*

Potts Hill Reservoirs is also listed on the *Canterbury-Bankstown Local Environmental Plan 2023* and on the Sydney Water State Agency Heritage and Conservation Register (s170).

An extract of Sydney Water's GIS Spatial system is included below, showing the location and curtilage of the subject heritage item.



**Figure 1:** Extract of heritage map showing the subject heritage item.

### 3. Proposal

A number of Sydney water projects, identified in Table 1 below, are proposing to utilise the existing compounds (Compound 1 and Compound 2)<sup>2</sup> located at the Potts Hill Reservoirs 1 & 2 and Site (see Figure 2). Compound 1 is located wholly with the SHR curtilage (as well as the S170 and LEP curtilages), while Compound 2 is only partially located within the SHR curtilage (see Figure 2 and Figure 4).

Compound 1 is proposed to be extended to the south (Figure 3) – utilising an additional c.10.04m by 44.87m.

**Table 1:** Sydney water projects proposing to utilise the two existing temporary compounds at Potts Hill.

<b>Total occupation period: August 2025 - March 2028</b>	<b>Period required</b>
T34-S01 Lakemba St Lakemba	Feb 26 - Mar 28
T35-S02 John St Lidcombe	Aug 25 - Jan 26
T40-S03 Hector St Sefton	Nov 25 - Dec 26
T41-S01 Pine Ave Five Dock	Feb 26 - Sept 26
T45-S03 King Street Ashbury	Jan 26 - Sept 26
T38-S01 500mm Punchbowl Rd, Punchbowl	Jan 26 - Jan 27
T45-S05 Homebush Rd Strathfield	Mar 26 - Mar 27
T46-S01 - T50-S01 Hunter/Railway Tce, LEWISHAM	Jun 26 - Aug 27

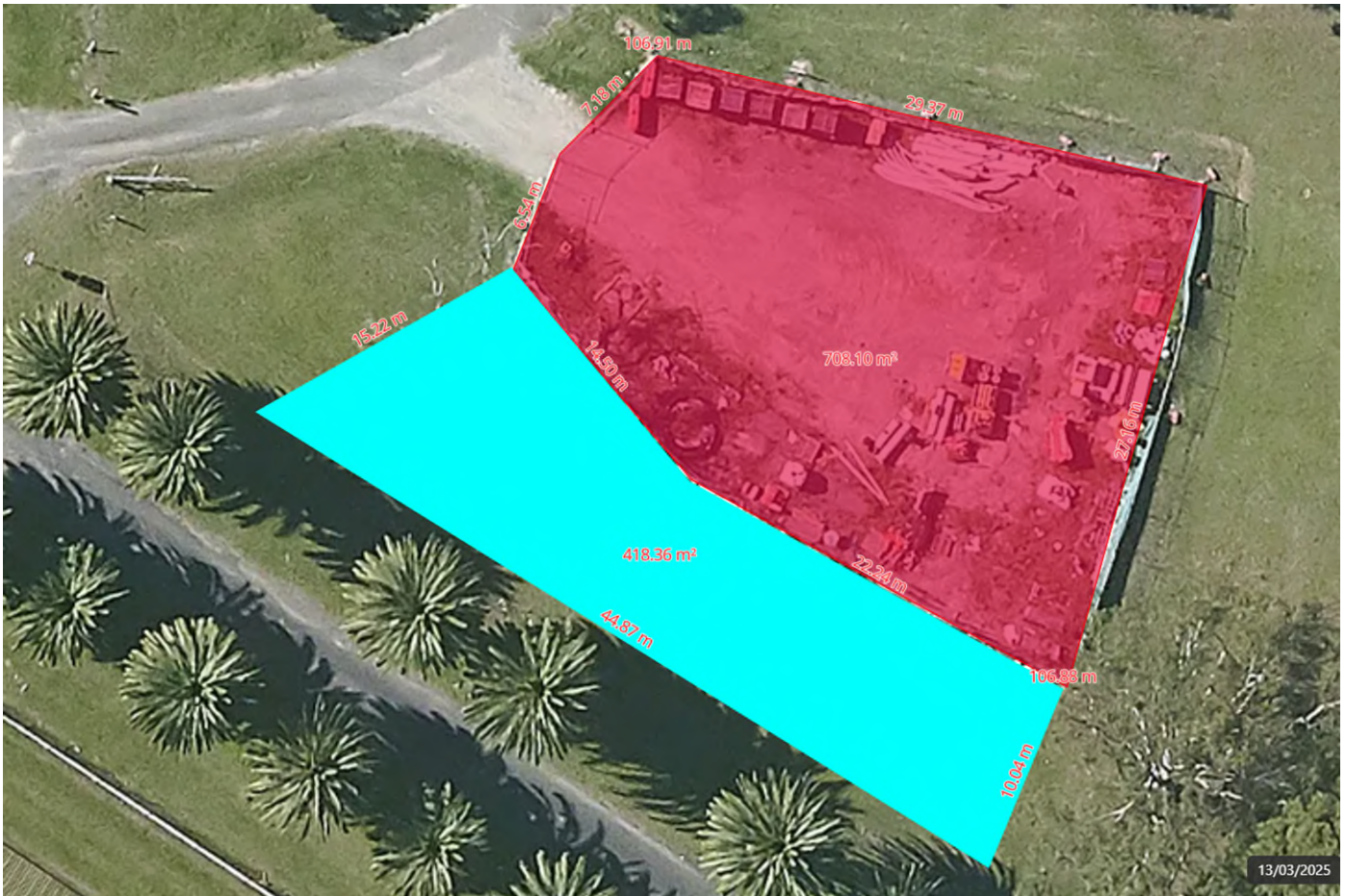
Both Compound 1 and 2 will be utilised for:

- the storage of construction materials (such as pipes, fittings, lighting towers, generators, traffic cones, and timber).
- short term storage of excavated material from site including concrete, asphalt, spoil (GSW), sand, DGB, Stab Sand.
- toilets and crib rooms, and lunchrooms.

<sup>2</sup> It is noted that the previous environmental approval that allowed construction of the compound did not specify a date for removing the compound, but identified works were likely to be complete by mid-2024 - SWEMS0025.01. The work/use of compounds continued into the first half of 2025.



**Figure 2:** Compound (1) is located north of Reservoir 1 (blue circle), and Compound (2) is located to the east (orange circle) as well as the access route (red line) to the compound (through 20 William Holmes S, Potts Hill). Source: SWC Spatial Hub/NearMap



**Figure 3:** Proposed extension to Compound 1. Source: Project Team.

## 4. Approval Framework & Assessment

Both the 2005 and the 2012 Potts Hill Conservation Management Plans (CMPs), in relation to the relative significance rankings of the components of the site, assign the following rankings to the elements in the vicinity of the existing temporary compounds (locations are shown in Figure 4):

- Vehicular Bridge (item 4) An important part of the early site configuration, created c.1919.  
Significance: High
- Reservoir No.2 (item 5) One of the key elements of the site, important for the unique site composition as well as for its own unique qualities.  
Significance: Exceptional
- Storage Shed (item 6) Relatively simple albeit historic (c.1923) structure.  
Significance: High
- Office (item 7) This relatively simple structure, built c.1960s has no particular association with other important site elements.  
Significance: Low
- House 1 (item 8) Fine example of Inter War California Bungalow style domestic structure within an utilitarian setting.  
Significance: High
- Route of construction railway (item 61) Important for its historic association with the construction of the Reservoir No. 2  
Significance: High
- Inlet (item 64) Penstocks to Reservoir No. 2

Significance: not rated

- Avenues of Canary Island Date Palms and other trees. Associated with the construction of the reservoirs from 1886 to 1923 (located immediately north of item 61 but not numbered).  
Significance: Exceptional



**Figure 4:** Extract from the 2012 CMP of Built Site Features Plan show proximity of Compounds 1 (blue box) and 2 (orange box) to individual heritage features (specifically 4, 5, 6, 7, 8 and 61). Source 2012 Potts Hill CMP p.5.

This assessment has considered the original condition of the areas (prior to the construction of the existing compounds) shown on Figure 5, 7 and 9 alongside the historical and current usage Figure 5, 6 and 8.



**Figure 5:** Location of the two compound sites (blue boxes) with SHR curtilage overlay. Source: SWC Spatial Hub.



**Figure 6:** Current (May 2025) condition of Compound 1. Source: SWC Spatial Hub/NearMap.



**Figure 7:** Former (2021) condition of Compound 1. Source: SWC Spatial Hub/NearMap.



**Figure 8:** Current (May 2025) condition of Compound 2. Source: SWC Spatial Hub/NearMap.



**Figure 9:** Former (2021) condition of Compound 2. Source: SWC Spatial Hub/NearMap.

### **Compound 1**

Compound 1 is located immediately to the north of Reservoir 2 (5), the vehicular bridge (4) and an avenue of Canary Island Date Palms (see Figure 4). The area is currently operating as a compound and has been historically a cleared, lightly grassed flat expanse of land.

The proposal is to continue using the compound (beyond the project it was established for) and extend it further to the south - see Figures 3 and 10 (the original approval for the compound was for a larger area that extended to the north that was not utilised). This will take the extent of the compound closer to the avenue of Canary Island Date Palms, identified on the 2012 CMP as being of exceptional value. However, the compound will be located outside of the tree canopy and, as with the existing compound, it will be directly on the surface with no excavation and no placement of hardstand materials. It will be recommended that the current compound fencing is extended to include the extension. One dead tree will be removed. The tree – located in the footprint of the extension (Figure 10) – is not identified in the CMP as having heritage significance.

The temporary continued use of compound 1 and the extension will not have an impact on the heritage values of **Potts Hill Reservoirs 1 & 2 and Site.**



**Figure 10:** Proposed extension to Compound 1 showing lightly grassed land. Source: SWC Spatial Hub/NearMap.

## **Compound 2**

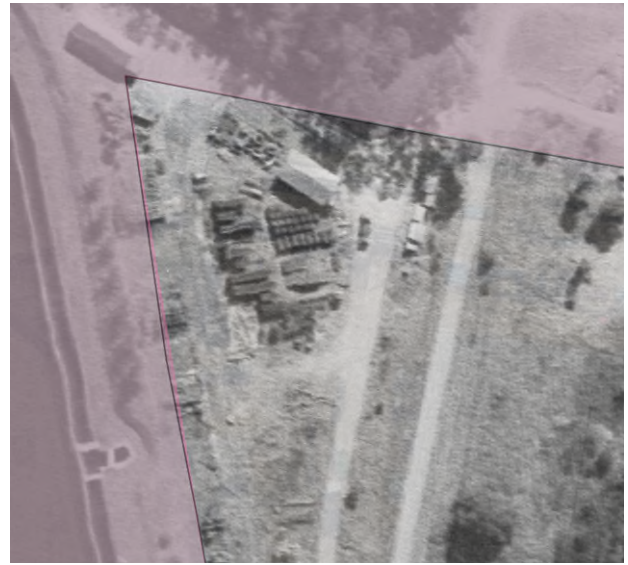
Compound 2 is located immediately to the east of Reservoir 2 (5), a storage shed (6), and office (7) (see Figure 4). The area is currently operating as a compound and has been utilised historically but was most recently a cleared lightly grassed flat expanse of land.

A review of the historical aerial photographs (see Figures 11 to 18, 1940s-1990s) demonstrates the changing historical use of this area as a compound/work site to a flat lightly vegetated expanse across several decades.

The temporary continued use of Compound 2 will not have an impact on the heritage values of **Potts Hill Reservoirs 1 & 2 and Site.**



**Figure 11:** 1940s aerial with SHR curtilage overlay.  
Source: SWC Spatial Hub.



**Figure 12:** 1950s aerial with SHR curtilage overlay.  
Source: SWC Spatial Hub.



**Figure 13:** 1960s aerial with SHR curtilage overlay.  
Source: SWC Spatial Hub.



**Figure 14:** 1970s aerial with SHR curtilage overlay.  
Source: SWC Spatial Hub.



**Figure 15:** 1978 aerial. Source: NSW Historical Imagery tile 2713\_17\_128.



**Figure 16:** 1980s aerial with SHR curtilage overlay. Source: SWC Spatial Hub.



**Figure 17:** 1990s aerial with SHR curtilage overlay. Source: SWC Spatial Hub.



**Figure 18:** 2025 NearMap aerial with SHR curtilage overlay. Source: SWC Spatial Hub.

The proposal is located within the curtilage of a heritage item listed on the NSW State Heritage Register, and therefore approval under the *Heritage Act 1977* is required. If the proposal meets particular exemption criteria, the works may be considered as exempt from requiring heritage approval under the *Heritage Act 1977*.

The proposal has been assessed against the specified activities and relevant standards of the following Standard Exemption/s, issued under Section 57(2) of the *Heritage Act 1977* (Government Gazette No. 262, 17 June 2022):

- **Standard Exemption 3: Alteration to Non-Significant Fabric**
- **Standard Exemption 13: Vegetation**

A complete list of the Standard Section 57 Exemptions is located here

<https://gazette.nsw.gov.au/gazette/2022/6/2022-262.pdf>.

The following tables (Table 2 and Table 3) provide a detailed assessment of the works against the Exemption criteria.

**Table 2 Assessment of works against Standard Exemption 3**

Specified Activity / Relevant Standard	Discussion
<i>The following specified activities/ works to an item do not require approval under subsection 57(1) if the specified activities/ works are undertaken in accordance with each of the relevant standards prescribed below.</i>	
<p><i>Specified activities/ works:</i></p> <p><i>a) The alteration of an item involving the introduction of new fabric and/or the removal of non-significant fabric.</i></p>	<p>The works are for the ongoing use of temporary establishment and subsequent removal of Works Compounds within the curtilage of the State Heritage Item. The works will be entirely on the surface with no permanent structures and will not have any substantive effect upon any significant fabric of the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b>.</p>
<p><i>b) The specified activities/ works must not impact the heritage significance of the item.</i></p>	<p>Complies.</p> <p>As above: The works will occur on the ground surface within the statutory curtilage but will not have any substantive effect upon any significant fabric of the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b></p>
<p><i>c) Significant fabric of the item must not be impacted.</i></p>	<p>Complies.</p> <p>No significant fabric of the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b> will be impacted by the proposed works. The works will occur on the ground surface within the statutory curtilage but will not have any substantive effect upon any significant fabric.</p>
<p><i>d) Relics must not be impacted.</i></p>	<p>Complies.</p> <p>No excavation is proposed, and no relics will be impacted by the proposed works. The CMP does not identify any archaeological sites in these areas.</p>
<p><i>e) Work must not involve construction of extensions or additions where these may impact the item's setting, views to or from the item, obscure existing significant fabric, impact relics and/or impact significant landscape layout, landscape elements or vegetation.</i></p>	<p>Complies.</p> <p>The proposed works will not impact the setting or views to or from the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b>. Fencing around the site will provide screening of the operational areas from view, apart from the traffic entering and leaving the site from Palmer Street. The proposed works will not obscure existing significant fabric or impact any relics. There will be no alteration to any significant landscape layout, landscape elements or vegetation.</p>
<p><i>f) The positioning and size of walls, windows and doors is not altered.</i></p>	<p>Complies.</p> <p>There will be no effect upon any significant built fabric relating to the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b>.</p>
<p><i>g) Significant finishes, surfaces (including flooring) and fixtures must not be impacted.</i></p>	<p>Complies.</p> <p>There will be no effect upon any significant built fabric relating to the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b>.</p>
<p><i>h) Any new fabric must be sympathetic to but can be distinguished from the appearance, composition, detailing, size, position and finish of existing fabric.</i></p>	<p>Complies.</p> <p>There will be no effect upon any significant built fabric relating to the <b>Potts Hill Reservoirs 1 &amp; 2 and Site</b>. No new permanent fabric will be introduced to the site</p>

Specified Activity / Relevant Standard	Discussion
	and the temporary barriers and stockpiles will be removed at the end of the works.
<p>i) Non-significant fabric must be identified as non-significant fabric in the listing on the State Heritage Register or the gazetted Interim Heritage Order, or a Conservation Management Plan, Conservation Management Strategy, Heritage Collections Plan, Archaeological Management Plan or Aboriginal Place Management Plan or identified as non-significant fabric in written advice prepared by a suitably qualified and experienced heritage professional before it can be removed.</p>	<p>Complies.</p> <p>In accordance with the CMP the compounds have been located in areas that result in the least possible physical intervention. There will be no effect upon any significant built fabric relating to the <b>Potts Hill Reservoirs 1 &amp; 2 and Site.</b></p>
<p>j) Installation of new fabric must be in accordance with the policies of a Conservation Management Plan, Conservation Management Strategy, Heritage Collections Plan, Archaeological Management Plan or Aboriginal Place Management Plan or in written advice prepared by a suitably qualified and experienced heritage professional before installation.</p>	<p>Complies.</p> <p>In accordance with the CMP the compounds have been located in areas that result in the least possible physical intervention. There will be no effect upon any significant built fabric relating to the <b>Potts Hill Reservoirs 1 &amp; 2 and Site.</b></p>
<p>k) Any new fabric must not impact setting or views to or from the item, obscure existing significant fabric or limit access to existing fabric for future maintenance.</p>	<p>Complies.</p> <p>The proposed works are temporary and will not impact the setting or views to or from the <b>Potts Hill Reservoirs 1 &amp; 2 and Site.</b> They will not obscure existing significant fabric or limit access to existing fabric for future maintenance.</p>
<p>l) Any new penetrations must be:</p> <ul style="list-style-type: none"> <li>i. limited in number; and</li> <li>ii. made through non-significant fabric or mortar joints only.</li> </ul>	<p>Complies.</p> <p>There will be no effect upon any significant built fabric relating to the <b>Potts Hill Reservoirs 1 &amp; 2 and Site.</b></p>
<p>m) Any excavation must comply with Standard Exemption 8: Excavation relevant standards.</p> <p>Relevant Standards:</p> <p>Specified activities/ works:</p> <ul style="list-style-type: none"> <li>a) Excavation or disturbance of land that is: <ul style="list-style-type: none"> <li>i. which occurs within an existing service trench, or</li> <li>ii. to carry out inspections or emergency maintenance or repair on underground utility services, or</li> <li>iii. to maintain, repair, or replace underground utility services to buildings, or iv. to maintain or repair the foundations of an existing building, or v. to expose survey marks, or</li> <li>iv. associated with feral animal/insect eradication.</li> </ul> </li> <li>b) Removing contaminated soil.</li> </ul> <p>Relevant standards:</p> <ul style="list-style-type: none"> <li>c) Activities/ works must not disturb or remove any relics.</li> <li>d) Excavation must not compromise the structural integrity of any heritage structure or significant landscape elements.</li> <li>e) Activities/ works must not affect archaeological evidence, for example the archaeology of foundation trench deposits from the time of original construction.</li> <li>f) If an environmental assessment is required under Part 5 of the Environmental Planning and Assessment Act 1979 (NSW) in relation to "b) of the specified activities/works, the assessment must be undertaken prior to commencing any work to remove the contaminated soil</li> </ul>	<p>Complies.</p> <p>No excavation will occur within the State listed curtilage of the <b>Potts Hill Reservoirs 1 &amp; 2 and Site.</b></p>

**Table 3 Assessment of works against Standard Exemption 13**

Specified Activity / Relevant Standard	Discussion
<b>STANDARD EXEMPTION 13: VEGETATION</b>	
<i>The following specified activities/ works to an item do not require approval under subsection 57(1) if the specified activities/ works are undertaken in accordance with each of the relevant standards prescribed below.</i>	
<b>Specified activities/ works:</b>	
a) Weeding (including poisoning of weeds), watering, mowing, manual clearing of paths and drains, top-dressing, pest control and fertilizing.	Not applicable.
b) New planting of species sympathetic to the item.	Not applicable.
c) Pruning to control size, improve shape, condition, flowering or fruiting.	Not applicable.
d) Removal of non-significant diseased, dying, dead and/or dangerous trees and/or plant material.	Complies. As discussed above the tree to be removed (#317) is a non-significant (planted/grown sometime after 1960).
e) Tree surgery.	Not applicable.
<b>Relevant standards:</b>	
f) Activities/ works must not alter the significant layout, contours, plant species or other significant landscape features or views.	The proposed works will be undertaken in accordance with Relevant Standards (f) no alteration to significant species or landscape features.
g) Pruning of significant vegetation must not exceed 30% of the tree canopy within a period of two years.	Not applicable.
h) Tree surgery may only be performed by a qualified arborist, horticulturist or tree surgeon and must be necessary for the health of those plants.	Not applicable.
i) Selective herbicide should be used when poisoning weeds. Herbicide should be applied using: i. spot application around significant elements of the heritage item (e.g. ornamental or symbolic plants, remnant native vegetation, structures, exposed relics and moveable items) to avoid adverse impacts to these; and ii. spraying in non-significant areas of the curtilage	Not applicable.
j) Removal of diseased, dead, dying or dangerous trees and/or plant material must not disturb archaeological relics (for example through stump grinding or removal of tree boles, in such situations stumps and tree boles should be left in place).	The proposed works will be undertaken in accordance with Relevant Standards (j). Removal of the dead tree will not disturb archaeological relics.

## 5. Conclusion & Recommendations

This assessment confirms that the proposed works located within the curtilage of the **Potts Hill Reservoirs 1 & 2 and Site** heritage item will not have an adverse impact on the significance of the heritage item, will comply with the relevant standards and specified activities of Standard Exemption/s No. 3, and are therefore permissible without approval under Section 57(2) of the *Heritage Act 1977*.

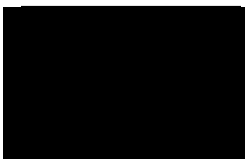
The following heritage recommendations must be adopted in undertaking the proposal:

- 1. Elements of the **Potts Hill Reservoirs 1 & 2 and Site** in the vicinity of the works, particularly the Avenue of Canary Island Date Palms and Storage Shed (item 6), should be adequately protected during the works to prevent accidental damage. Protection measures could include physical barriers, exclusion zones or other methods as appropriate.
- 2. An appropriately qualified arborist should be engaged to check health the Avenue of Canary Island Date Palms within three months of the establishment of the ue/extension of Compound 1. Any actions recommended by the arborist should be discussed with the Sydney Water Principal Heritage Advisor prior to actioning.
- 3. All spoil/hazardous materials/fuel must be appropriately stored and managed to ensure the materials do not spread beyond the compounds. Measures must be in place for accidental spills.
- 4. All project team members, including contractors, should be informed about the heritage significance of the site as part of the general site induction packages. The inductions would identify why the **Potts Hill Reservoirs 1 & 2 and Site** is significant, the contractors' statutory obligations relating to heritage and to the protection methods to be used during construction to prevent accidental damage during construction works and use of the compound.
- 5. The period of use for Compound 1 and Compound 2, including removal of all fencing, equipment, spoil, infrastructure and making good, shall not extend beyond September 2027.
- 6. On the completion of works the compound sites should be returned, as a minimum, to the state prior to use as a compound site (see figures 7 and 9 showing the baseline condition in 2021 prior to construction of the compounds).

The works must be undertaken in accordance with the Specified Activities and Relevant Standards of the applicable Standard Exemption/s, and in accordance with any recommendations included in this assessment. This record meets the requirements for record keeping under General Condition 10 of the Standard Exemptions Gazettal.

This Exemption considers the proposal from a heritage perspective only and does not provide an assessment of or qualify as a record of any other environmental consideration that may be required, including statutory planning approval.

This Exemption assessment has been prepared by the following Sydney Water Heritage Advisor:



**Kylie Seretis**  
**Principal Heritage Advisor**

**04/09/2025**



**Appendix D – Noise assessment memo**



## 1 Proposal details

### 1.1 Proposed scope of works

The scope of work is to renew about 580 m of critical watermains along Lakemba Street, Lakemba. Connection to the existing networks will occur at either end of the alignment, as well as into Yerrick Road, Barremma Road, and Benaroon Road. The proposal involves breakout and excavation of the road corridor to install the watermain.

### 1.2 Duration and timing of works

Construction of the proposal is expected to start April 2026 and take about 8 months to complete.

The standard construction work hours are as follows:

- Monday to Friday: 7am – 6pm
- Saturday: 8am – 1pm
- Sunday and public holidays: no work.

Out of hours work are defined as:

- 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.

Where possible, the proposal will occur during standard hours. However, to minimise disruption to traffic and potential safety risks to construction personnel and road users, most of the work would be carried out outside of standard hours in accordance with the Road Occupancy Licence (ROL).

Proposed out of hours works would be as follows (subject to ROL):

- Days: Monday to Friday between 8pm and 5am
- No work on weekends

It is anticipated that work would be conducted for a maximum of 5 night shifts a week with an orientation of 2 shifts on, 1 shift at an alternative location and 2 shifts back at original location. There would be about 134 shifts for the whole project.

### 1.3 Proposed activities/ equipment (noisiest plant details)

The proposed activities involve the following:

- site establishment and investigations (potholing etc.)
- excavations
- conventional pipe lay
- connection works



# Construction noise and vibration assessment memo

- site demobilisation.

The equipment required during construction includes:

- excavators (1 x 13.5t and 1 x 5t)
- skip bins
- concrete saws
- generators
- jackhammers
- tip trucks
- air compressors
- light vehicles
- plate compactors
- vacuum truck
- concrete agitator trucks
- street sweepers
- compactor.

To appropriately recommend mitigation measures, the works would be separated into the following:

- Category 1 works: this includes site establishment and investigations, and excavations using a concrete saw as the noisiest plant.
- Category 2 works: this includes conventional pipe lay and connection works using an excavator (13.5 ton) as the noisiest plant.
- Compound operations.

It should be noted that the Out of Hours Night work for the following would all be completed before midnight:

- use of power saws for cutting road pavement, concrete or pipes
- jackhammering.

## 1.4 Community consultation

Consultation with nearby residents and businesses is required and will be undertaken at least a month in advance of the proposed works. Community consultation will involve discussions regarding anticipated noise impacts and disruptions to normal traffic and property access. Consultation with City of Canterbury-Bankstown council is ongoing.

## 2 Methodology

[Transport for NSW \(TfNSW\) Construction and Maintenance noise estimator tool](#) (TfNSW, 2022) can be used to perform a basic noise assessment to capture predicted noise impacts at different distances for different types of receivers. Section 2 of this memo details the inputs required for the assessment. Section 3 of this memo details the output of the assessment.

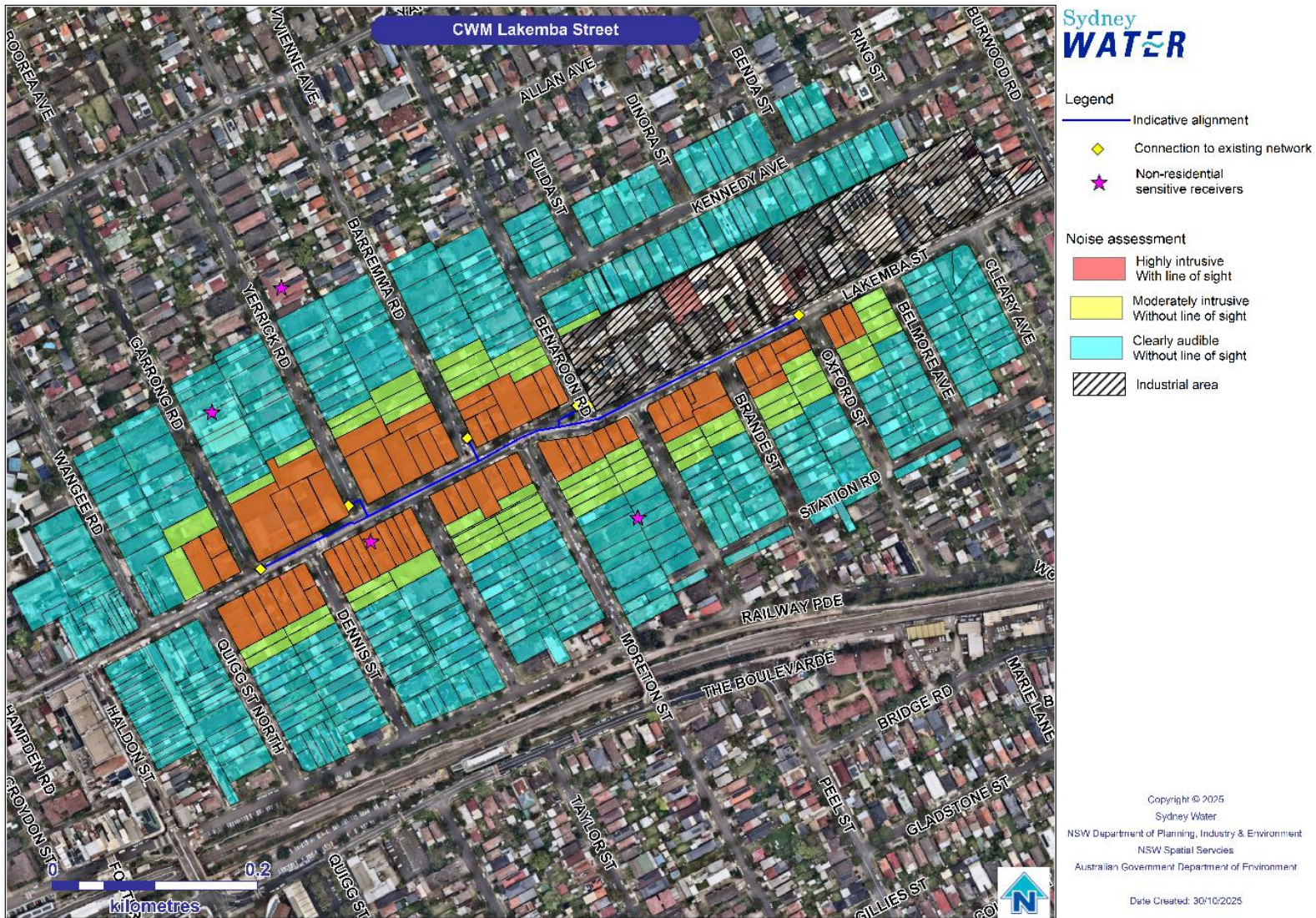
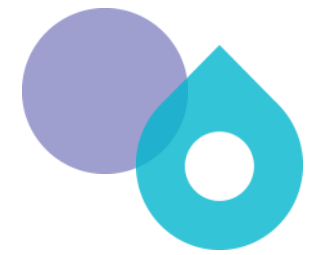
### 2.1 Noise sensitive receivers and distance to receivers

The proposal is surrounded by medium density residential properties with some industrial buildings on the north side of Lakemba Street.

Other sensitive receivers include:

- Colonial Preschool and Child Care centre – adjacent north
- Saint Therese Catholic Church – 100 metres north
- Belmore Place Care community – 170 metres north
- Peel Park – 80 metres south
- Hamden Park Public School – 300 metres northwest
- BHC Medical Centre – 370 metres southwest
- All Saints Greek Orthodox Church – 500 metres east.

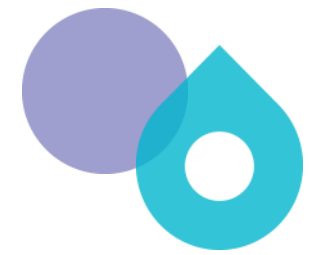
# Construction noise and vibration assessment memo



**Figure 1** Category 1 noise assessment

Noise assessment memo | T34-S01 Lakemba Street

# Construction noise and vibration assessment memo



Sydney  
**WATER**

**Legend**

- Indicative alignment
- Connection to existing network
- Non-residential sensitive receivers

**Noise assessment**

- Highly intrusive  
With line of sight
- Moderately intrusive  
Without line of sight
- Clearly audible  
Without line of sight
- Industrial area

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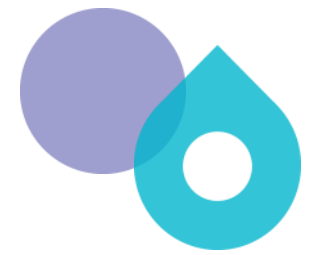
NSW Spatial Services

Australian Government Department of Environment

Date Created: 30/10/2025

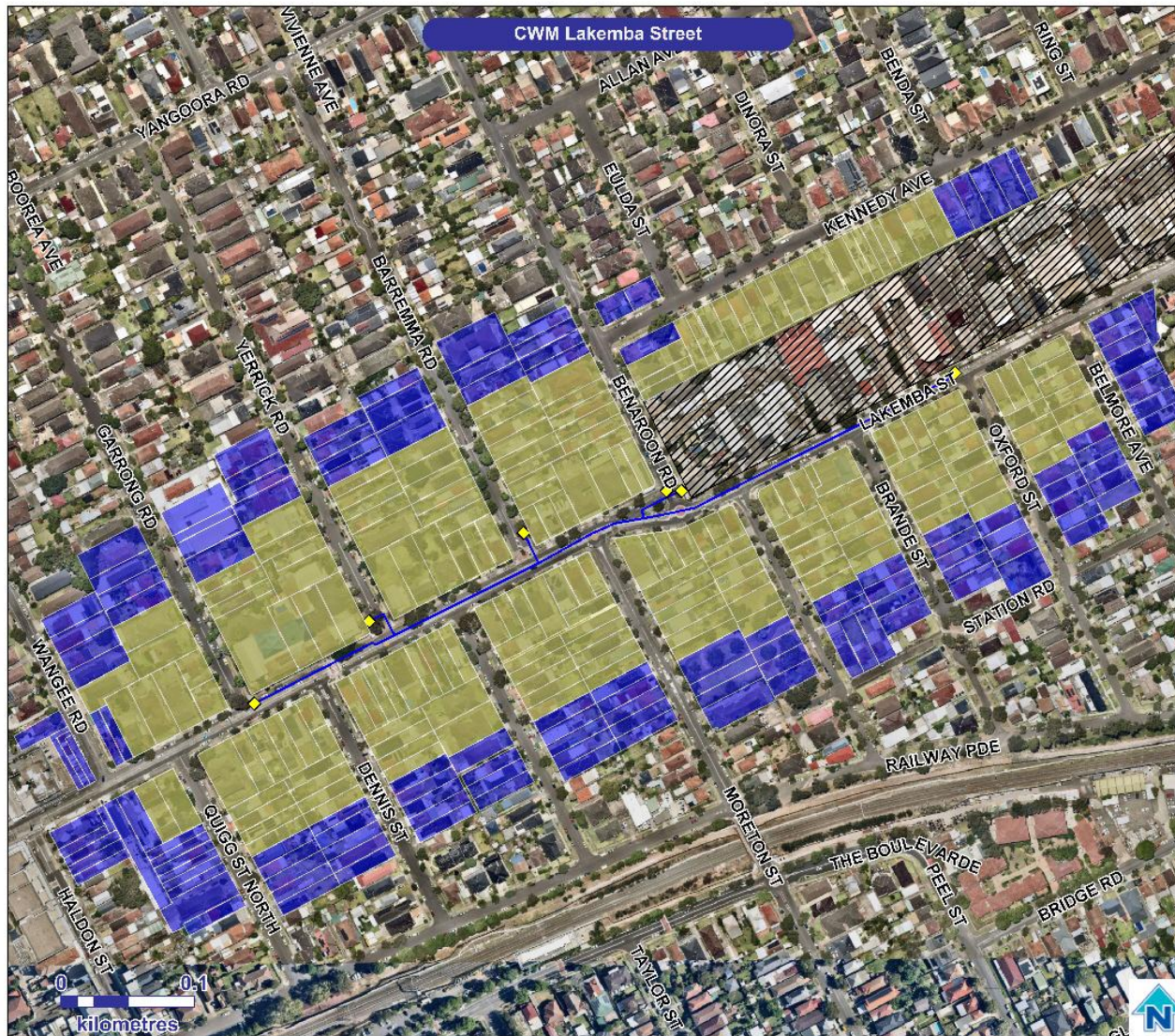
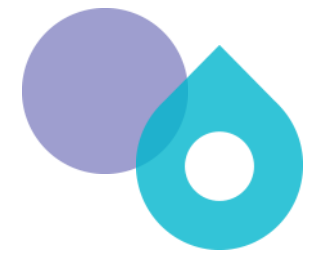
**Figure 2** Category 2 noise assessment

# Construction noise and vibration assessment memo








**Figure 3** Compound noise assessment

# Construction noise and vibration assessment memo



Sydney  
**WATER**

Legend

-  Indicative alignment
-  Connection to existing network
-  Industrial area
-  Properties likely to experience sleep disturbance during category 1 works
-  Properties likely to experience sleep disturbance during category 1 and 2 works

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**Figure 4 Sleep disturbance**  
 Noise assessment memo | T34-S01 Lakemba Street

# Construction noise and vibration assessment memo

## 2.2 Noise area category

The noise area category is chosen from the noise estimator tool to define an approximate background noise level for the environment surrounding the proposal. The noise area category is chosen based on a number of factors, including:

- surrounding land use and receiver types (refer Section 2.1 above)
- traffic volumes on nearby roads
- other transport infrastructure e.g. trains, airports/flight paths.

The surrounding environment is classified as ‘developed settlements (urban and suburban)’ in the estimator.

## 2.3 Background noise levels and noise management levels

Table 1 provides the assumed background noise levels and noise management levels. These noise management levels have been taken from the noise area category identified in Section 2.2 above.

Where the assessment identifies noise impacts above the noise management level (refer Section 3 of the memo), reasonable and feasible mitigation measures (refer Section 4 of the memo) should be applied.

Table 1 Background noise levels and noise management levels

Noise area category		R4
<b>RBL or <math>L_{A90}</math><sup>1</sup> Background level (dB(A))</b>	<b>Day</b>	55
	<b>Evening</b>	50
	<b>Night</b>	45
<b><math>L_{Aeq(15minute)}</math> Noise Management Level<sup>2</sup> (dB(A))</b>	<b>Day</b>	65
	<b>Day (OOHW)</b>	60
	<b>Evening</b>	55
	<b>Night</b>	50

Notes: <sup>1</sup> $L_{A90}$  = Background noise level

<sup>2</sup>Noise Management Level for works during standard hours = Background level plus 10dB(A)

Noise Management Level (NML) for out of hours works = Background level plus 5dB(A).

## 2.4 Type of noise assessment

The next step requiring input to the noise estimator is to select either noisiest plant or scenario. This will calculate the predicted worst-case construction noise levels. These construction noise levels will be assessed against the noise management levels identified above. Based on the plant and equipment proposed to be used, there may be different worst-case construction noise levels at different times of the day or night.

Based on Section 1.3 of this memo, noisiest plant was chosen. Different noisiest plant will be used at different times of day/night, eg:



# Construction noise and vibration assessment memo

- Concrete saw – during out of hours night
- Excavator (13.5 ton) – during out of hours night
- Compound operation – during daytime and nighttime hours.

Noisiest plant was chosen for a distance-based assessment for the first 2 options and the compound operation scenario for the third option.

## 2.5 Line of sight to receivers

A receiver may have line of sight, or no line of sight, to the proposal.

Line of sight is the straight line between the noise source and the receiver. Receivers with line of sight would typically include those in front of the work, who do not have their view blocked by barriers such as terrain (e.g. a large hill), permanent noise walls or other buildings.

Receivers with no line of sight (all other factors being equal, such as distance to the work and type of equipment) will experience less noise than receivers with line of sight. Typically, these include the receivers who have their view blocked from the works by barriers including those listed above.

*As the proposal is located along Lakemba Street, the first row of buildings along the street will have line of sight to the construction works, all other buildings located behind will not.*

As a result, the noise estimator will run based on the following activities:

- Category 1 works, standard day hours and out of hours nights works using a concrete saw (line of sight and no line of sight)
- Category 2 works, standard day hours and out of hours nights works using an excavator (line of sight and no line of sight)
- Compound operations, standard hours and out of hours evening and night works using the compound operations scenario (line of sight and no line of sight).

## 3 Assessment of impacts

### 3.1 Activity 1 – Category 1 works

The proposal is located within an urban environment surrounded by sensitive receivers both with and without line of sight. All residential properties along Lakemba Street adjacent to the proposal as well as some along connecting roads are within the highly intrusive zone.

Construction works would be carried out during night hours and standard day hours.

The following properties would experience noise impacts:

- A total of 82 residential properties would experience highly intrusive noise.
- A total of 59 residential properties would be experience moderately intrusive noise.

Residential properties within 145m of the proposed works would experience sleep disturbance as a result of the proposed works.

### 3.2 Activity 2 – Category 2 works

The proposal is located within an urban environment surrounded by sensitive receivers both with and without line of sight. All residential properties along Lakemba Street adjacent to the proposal as well as some along connecting roads are within the highly intrusive zone.

Construction works would be carried out during night hours and standard day hours.

The following properties would experience noise impacts:

- A total of 58 residential properties would experience highly intrusive noise.
- A total of 7 residential properties would experience moderately intrusive noise.

Residential properties within 95m of the proposed works would experience sleep disturbance as a result of the proposed works.

Figure 1 Affected distance (metres) for non-residential receivers during *activity 1 and activity 2 (day)*

Land use	L <sub>Aeq(15minute)</sub> noise level above NML	
	10 to 20 dB(A)	Highly affected – 75 dB(A) or above
Classrooms at schools and other educations institutions	110	40
Place of worship	110	40
Passive recreation	70	40
Recommended additional mitigation measures (refer Section 4.2 of this for further details)	Notification (N)	N, Phone Call (PC), Respite Offer (RO)

# Construction noise and vibration assessment memo

Table 2 Affected distance (metres) for residential receivers during *compound operations, activity 1 and activity 2 (day)*

Activities	L <sub>Aeq(15minute)</sub> noise level above background (L <sub>A90</sub> )		L <sub>Aeq(15minute)</sub> 75dB or greater
	20 to 30 dB(A)	> 30 dB(A)	
	Moderately intrusive	Highly intrusive	Highly affected
<i>Compound operations</i>	20 metres	20 metres	20 metres
<i>Category 1 works (line of sight)</i>	-	25 metres	25 metres
<i>Category 1 works (no line of sight)</i>	45 metres	-	-
<i>Category 2 works (line of sight)</i>	-	25 metres	25 metres
<i>Category 2 works (no line of sight)</i>	15 metres	-	-
Recommended additional mitigation measures (refer Section 4.2 of this memo for further details)	Notification (N) Phone Call (PC) Respite Offer (RO)	N, PC, RO	N, PC, RO

Table 3 Affected distance (metres) for residential receivers during *compound operations (out of hours day/evening)*

Activities	L <sub>Aeq(15minute)</sub> noise level above background (L <sub>A90</sub> )			L <sub>Aeq(15minute)</sub> 75dB or greater
	10 to 20 dB(A)	20 to 30 dB(A)	> 30 dB(A)	
	Clearly audible	Moderately intrusive	Highly intrusive	Highly affected
<i>Compound operations – OOH day</i>	60	20	N/A	N/A
<i>Compound operations – evening</i>	105	30	10	20
Recommended additional mitigation measures (refer Section 4.2 of this for further details)	Notification (N) Respite Period 1 (R1) Duration Respite (DR)	N, R1, DR	N, R1, DR Specific Notification (SN) Phone Call (PC)	N, PC Respite Offer (RO)

# Construction noise and vibration assessment memo

Table 4 Affected distance (metres) for residential receivers during *compound operations, activity 1 and activity 2 (out of hours night)*

Activities	L <sub>Aeq(15minute)</sub> noise level above background (L <sub>A90</sub> )				L <sub>Aeq(15minute)</sub> 75dB or greater
	5 to 10 dB(A)	10 to 20 dB(A)	20 to 30 dB(A)	> 30 dB(A)	
	Noticeable	Clearly audible	Moderately intrusive	Highly intrusive	
Compound operations	255	165	60	20	20
Category 1 works (line of sight)	-	-	-	45	45
Category 1 works (no line of sight)	280	185	75	-	-
Category 2 works (line of sight)	-	-	-	25	25
Category 2 works (no line of sight)	145	95	35	-	-
Recommended additional mitigation measures (refer Section 4.2 for further details)	N (Notification)	N Respite Period 2 (R2) Duration Respite (DR)	N, R2, DR Specific Notification (SN) Phone Call (PC)	N, R2, DR, SN, PC Alternative Accommodation (AA)	N, PC Respite Offer (RO)

It should be noted that no buildings behind the first line of residences along Lakemba have line of sight (LOS) to the proposed works and all buildings not located along Lakemba Street have been deemed no line of sight (NLOS).

## 3.3 Sleep disturbance

There is potential for sleep disturbance impact on residential receivers within 145 metres of the proposal during use of a concrete saw and within 95 metres during the use of an excavator (13.5 ton). Recommended mitigation measures in section 4 of this memo should mitigate sleep disturbance impact.

## 3.4 Vibration

The proposal will require the use of some vibratory equipment including handheld tools such as jackhammer that have potential vibration impacts.

Table 5 Vibration impacts and minimum distances

Aspect	Minimum working distance	Will receivers be within the minimum working distance	Vibration impacts
Light framed structure	1 m (nominal)	No	No structures would be within the minimum working distance. Vibration from the proposed works would not impact light framed structures.



## Construction noise and vibration assessment memo

Aspect	Minimum working distance	Will receivers be within the minimum working distance	Vibration impacts
Heritage and other sensitive structures	2 m	No	No heritage structures are located within the minimum working distances. Vibration from the proposed works would not impact Heritage or other sensitive structures.
Human response/ comfort	3 m	Yes - temporary	No sensitive receivers are within the minimum working distance. However, vibration from the proposed works may impact the workers using vibration intensive equipment. Workers would be equipped with the necessary PPE and impacts would be temporary.

## 4 Mitigation measures

### 4.1 Standard mitigation measures

Standard techniques for controlling noise impacts during construction are presented in the ICNG. A construction noise and vibration management plan (CNVMP) should be prepared before work starts, incorporating the measures summarised below in 7, 8, and 9.

Table 6 Standard mitigation measures

#### Standard measures

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 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 (eg 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 (eg 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 (eg 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 night works are needed (beyond those identified in the REF), the Delivery Contractor would:

- justify the need for night works



# Construction noise and vibration assessment memo

## Standard measures

- consider potential noise impacts and implement the relevant standard daytime and out of hours safeguards and document consideration of all reasonable and feasible management measures
- 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 communications representatives.

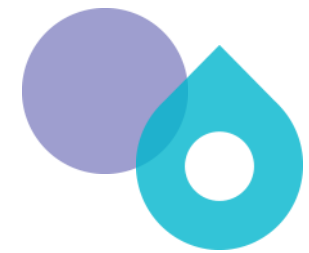
If works on **Sundays or public holidays are required**, the Delivery Contractor would:

- justify why all other times are not feasible
- consider potential noise impacts and implement relevant standard daytime, out of hours and night-time safeguards and other reasonable and feasible management measures
- identify community notification requirements
- seek approval from the Sydney Water Project Manager in consultation with the environment and communications representatives.

Conduct a dilapidation survey / asset condition assessment prior to works which have potential to damage existing structures.

Monitor compliance with the recommended vibration levels in DIN 4150-3 1999: Structural Vibration – Part 3; Effects of vibration on structures.

Consider less vibration intensive methodologies where practicable and use only the necessary sized and powered equipment.



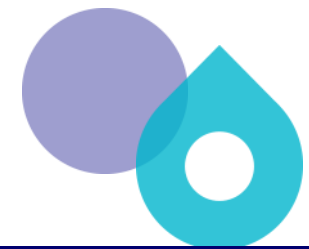
## 4.2 Additional mitigation measures

Table 8 provides a list of the recommended mitigation measures from TfNSW noise estimator tool in relation to the assessment outcome (refer section 3.2 of this document). Not all mitigation measures are recommended at all locations (refer commentary for further detail). Community consultation will determine the number of nights/week if works are to extend beyond two nights/week. Table 8 also includes further information on why some of these mitigation measures will/will not be implemented.

Table 8 Additional mitigation measures

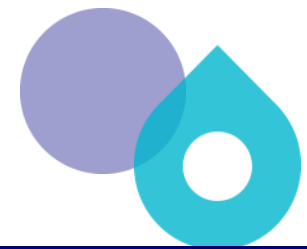
Abbreviation	Additional mitigation measure and description	Commentary
N	<p>Notification (letterbox drop or equivalent)</p> <p>Advance warning of works and potential disruptions can assist in reducing the impact on the community. The notification may consist of using variable message sign, letterbox drop (or equivalent), web site / social media or a combination to distribute information detailing work activities, time periods over which these will occur, impacts and mitigation measures. Notification should be a minimum of five working days prior to the start of works. The approval conditions for projects may also specify requirements for notification to the community about works that may impact on them.</p>	Will be done (all locations) – letterbox drops at least one week out from starting
SN	<p>Specific notifications</p> <p>Specific notifications are letterbox dropped (or equivalent) to identified stakeholders no later than five working days ahead of construction activities that are likely to exceed the noise objectives. The specific notification provides additional information when relevant and informative to more highly affected receivers than covered in general letterbox drops.</p> <p>This form of communication is used to support periodic notifications, or to advertise unscheduled works.</p>	Will be done – (targeted engagement and doorknocks closer to construction)
PC	<p>Phone calls</p> <p>Phone calls detailing relevant information made to identified/affected stakeholders, who have provided their contact details, within seven calendar days of construction start. Phone calls provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposal and specific needs. Where the resident cannot be telephoned then an alternative form of engagement should be used.</p>	Will be done – phone calls will be performed with highly impacted receivers where appropriate
IB	Individual briefings	Not recommended by the noise estimator tool.

# Construction noise and vibration assessment memo



Abbreviation	Additional mitigation measure and description	Commentary
	<p>Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Project representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project. Where the resident cannot be met with individually then an alternative form of engagement should be used.</p>	
RO	<p>Respite offer Respite Offers should be considered where there are high noise and vibration generating activities near receivers. As a guide work should be carried out in continuous blocks that do not exceed 3 hours each, with a minimum respite period of one hour between each block. The actual duration of each block of work and respite should be flexible to accommodate the usage of and amenity at nearby receivers. The purpose of such an offer is to provide residents with respite from an ongoing impact. This measure is evaluated on a project-by-project basis, and may not be applicable to all projects, or when duration respite has been agreed (see below)</p>	<p>This was not considered appropriate to this project as duration respite will be offered. In addition, noisiest work will be completed before 12 midnight and works will progress along the alignment ensuring no single receiver is highly impacted for an extended period. This offer can be considered by the communication team (for receivers mapped within the distance identified as being eligible for this mitigation measure).</p>
R1	<p>Respite Period 1 Out of hours construction noise in out of hours period 1 shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than 6 evenings per month</p>	<p>As for Respite Offer – not recommended – Respite period 2 and Duration respite will be applied and confirmed by community consultation.</p>
R2	<p>Respite Period 2 Night time construction noise in out of hours period 2 shall be limited to two consecutive nights except for where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and 6 nights per month. Where possible, high noise generating works shall be completed before midnight.</p>	<p>Will be done – Respite period 2 will ensure all noisy works will be completed before midnight and a work pattern will be agreed with nearby sensitive receivers through community consultation.</p>
DR	<p>Duration respite Respite offers and respite periods 1 and 2 may be counterproductive in reducing the impact on the community for longer duration projects. In this instance and where it can be strongly justified it may be beneficial to increase the work duration, number of evenings or nights worked through Duration Respite so that the project can be completed more quickly.</p>	<p>Will be considered during consultation – Respite Period 2 is the desired measure, however, consultation with the community will be carried out to confirm the favoured respite and shift patterns.</p>

# Construction noise and vibration assessment memo



Abbreviation	Additional mitigation measure and description	Commentary
AA	<p>RDC staff should engage with the community where noise levels are expected to exceed the NML to demonstrate support for Duration Respite.</p> <p>Alternative accommodation Alternative accommodation options may be offered (as a last resort) to residents living in close proximity to construction works (within the distance nominated by the noise estimator) that are likely to experience highly intrusive noise levels.</p>	<p>The specifics of the offer will be identified on a project-by-project basis, however an AA offer is unlikely to be made for maintenance works. Additional aspects for consideration shall include whether the highly intrusive activities occur throughout the night or before midnight.</p>
V	<p>Verification Verification may be required for building or asset condition where works are likely to cause vibration impact or for noise levels following reasonable complaints.</p>	<p>Not specifically recommended by the noise estimator tool. However, this can be a useful activity to check noise levels during construction. An example would be where there has been a noise complaint, attended monitoring may be performed to help investigate the complaint.</p>

# Construction noise and vibration assessment memo

## 4.3 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 9 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 9 Reasonable and feasible table

Mitigation option	Feasible mitigation test (can it be done)	Reasonable mitigation test (should it be done)	Adopted/ Partially Adopted/ Not Adopted	Justification or comment
<b>Planning the work</b>				
<b>Consideration of alternatives / options</b>	Yes	No	<b>Not Adopted</b>	<p>The residents in the area require access to safe and reliable drinking water and a new watermain needs to be installed to replace an existing main.</p> <p>There are no alternative options available, other than not completing the work. This is not feasible as the main has historical breaks and therefore requires renewal to avoid any further adverse impact to the community and environment.</p>
<b>Do nothing</b>	No	No	<b>Not Adopted</b>	<p>Do nothing is not a feasible option. The existing condition of the main is likely to result in further failure and could result in collapse with subsequent environmental damage, consequent clean-up costs, potential fines and liabilities. The proposed upgrade would remove the likelihood of future breaks and maintain a safe and reliable water supply to customers.</p>
<b>Conduct the works during standard daytime hours</b>	No	Yes	<b>Partially Adopted</b>	<p>The ROL for lane closures of Lakemba Street limits work being done during the day. ROL day hours are a lot shorter than out of hours ROLs. Construction works on side streets would be carried out during the day with partial road closures under the ROL. ROL restrictions during standard day hours may extend the construction schedule, increasing delivery cost and</p>

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Mitigation option	Feasible mitigation test (can it be done)	Reasonable mitigation test (should it be done)	Adopted/ Partially Adopted/ Not Adopted	Justification or comment
				inconvenience to residents and road users.
<b>Conduct the works during the evening and night</b>	Yes	Yes	<b>Adopted</b>	<p>Construction and connection work will be completed at night in line with ROL limitations and crew safety from low flow requirements for connection work.</p> <p>Night work hours are proposed from 8pm to 5am. Community consultation in advance of work starting will determine the number of nights, if work is to extend beyond two nights per week. The linear alignment will ensure individual property impact (work directly outside the property) will be typically limited to about two nights.</p>
<b>Consultation/ notifications/ complaints management</b>				
<b>Community consultation prior to works</b>	Yes	Yes	<b>Adopted</b>	<p>Community engagement will commence before work starts, with notification to impacted residents within the zone of influence.</p> <p>Residents and businesses within the direct zone of influence will be consulted prior to the commencement of works. This will include face to face engagement and door knocks. Consultation will include number of night shifts per week and mitigation measures to be adopted.</p> <p>Community preference will determine if shifts can extend to more than two night shifts per week and the appropriate respite periods.</p>
<b>Consultation with residents during works</b>	Yes	Yes	<b>Adopted</b>	<p>Ongoing engagement will continue on an ad-hoc basis. For sensitive receivers / highly impacted residents, regular follow-up will be done (i.e. one-on-one meetings, emails, texts, phone discussions).</p> <p>Engagement during construction will be ongoing and include proactive management of issues to minimise complaints. Where complaints and enquiries arise, action will be taken to</p>

# Construction noise and vibration assessment memo

Mitigation option	Feasible mitigation test (can it be done)	Reasonable mitigation test (should it be done)	Adopted/ Partially Adopted/ Not Adopted	Justification or comment
				address these with appropriate mitigation adopted.
<b>Project updates</b>	Yes	Yes	<b>Adopted</b>	Regular project update newsletters will be sent to surrounding community and emailed to key stakeholders including Canterbury-Bankstown Council. A request will be made to Canterbury-Bankstown Council to share information on the project through their social network.  Correspondence will include an option for residents and businesses to sign up to a weekly update email.
<b>Notification to residents prior to out of hours work</b>	Yes	Yes	<b>Adopted</b>	Residents will be notified of night work at least seven days' in advance of work starting.  An Out of Hours Work Plan (OHWP) will be completed in advance of work starting.
<b>Ongoing community complaints management</b>	Yes	Yes	<b>Adopted</b>	A Community Engagement Advisor will be assigned to the project.  All consultation with community and stakeholders will be recorded on Sydney Water's Consultation Manager database.
<b>Daily register of planned activities on site</b>	Yes	Yes	<b>Adopted</b>	Register incorporated as part of site diary entry and pre-start meetings to discuss and record potential community and environmental issues and impacts.  Mitigation measures to be adopted will be discussed, based on planned construction activities, weather and site conditions.  Mitigation measures will be put in place in advance to address potential issues.
Selection of construction methodology / plant and equipment				
<b>Underbore the total alignment</b>	<i>Partial</i>	Yes	<b>Not adopted</b>	Under boring the alignment is not feasible and open trenching is the preferred methodology. For under boring, the construction of launch and a receival pits within the road corridor is challenging and would extend the construction schedule due to set-up of the boring machine.

# Construction noise and vibration assessment memo

Mitigation option	Feasible mitigation test (can it be done)	Reasonable mitigation test (should it be done)	Adopted/ Partially Adopted/ Not Adopted	Justification or comment
<b>Two work fronts</b>	No	No	<b>Partially adopted</b>	The alignment is considered too short in distance to accommodate two works fronts. However, the 2-1-2 shift pattern (if confirmed by community consultation) would require two work front to occur, although not at the same time.
<b>Smaller excavator</b>	Yes	No	<b>Not adopted</b>	A smaller excavator is not able to reach the trench invert level. Additional plant will be required which will create further impacts to nearby receivers.
<b>Noise and vibration verification / monitoring</b>				
<b>Attended noise and vibration monitoring</b>	Yes	Yes	<b>Adopted</b>	Attended monitoring will be in place to evaluate construction noise and where appropriate, vibration levels. Recordings will be measured to evaluate whether mitigation measures are adequate or require revision, and to address complaints.
<b>Unattended continuous noise monitoring</b>	Yes	No	<b>Not Adopted</b>	Verification of predicted noise levels during construction will be obtained via attended noise monitoring. Continuous monitoring will be considered if complaints are received.
<b>HSEQ Site Presence</b>	Yes	Yes	<b>Adopted</b>	Increase of site presence and inspections occurring to ensure proactive management of site issues.  A Project Environmental Mentoring session will be held in advance of work starting to induct all site crew members on the requirements of the REF and CEMP.
<b>Noise attenuation at source/ site</b>				
<b>Noise barriers at work front</b>	No	Yes	<b>Not adopted</b>	Noise barriers would not be installed for this project.  This is not feasible because the project is a linear alignment and noise barriers would need to be constructed and deconstructed regularly to follow the alignment.

# Construction noise and vibration assessment memo

Mitigation option	Feasible mitigation test (can it be done)	Reasonable mitigation test (should it be done)	Adopted/ Partially Adopted/ Not Adopted	Justification or comment
<b>Noise barriers along alignment</b>	No	No	<b>Not Adopted</b>	As the worksite will be set up and closed down each shift to open the road, installation of noise barriers along the entire alignment is not practicable, socially and visually unfitting, and could pose as a hazard for the road users.
<b>Purpose built noise wall</b>	No	No	<b>Not Adopted</b>	As the work is temporary and fast-moving, building a permanent noise wall along the alignment is not practicable.
<b>Respite periods</b>				
<b>Duration respite periods</b>	Yes	Yes	<b>Adopted</b>	Community preference will determine if shifts can extend to more than two night shifts per week and the appropriate respite periods.
<b>Respite periods – Noisy works completed prior to midnight</b>	Yes	Yes	<b>Adopted</b>	All noisy/annoying work (per section 1.3 of the memo) will be completed before midnight. Noise and community mitigation measures will be implemented.
<b>Respite periods for high impact noise works – other options (such as three hour blocks with a one hour respite period)</b>	No	No	<b>Not Adopted</b>	Noisy/annoying work (per section 1.3 of the memo) will only happen between 9pm to midnight.
<b>Respite – Alternate Accommodation</b>	Yes	No	<b>Not Adopted</b>	As construction will progress along the alignment each shift, is linear in nature and fast-moving, actual direct impact (working outside the property) is minimal, with alternate accommodation not required.
<b>Consultation for high impact noise works</b>	Yes	Yes	<b>Adopted</b>	For high impact noise affected residents, identified during community engagement consultation, the following provisions may apply: <ul style="list-style-type: none"> <li>• earplugs for night work</li> <li>• vouchers/gift cards to allow respite away from the property.</li> </ul>

# Construction noise and vibration assessment memo

Mitigation option	Feasible mitigation test (can it be done)	Reasonable mitigation test (should it be done)	Adopted/ Partially Adopted/ Not Adopted	Justification or comment
Architectural treatments at properties – ie double glazing, soundproofing, door/window sealing	No	No	<b>Not Adopted</b>	Architectural treatments have not been offered due to the temporary and fast-moving nature of the work.

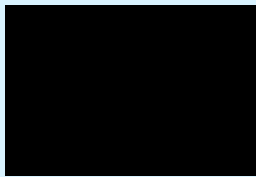
## 5 Conclusion

An assessment was completed to review the potential for noise impacts during the proposal at Lakemba Street, Lakemba to be undertaken outside of standard construction hours. The assessment identified that the construction of the proposal will have the potential to generate noise and vibration noticeable at nearby sensitive receivers.

The TfNSW Construction and Maintenance noise estimator tool has been used to predict noise levels and maps for each relevant time period. It should be noted that these noise levels are for the worst-case scenario with noisiest work completed before midnight. Works will advance along the alignment, limiting the noise exposure of individual receivers with noise levels increasing as the work approaches a receiver and then decreasing as they move past them.

Standard and additional measures are recommended to mitigate and manage noise during construction. If works are to extend beyond two nights/week, consultation and agreement with the community will be carried out to determine the number of nights per week works can be undertaken.

### Prepared by:



Aaron Panozzo  
Noise memo author  
Sydney Water  
Date: 18/12/2025

### Reviewed by:



John Eames  
Senior Environmental Scientist  
Sydney Water  
Date: 18/12/2025



**Appendix E – Response from Canterbury-Bankstown Council (TISEPP notification)**



Archived: Wednesday, 21 January 2026 3:36:37 PM

From: [REDACTED]

Mail received time: Tue, 30 Sep 2025 23:59:24 +0000

Subject: [External] RESPONSE - Critical Watermain Renewal Notification - Lakemba Street, Lakemba - 01.10.2025

Attachments:

[T34-S01 CWM Lakemba - TISEPP notification letter.pdf](#);

**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.

Dear Sir/Madam,

The City of Canterbury-Bankstown Council has no objections to the proposed works at **Lakemba Street, Lakemba** (as per your attached correspondence) *however as no project dates have been provided this email is only valid for the current financial year 2025-26* subject to compliance with the following conditions:

- You must notify all adjoining property owners and residents who are reasonably likely to be affected by the proposed work.
- You shall address all concerns and objections from the property owners and residents prior to proceeding with work and notify Council of the outcome of such communications.
- There shall be no interference or conflict with Council's infrastructure assets including those within the road reserve or other land including parks and reserves. These assets include but are not limited to footpath, kerb and gutter, street trees, street furniture, other furniture, traffic signs, drainage pits and pipes.
- You shall conduct a **“Before You Dig Australia”** (previously called **“Dial Before You Dig”**) search of utilities prior to commencement of work on site. There shall be no interference with other footway based public utility services such as electrical cables, telephone cables, gas, water and sewer mains.
- Council's stormwater drainage network is not available through **“Before You Dig Australia”**. Investigations must be undertaken prior to commencement of works to locate Council's stormwater system and any other drainage systems including private connections, to ensure their protection during works.
- Adequate traffic control for both vehicular and pedestrian traffic shall be maintained at all times and controlled in accordance with approved Traffic Management Plans complying with Australian Standard 1742.3 Traffic Control for Work on Roads.
- All disturbed footway areas shall be properly restored with matching turf.
- Council carries out all permanent footway and roadway restorations in the Local Government Area (Unless there is a Memorandum of Understanding with Council for restorations). Council's permanent restoration work complies with AUS-SPEC 2 NSW Specification 221 Pipe Drainage, AUS-SPEC 2 NSW Specification 306U Road Openings & Restorations and Council's Standard Drawings and specifications. Standard Drawings are available to download from Council's website, <https://www.cbccity.nsw.gov.au>.

**Following completion of temporary restoration work, contact Council's Public Domain & Works Team to arrange a final inspection and permanent restoration work on phone number 02 9707 9020 or email [publicdomainworks@cbccity.nsw.gov.au](mailto:publicdomainworks@cbccity.nsw.gov.au)**

Councils reference number: **ASST-1795940034-406**

**NOTE: Council has planned works for the following:**

- **Lakemba St-Regional Road Rehabilitation — 1<sup>st</sup> July 2025 to 30<sup>th</sup> June 2026**
- **Bus Stop Burwood Rd at Lakemba St (outside 251 Burwood Rd) — 1<sup>st</sup> July 2025 to 30<sup>th</sup> June 2026**
- **Wangee Road Playspace-Stg1 Design — 1<sup>st</sup> July 2025 to 30<sup>th</sup> June 2026**

If you require further clarification, please contact the LAAN Team by replying back to this email.

Regards,  
LAAN Team



CANTERBURY BANKSTOWN

Michelle Nguyen â€ Customer Experience and Support Officer



@ourcbcity  
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The City of Canterbury Bankstown acknowledges the traditional custodians of the land, water and skies of Canterbury-Bankstown, the Darug (Darag, Dharug, Daruk, Dharuk) People. We recognise and respect Darug cultural heritage, beliefs and relationship with the land. We acknowledge the First Peoples' continuing importance to our CBCity community.

