Review of Environmental Factors Multi-program - Category B

South Maintenance Holes and Deep Shafts Rehabilitation (IN.20038562)

1 Determination

This Review of Environmental Factors Multi-program - 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) (May, 2023). Together both documents assess the potential environmental impacts from maintenance hole (MH) and deep shaft rehabilitation works across 25 sites throughout Sydney, Waverley and Randwick local government areas (LGAs). 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 construction environmental impacts of the proposal concern noise and traffic. During operation, no additional impacts are anticipated as the proposal is a maintenance and rehabilitation project and the assets are located below ground. 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:
[redacted]	[redacted]	[redacted]	[redacted]
Sam Campbell Environmental Officer Sydney Water Date: 08/08/2025	John Eames Environment Representative Sydney Water Date: 13/08/2025	Manijeh Kumsuz Project Manager Sydney Water Date: 19/08/2025	Murray Johnson Snr Mgr E&H, WES Sydney Water Date: 21/08/2025

2 Proposal Summary

Table 1 Description of proposal

Aspect	Detailed description
Location	The proposal involves rehabilitation works on 25 maintenance holes (MHs) and deep shafts within Sydney, Waverley and Randwick local government areas (LGAs) (Figure 1, Table 2). All sites are within previously disturbed urban environments. Most sites are located within roadways and traffic control is required. One site, MH85, is located with the grounds of Randwick High School.
Approved REF	Review of Environmental Factors Multi-program pipeline and related infrastructure replacement, repair and upgrades (Multi-program REF) (May, 2023).
Proposal description	The proposal is part of the Rehabilitation of Deep Access Maintenance Holes program as detailed in the Multi-program REF. Deep access MHs are in wastewater pipelines across all of Sydney Water's area of operations and the degradation varies significantly depending on age as well as operational and environmental factors. Rehabilitation is also required for safety reasons. The proposal assesses minor repair works below ground at 25 MHs and shafts and would generally require a small footprint. All sites are contained to previously disturbed areas within local roads or built-up areas, one site is situated in the grounds of Randwick High School. General requirements for the repair of the MHs are as follows:

Table 2 Site identification labels and location summary (see Figure 1)

Site ID	Location	LGA
MH53	Corner of Bourke Street and Thomson Place, Darlinghurst	Sydney
MH54	Corner of Bourke Street and Stanley Street, Darlinghurst	Sydney
MH55	In roadway opposite 187-189 Bourke Street, Darlinghurst	Sydney
MH56	185 Bourke Street (William Street intersection), Darlinghurst	Sydney
MH57	Corner of Reid Avenue and McElhone Street, Woolloomooloo	Sydney
MH58	147 Brougham Street, Woolloomooloo	Sydney
MH59	In roadway opposite 186-188 Victoria Street, Kings Cross	Sydney
MH60	In roadway opposite 164 Victoria Street, Potts Point	Sydney
MH61	Corner of Victoria Street and Butlers Street, Potts Point	Sydney
MH63	Corner of Victoria Street and Hughes Street, Potts Point	Sydney
MH64	In roadway opposite 98 Victoria Street, Potts Point	Sydney
MH65	In roadway opposite 81 Victoria Street, Potts Point	Sydney
MH66	In roadway opposite 39 Elizabeth Bay Road, Elizabeth Bay	Sydney
MH67	In roadway opposite 19-23 Elizabeth Bay Road, Elizabeth Bay	Sydney
MH68	In roadway opposite 10 Barncleuth Square, Elizabeth Bay	Sydney
MH69	In roadway opposite 77 Roslyn Gardens, Elizabeth Bay	Sydney
MH80	68 Hall Street, Bondi	Waverley
MH81	48 Hall Street, Bondi	Waverley
MH82	In roadway opposite 2 Dudley Street, Randwick	Randwick
MH83	In roadway of Nancye Street, Randwick	Randwick
MH84	In roadway opposite 297 Avoca Street, Randwick	Randwick
MH85	In Lot 1738 Rainbow Street, Randwick (Randwick High School)	Randwick
MH87	In roadway opposite Paine Reserve, Rainbow Street, Kingsford	Randwick
MH88	63 Rainbow Street, Kingsford	Randwick
MH89	27 Rainbow Street, Kingsford	Randwick

- provide allowances for person entry during mobilisation of rehabilitation crews to confirm scope of repairs required
- replace the existing MH cover and frame (if required) or clean and regrease the existing MH cover and frame
- replace the existing step irons with plastic encapsulated or stainless-steel equivalents in an arrangement suitable for modern confined space access methods
- remove any lower platform(s) without replacement
- remove existing staggered ladders and replace with stainless steel in an arrangement suitable for modern confined space access methods
- seal shaft infiltrations with fast setting hydraulic cement and polyurethane based crack injection and/or spitter pipes.

These activities involve repairs to existing Sydney Water infrastructure, no ground and/or vegetation impacts are required for 24 of the 25 sites. MH58 requires some excavation around the existing sewer asset, which may necessitate trimming of branches to allow safe clearance for larger machinery. The minor and inconsequential nature of this work means council consultation is not required.

Site establishment would involve:

- delineating the construction sites
- establishing storage and laydown areas (compound areas)
- establishing traffic management (as required).

Indicative temporary compound areas are provided in Appendix C. Compounds will be up to about 20m x 6m in size and will be in the road corridor. Compound areas will be removed at the end of each shift and reestablished at the start of each new shift.

Proposal timing

Rehabilitation works are needed at 25 maintenance holes (‘sites’) within Sydney Water’s operational area. The proposal is expected to start September 2025. The required duration for construction at each site ranges from about two weeks (MH57) to 4.5 months (MH87). Each site will be completed consecutively with no overlap in scheduling proposed. Overall construction, testing and commissioning is expected to be completed June 2028.

Non-standard work hours are proposed, i.e. night shifts (8pm to 5am) for safety, and to reduce impacts (e.g. traffic) at different times and pending road occupancy licences (ROLs) requirements. Site set-up that does not interfere with traffic and the conditions of the road occupancy licences (ROLs) will commence at 8pm, traffic control will start from 9pm and the noisiest work will be completed before midnight.

This has been assessed, and mitigation measures are provided in Section 5.

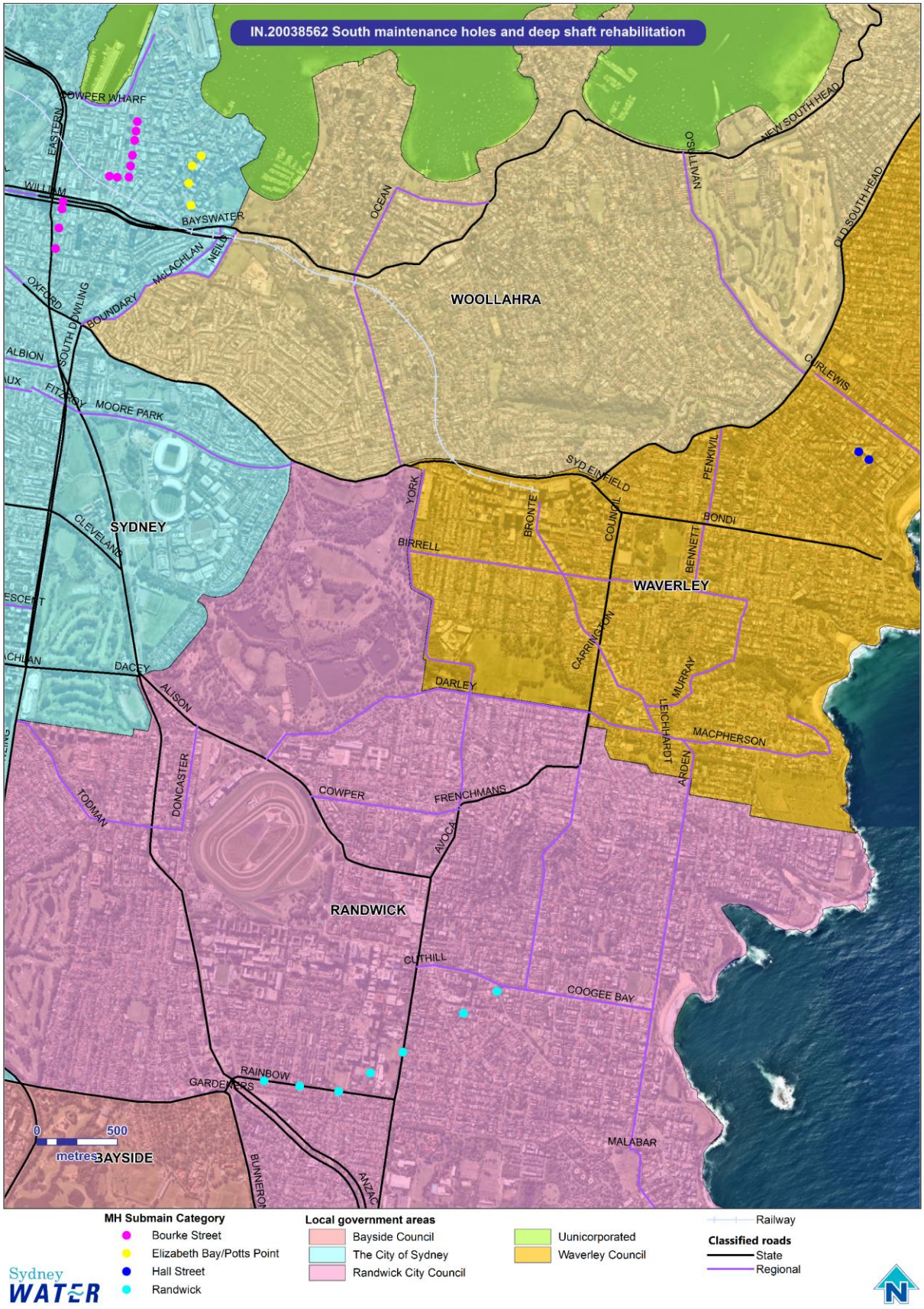

Figure 1 Proposal locations across each local government area. Refer to Section 5 for further details.

3 Consultation

3.1 TISEPP consultation

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). No formal consultation was required under the TISEPP as works are considered minor or inconsequential. Construction activities will be undertaken at night to minimise traffic disruption, all works will be on Sydney Water assets (MHs) and impacts to the road surface are only planned at MH58.

Most of the works will be undertaken on existing assets within roadways with one site (MH85) within school grounds. To reduce traffic and access impacts all the works will be completed during non-standard hours (i.e. night works). Compounds will be set up at the start of each shift to avoid impacts to roadways during daytime hours. Excavation and vegetation impacts are not required for 24 of the 25 sites. The contractor should notify council of works and determine any traffic management and restoration requirements. Further detail is provided in Appendix B.

For access to the Maintenance Holes, the proposal requires partial road closures of:

- Bourke Street
- William Street
- McElhone Street
- Brougham Street
- Victoria Street
- Elizabeth Bay Road
- Barncleuth Square
- Roslyn Gardens
- Hall Street
- Dudley Street
- Nancye Street
- Avoca Street
- Rainbow Street

Rainbow Street, Avoca Street and William Street are classified state roads managed by Transport for NSW (TfNSW). The contractor will consult with TfNSW and obtain ROLs and prepare a Traffic Management Plan (TMP) prior to commencement.

3.2 Community and stakeholder consultation

Our approach to community and stakeholder consultation is guided by Sydney Water's community and stakeholder engagement guidelines as outlined in the Multi-program REF (May, 2023). Consultation with affected residents will follow the recommendations in the TfNSW noise estimator tool.

4 Legislative requirements

There are additional legislative requirements beyond those already assessed in the Multi-program REF (May, 2023).

Table 3 Environmental planning instruments relevant to the proposal

Environmental Planning Instrument	Relevance to proposal
Waverly Local Environment Plan (2012)	The proposal areas are zoned as E1 – 'Local Centre' under the Waverly LEP.
Randwick Local Environment Plan (2012)	The proposal areas are zoned as R3 – 'Medium Density Residential', 'R2' Low Density Residential' and SP2 – 'Infrastructure' under the Randwick LEP.

City of Sydney Local Environment Plan (2012)	The proposal areas are zoned as R1 – 'General Residential', MU1 – 'Mixed Use' and SP2 – 'Infrastructure' under the City of Sydney LEP.

Table 4 Consideration of additional environmental legislation relevant to the proposal

Legislation	Additional considerations
Roads Act 1993	Section 138 of the Roads Act 1993 states a person must not carry out work in, on or over a public road without consent of the responsible road's authority. MH Rehabilitation works would be occurring on public roads and would require temporary laydown areas to be erected on the road surface. The proposal would therefore require consent from the road's authority before the start of works. In this case it is TfNSW, Waverly Council, Randwick Council and the City of Sydney.

5 Additional environmental impacts and mitigation measures

Existing Environment

The proposal is spread across multiple discrete sites within a mix of infrastructure (SP2), general residential (R1), low-density residential (R2), medium-density residential (R3), local centre (E1) and mixed use (MU1) zones. All sites are in an urban setting, predominantly comprised of single-storey and multi-storey residential properties, small businesses and education facilities.

The proposal is limited to previously disturbed areas from past construction activities. The sites would be accessed from the existing road network and no vegetation clearing for access tracks would be required, MH58 may require some trimming of branches for safe clearance for larger machinery. The existing noise environment is comprised of heavy commuter traffic to the Sydney CBD. Although, as works would take place overnight, the noise environment is expected to be quieter.

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).

Table 5 Environmental impacts table

Aspect	Additional impacts	Additional mitigation measures
Topography, geology and soils	Ground disturbance and excavation activities would occur for the rehabilitation of MH58. This includes excavation around the existing MH and shoring system installation for the surrounding excavated area. The dimensions would be 3.1 metres in length, 3.1 metres in width and 2.5 metres in depth. Appropriate stockpiling and sediment control measures would be implemented to minimise the movement of soils off-site and into the local environment. Refer to potential site impacts summarised in Appendix D and manage in accordance with mitigation measures in the Multi-program REF (May, 2023).	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May, 2023) and the following additional mitigation measures: • Dispose excavated soils to a licenced facility. • Backfill and compact excavated construction area

Aspect	Additional impacts	Additional mitigation measures
		once works are completed. • Reinstate road surface to similar or better conditions once works are completed.
Water and drainage	Refer to potential site impacts summarised in Appendix D and manage in accordance with mitigation measures in the Multi-program REF (May, 2023).	*No additional mitigation measures to be applied.*
Flora and fauna	Vegetation throughout the study area consists of planted native or exotic street trees and grassy turfed areas. There are no threatened ecological communities (TECs) or threatened flora within the study area. Vegetation impacts (trimming/removal) are not required for most sites. One site, MH58, may require some trimming of branches to allow safe clearance for larger machinery (e.g. mini crawler crane). However, vegetation will be trimming only and involve the minimum required to enable works. No tree removal is allowed for access to MHs or at the compound sites (refer to Appendix C and D). Predominantly, equipment and materials would be stored on hardstand within the proposed compound areas. Several native fauna sightings are recorded within 200m of the proposal. Predominantly, fauna sightings are of Grey-headed Flying-fox. Historic sightings for the threatened Spotted-tailed Quoll are mapped within 40m of MH60 and MH61. Although highly mobile, these species are predominantly nocturnal. However, the works are in a built-up environment, not likely to destroy habitat for these species and direct impacts are considered unlikely. Any potential impacts would be adequately managed through mitigation measures in the Multi-program REF (May, 2023) and this REF.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May, 2023) and the following additional mitigation measures: • The contractor will incorporate Quolls into their Toolbox Talk prior to works starting (see Appendix D). This should include mention of where Quolls have been recorded (i.e. MH60 and MH61), behaviour and how to identify them.
Heritage	Refer to potential site impacts summarised in Appendix D and manage in accordance with mitigation measures in the Multi-program REF (May, 2023).	*No additional mitigation measures to be applied.*
Noise and vibration	**Existing environment** Predominantly, the land uses surrounding the proposal sites include mixed use and residential areas. The existing noise environment is influenced by local foot traffic, train lines and vehicle traffic (trucks and cars) due to the nearby state roads. The nearest sensitive receivers include residents, educational facilities (i.e. schools, daycare centres) and small businesses that are located adjacent to sites. **Equipment and timing of work**	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May, 2023) and the following additional mitigation measures: • Schedule work to minimise disruption, and balance the needs of neighbours,

Aspect	Additional impacts	Additional mitigation measures
	The proposal will generate temporary noise and vibration during the proposed activities. Equipment, vehicles and machinery that would typically be used during the proposal and that have potential to generate noise include: • light and heavy vehicle movements • compressors • small hand / power tools. • concrete sawing of the road surface (MH58 exclusively) The rehabilitation of each MH is expected to take between 2 weeks to about 4.5 months, depending on site and rehabilitation requirements at each MH (refer to Appendix E for scope used to determine noise and vibration impacts). The entire program is proposed to be completed during non-standard work hours. However, work at each site will be completed consecutively and noisiest activities will be non-continuous and not every shift. Therefore, a limited number of receivers would be affected for extended periods of time at each site, but noise impacts would vary across the work period. **Noise impact assessment** The likelihood of noise impact was assessed using Table 2 of the Draft Construction Noise Guideline (EPA 2020). After consideration of the existing environment, equipment and timing of work, noise impact was assessed to be low-medium risk and therefore a qualitative noise impact assessment was completed using the Transport for NSW (TfNSW) Construction and Maintenance noise estimator tool (TfNSW, 2022). <u>Tool input</u> The purpose of the noise assessment was to assess the predicted worst-case noise impacts. This identified recommended additional mitigation measures for impacted receivers at different distances from the works, which would guide community engagement for the proposal. R3 was chosen as representative of the baseline noise environment as it best reflects the surrounding traffic volumes and noise catchment among sites. The background noise level for the assessment of night works is 40 dB(A). The noise propagation type was identified as 'Residential receiver-developed settlements (urban and suburban)'. This classification is crucial for understanding how noise will travel and affect surrounding receivers. A receiver may have line of sight (LOS), or no line of sight (NLOS, to the proposal. LOS is the straight line between the	businesses, and pedestrians. • Deposit material in skip bins from as low a height as possible. • The contractor is to consider the relevant mitigation measures from Transport for NSW noise estimator tool and offered where appropriate as detailed in Table 6. This includes Notifications, Phone Calls, Specific notifications, Respite Offers and Duration Respite. Figure 11 provides an example of the noise contours and should be considered in conjunction with Table 6. (Noise impact estimates are applicable across all 25 MHs assessed in the REF). • The community engagement team will engage with nearby stakeholders while considering the recommended mitigation measures. • Noisiest work will ideally be completed before 12am midnight. • Noise blankets to be employed at all sites, where appropriate.

Aspect	Additional impacts	Additional mitigation measures
	noise source and the receiver. Receivers with LOS 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 NLOS (all other factors being equal, such as distance to the work and type of equipment) will experience less noise than receivers with LOS. Typically, these include the receivers who have their view blocked from the works by barriers including those listed above, but can include works below ground (i.e. within a MH). The worst-case scenarios for the proposed work are: • Compressor positioned aboveground and operated every shift was chosen as representative of the nosiest activity with LOS. • Small hand / power tools used intermittently within MHs was chosen as representative of the noisiest activity with NLOS. As associated works will be within the MHs, noise impacts from these tools are expected to be attenuated as works will be below ground. This resulted in the same noise impact output from the noise estimator tool as the above scenario. • Concrete sawing of the road surface aboveground and operated intermittently. Chosen as representative of the noisiest activity with LOS and NLOS at MH58. A combination of LOS and NLOS was used as receivers beyond the highly intrusive buffer would be behind a substantial solid barrier. <u>Tool output</u> Based on the above criteria, the predicted worst-case noise impacts for sensitive receivers associated proposed construction activities during night work are summarised in Table 6. The output comprises distance-based noise impact contours, which provide a visual representation of how sound levels from a source vary across an area. Refer to Figure 11 for representative noise contour mapping. These outputs also include recommended mitigation measures at different distances from sensitive receivers, as identified by the noise estimator tool (refer to Appendix F). These are to be considered by the community team and offered where appropriate. The proposal would elevate the noise environment temporarily and would have a moderate impact on some receivers. The noise impact to sensitive receivers would be temporary and short term. This would be achieved through the implementation of mitigation measures and considering the differing needs of the community.	

Aspect	Additional impacts	Additional mitigation measures
	Vibration impacts Given the minor nature of proposed activities and that equipment is limited to small hand / power tools and a concrete saw for MH58, no significant vibration impacts are expected during the work. Any potential vibrational impacts would be adequately managed through mitigation measures in the Multi-program REF (May, 2023) and this REF.	
Waste and hazardous materials	Refer to potential site impacts summarised in Appendix D and manage in accordance with mitigation measures in the Multi-program REF (May, 2023).	*No additional mitigation measures to be applied.*
Traffic and access	An ROL is a mandatory requirement for any works that may impact the operational capacity of classified roads, as per the Roads Act (1993). The ROL ensures that traffic control measures are implemented to maintain road safety, reduce congestion, and coordinate works with other road network activities. It is issued by TMC and considers factors such as peak traffic periods, pedestrian safety, and emergency vehicle access. For this project, ROLs are in the process of being obtained, confirming that the works are authorised and will proceed in accordance with approved traffic management measures. Traffic controllers would ensure residential access is maintained at all times for properties directly bordering the proposal sites. Road plates will be installed over the excavation area at MH58 at the end of each night shift. This will allow the entirety of Brougham Street to be used during the day. Due to the use of night works and traffic controllers, impacts to traffic are expected to be minimal. Refer to potential site impacts summarised in Appendix D and manage in accordance with mitigation measures in the Multi-program REF (May, 2023).	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May, 2023). • Contractor will consult with TfNSW and obtain a Road Occupancy Licence before construction commences. • Sufficient lighting in areas where works are to occur for the safety of passing road users and construction workers. • Vehicles are to park in a manner that minimises impacts to other road users and the public.
Social and Visual	Temporary impacts to the visual amenity of the area would be experienced and are associated with the site compound, lighting equipment, construction equipment and activities during the works. Given the minor nature of the works, MH rehabilitation activities taking place internally, the temporary / short term nature of the proposal, and the night work hours where public presence is lower, any social and visual impacts are considered minor. Where the ground is impacted, it will be restored to its pre-disturbed state in consultation with TfNSW and local council.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May, 2023). • Ensure lights are pointed toward the ground and not the adjacent residential buildings or vegetation. • Construction schedule to continue to be refined in response to

Aspect	Additional impacts	Additional mitigation measures
		stakeholder concerns to balance and minimise impacts to all community members. • Complaints to be managed in accordance with Sydney Water's Complaints Procedure and relevant Community Engagement Plan.

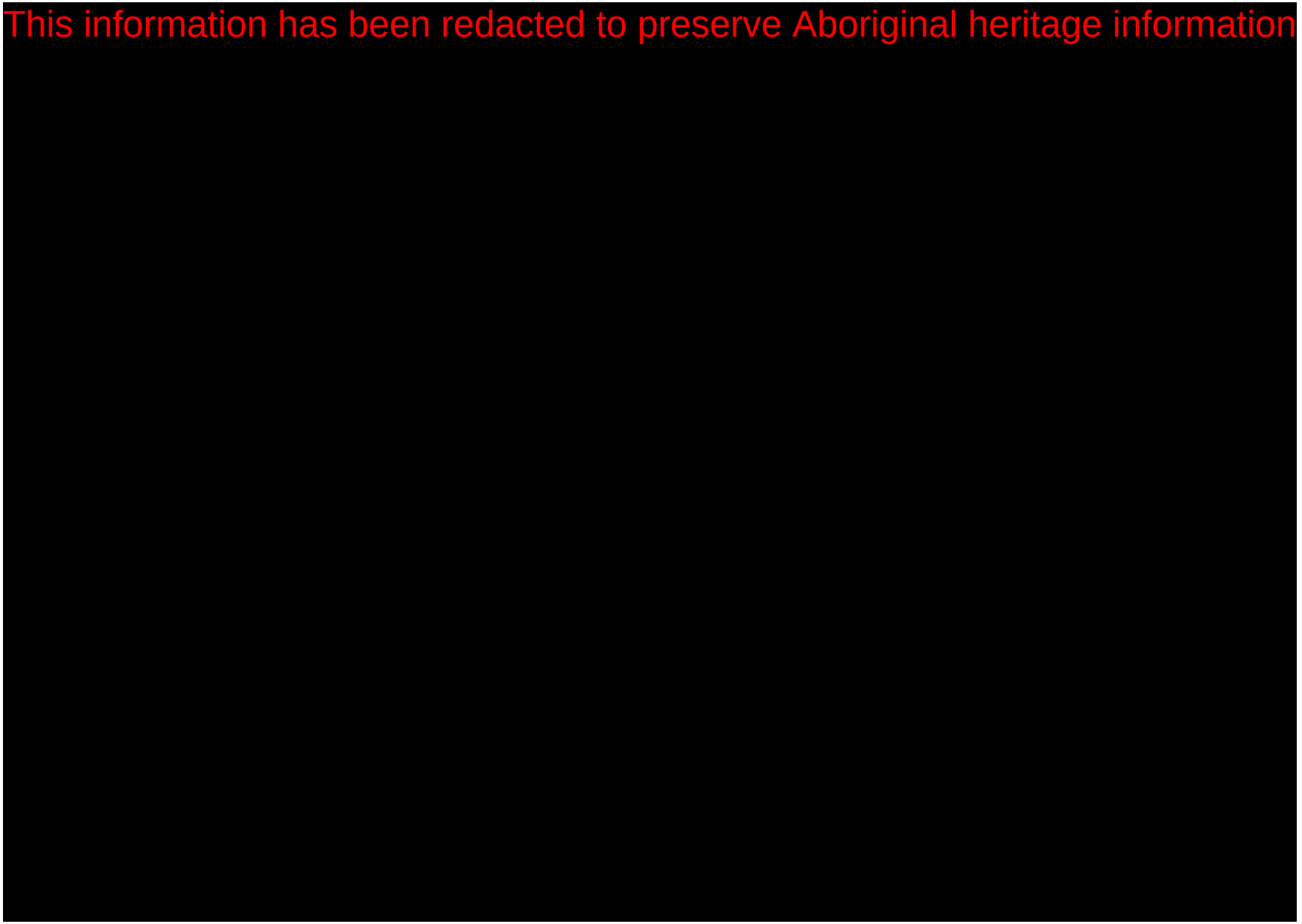

Figure 1 Proposal locations (MH53-56) and environmental constraints

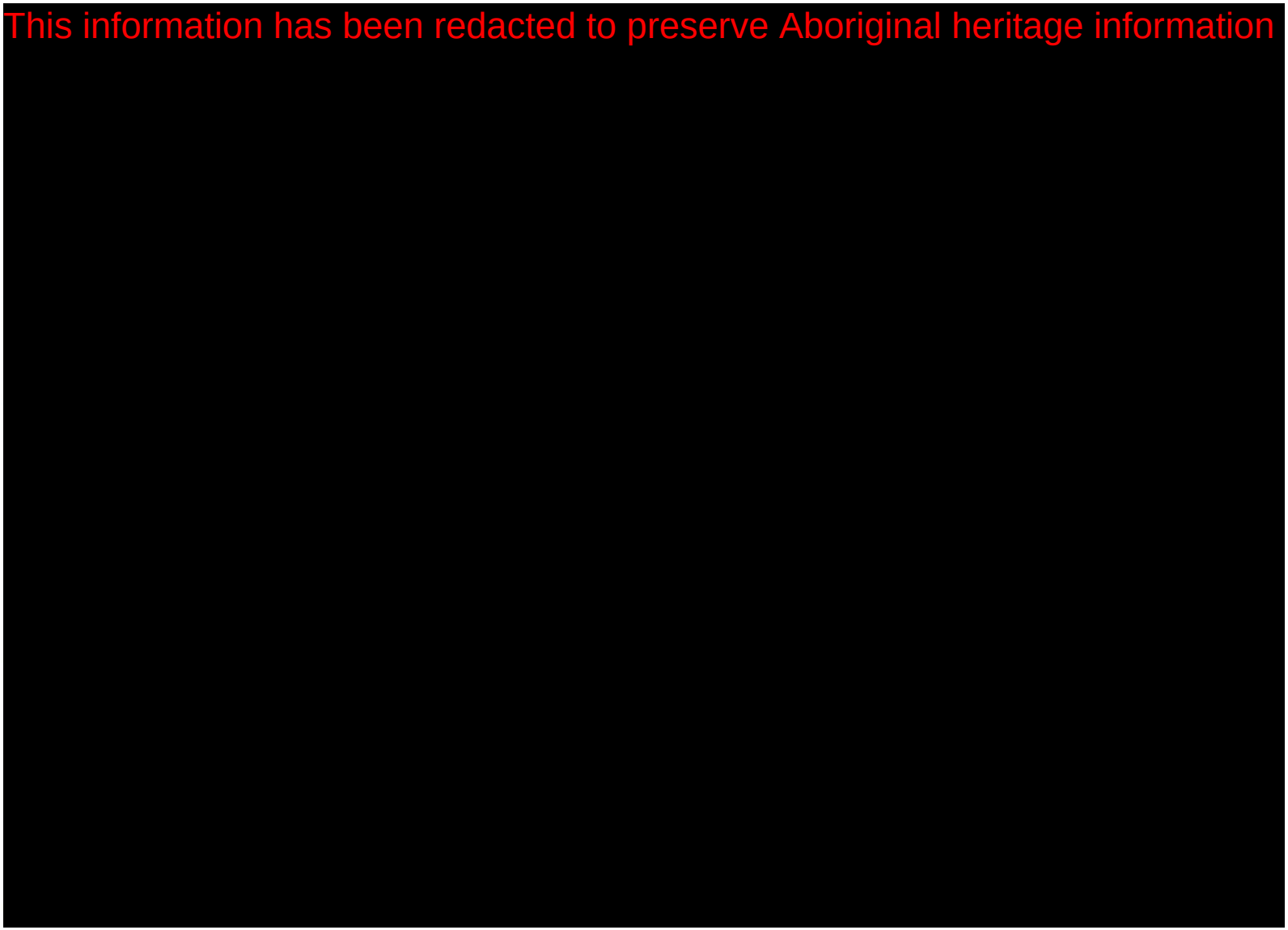

Figure 2 Proposal locations (MH53-56) and heritage constraints

Figure 3 Proposal locations (MH57-65) and environmental constraints

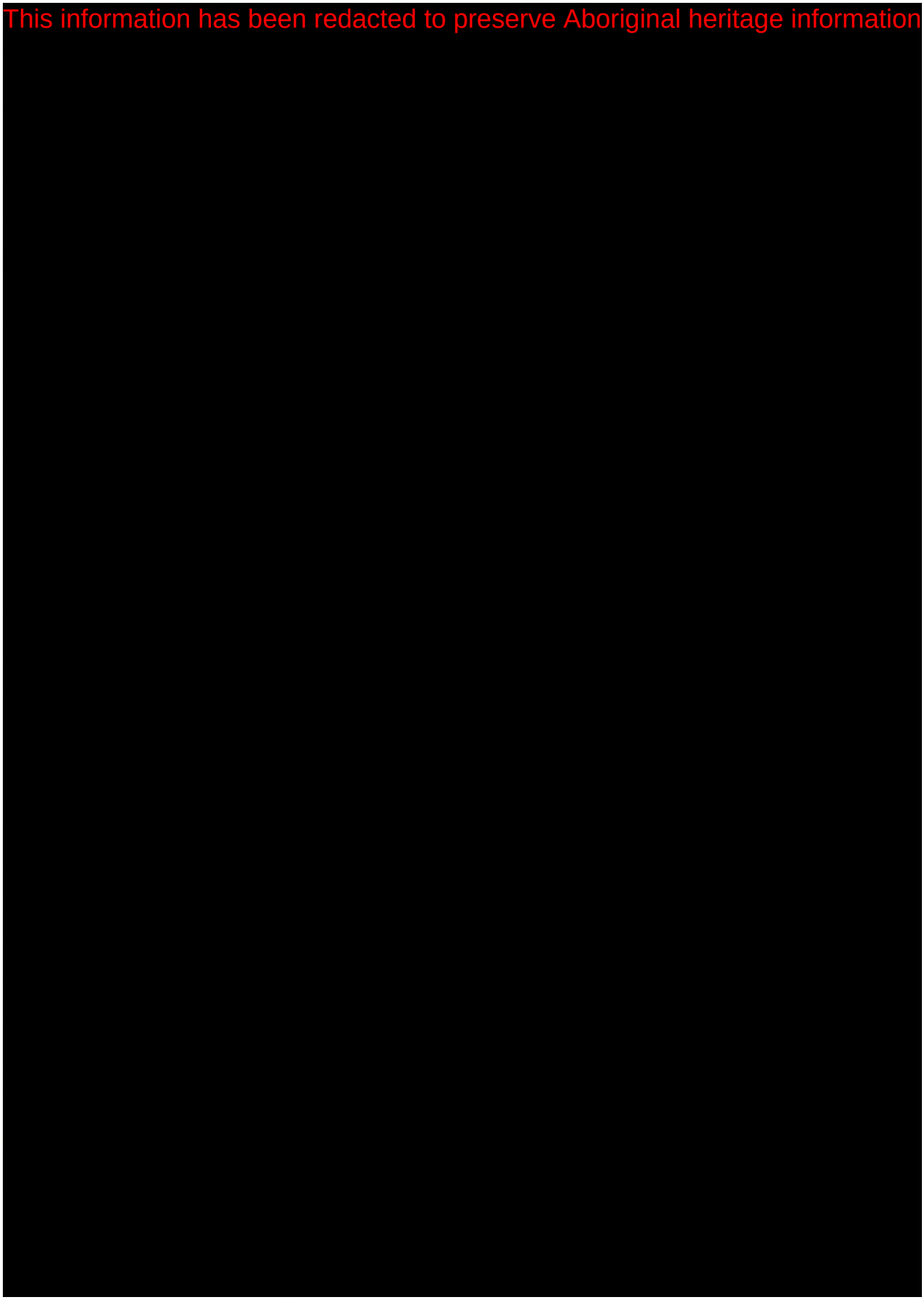

Figure 4 Proposal locations (MH57-65) and heritage constraints

Figure 5 Proposal locations (MH66-69) and environmental constraints

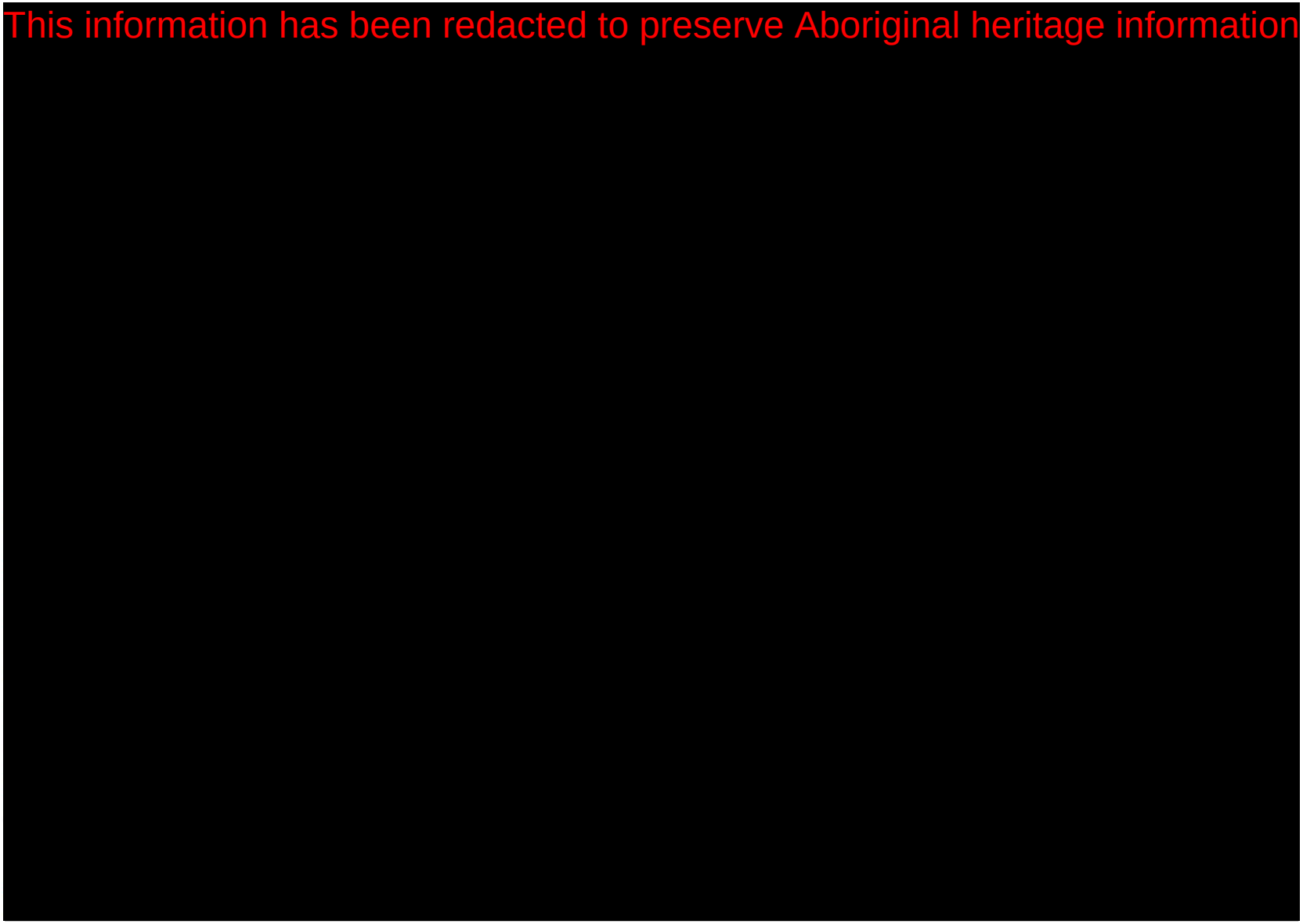

Figure 6 Proposal locations (MH66-69) and heritage constraints

Figure 7 Proposal locations (MH80-81), environmental and heritage constraints

Figure 8 Proposal locations (MH82-83), environmental and heritage constraints

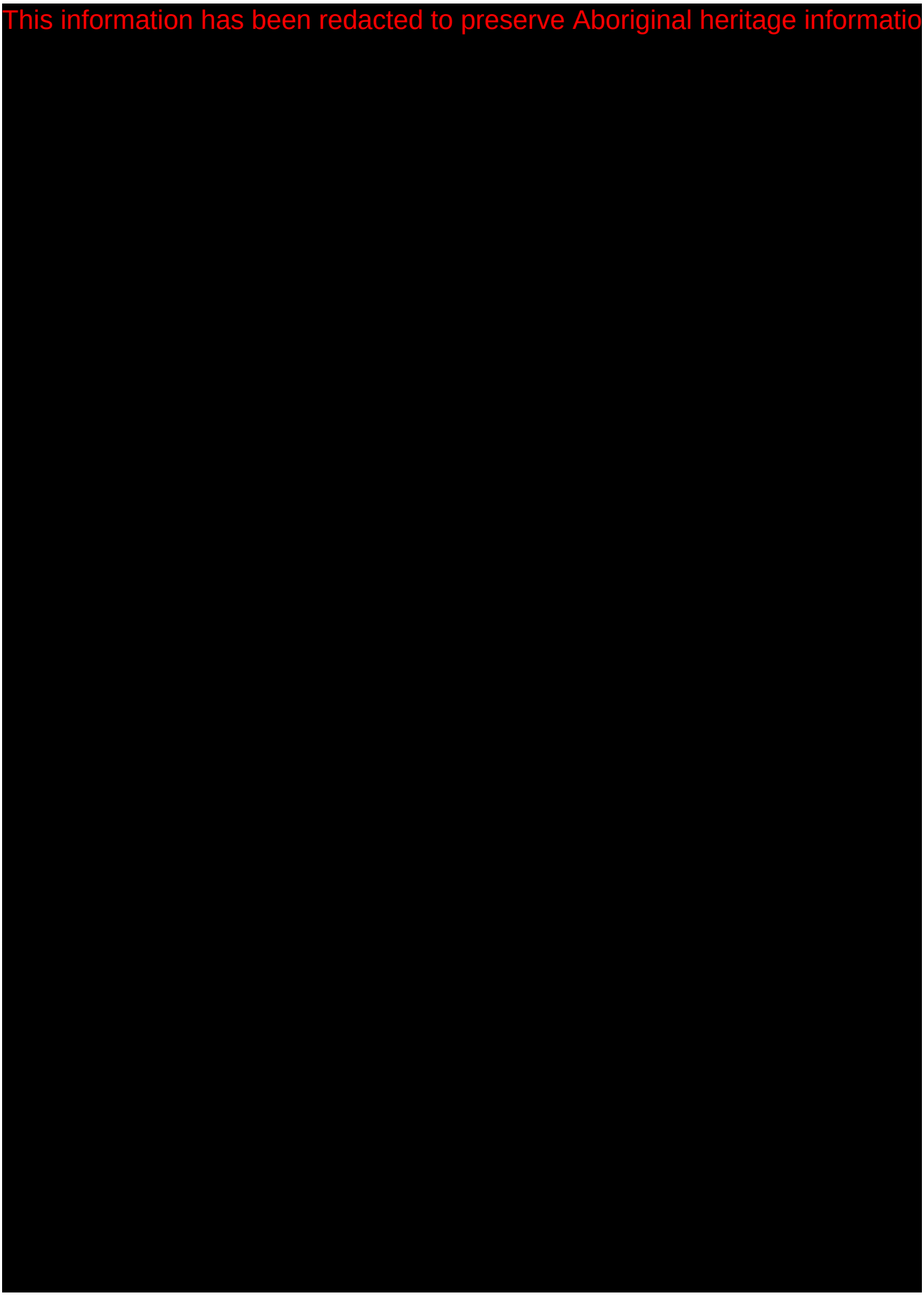

Figure 9 Proposal locations (MH84-85), environmental and heritage constraints

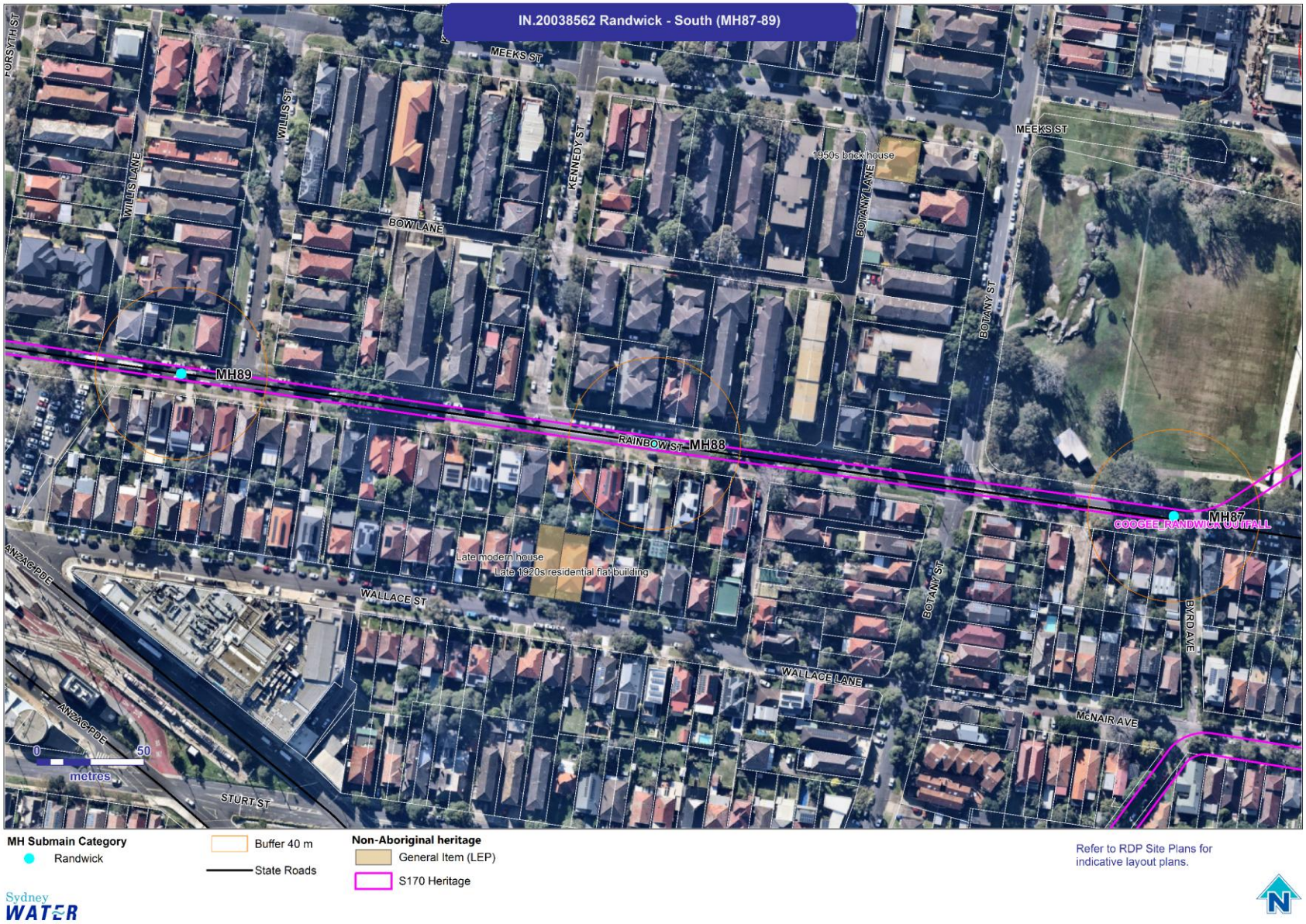

Figure 10 Proposal locations (MH87-89), environmental and heritage constraint

Figure 11 Visual example of noise impact contours at two of the 25 sites assessed. Sensitive receivers nearer to works will be most affected. Refer to Table 6 and Appendix F for further details.

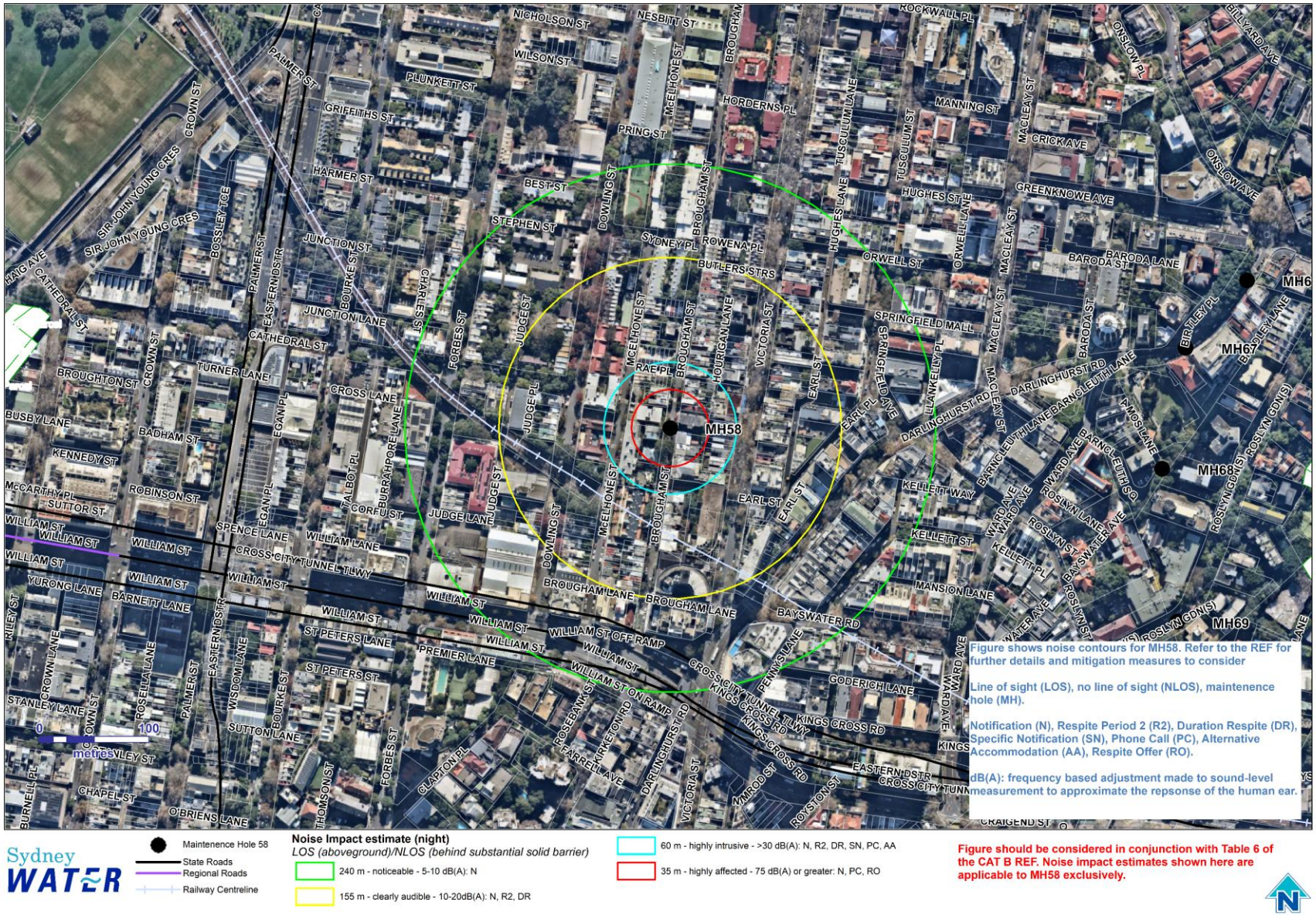

Figure 12 Noise impact contours MH58. Sensitive receivers nearer to works will be most affected. Refer to Table 6 and Appendix F for further details.

Table 6 Affected distance (metres) for sensitive receivers (night) – distanced-based (noisiest tool) in a developed area. Three scenarios were assessed: compressor, aboveground; hand power tools (2-3 items), within MHs; Concrete saw, aboveground. Outputs of the first two scenarios are to be considered and applied to all MH sites assessed, with the exception of MH58 which is applicable to the final scenario.

Scenario	Activities	LAeq(15minute) noise level above background (LA90)				
		5 to 10 dB(A)	**10 to 20 dB(A)**	**20 to 30 dB(A)**	**> 30 dB(A)**	**LAeq(15minute) 75dB or greater**
		Noticeable	**Clearly audible**	**Moderately intrusive**	**Highly intrusive**	**Highly affected**
Compressor, aboveground with LOS.	Developed: Line of sight	145	95	35	15	10
Power tools, within MHs behind substantial solid barrier (NLOS).	Developed: No line of sight	145	95	35	15	10
Concrete saw, aboveground at MH58. LOS and behind a substantial solid barrier (NLOS).	Developed	240 (NLOS)	155 (NLOS)	60 (NLOS)	60 (LOS)	35 (LOS)
Recommended additional mitigation measures (refer Appendix D for further details)		Notification (N)	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)

Table 7 Environmental mitigation measures

General
Should the proposal/methodology (refer to whatever change is relevant) change from the EIA, no further environmental assessment is required provided the change: • remains within the assessment/study area for the EIA (or use EIA terminology) and has no net additional environmental impact or • is outside the assessment/study area for the EIA (or use EIA terminology) but: - reduces impacts to biodiversity, heritage or human amenity or - avoids engineering (for example, geological, topographical) constraints and - after consultation with any potentially affected landowners and relevant agencies. The 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.

6 Conclusion

This Category B REF outlines potential environmental impacts associated with noise and traffic as part of the South Maintenance Holes (MHs) and Deep Shafts Rehabilitation project. Any additional environmental impacts are considered 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.

Appendix A – Section 171 checklist

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

Section 171 checklist	REF finding
Any environmental impact on a community	The proposal would have limited short-term impacts on the community associated with temporary noise, social and visual impacts. There will be environmental improvements by providing reliable services to the local community.
Any transformation of a locality	The proposal will not result in the transformation of a locality.
Any environmental impact on the ecosystems of the locality	The proposal will not result in environmental impacts to ecosystems of the locality. The proposal will lead to environmental improvements by ensuring a reliable wastewater service to collect and treat wastewater, minimising any impacts on the ecosystem.
Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality	The proposal will not reduce the aesthetic, recreational, scientific or other environmental quality or value of the locality.
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	The proposal is in a previously disturbed residential area. There would be localised reduction of aesthetic and recreational values during works. However, these would be temporary, and the site would be restored to pre-existing conditions after the works. The proposal would not impact scientific or environmental values of the sites during construction or operation. The proposal will not reduce the aesthetic, recreational, scientific or other environmental quality or value of the locality.
Any impact on the habitat of any protected animals (within the meaning of the *Biodiversity Conservation Act 2016*)	The proposal will not have any impact on the habitat of protected animals.
Any endangering of any species of animal or plant or other form of life, whether living on land, in water or in the air	The proposal will not be endangering any species of animal, plant or other form of life, whether living on land, in water or in the air.
Any long-term effects on the environment	The proposal will not have any long-term impacts on the environment but will have a long-term benefit by providing a reliable and modern wastewater service for the area.
Any degradation of the quality of the environment	The proposal will not cause the degradation of the quality of the environment.

Section 171 checklist	REF finding
Any risk to the safety of the environment	The proposal will not increase risk to the safety of the environment.
Any reduction in the range of beneficial uses of the environment	The proposal will not reduce the range of beneficial uses of the environment.
Any pollution of the environment	Environmental mitigation measures will mitigate the potential for the proposal to pollute the environment. No pollution of the environment is expected.
Any environmental problems associated with the disposal of waste	Waste disposal will be in accordance with the environmental mitigation measures, and no environmental problems associated with the disposal of waste are expected.
Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply	The proposal will not increase demand on resources, that are, or are likely to become, in short supply.
Any cumulative environmental effect with other existing or likely future activities	The proposal will not have any cumulative environmental effect with other existing or likely future activities.
Any impact on coastal processes and coastal hazards, including those under projected climate change conditions	The proposal will not have any impact on coastal processes or hazards, and coastal processes and coastal hazards will not have any impact on the proposal.
Any applicable local strategic planning statements, regional strategic plans or district strategic plans made under the EP&A Act, Division 3.1	There are no applicable strategic planning statements or plans, as the proposal forms part of a rehabilitation program.
Any other relevant environmental factors.	The proposal has been assessed against the factors listed above, and there are no other relevant environmental factors to consider.

Appendix B – Consideration of TISEPP consultation

TISEPP section	Yes	No
Section 2.10, council related infrastructure or services – consultation with council		
Will the work:		
Potentially have a substantial impact on stormwater management services provided by council?		✓
Be likely to generate traffic that will strain the capacity of the road system in the LGA?		✓
Connect to, and have a substantial impact on, the capacity of a council owned sewerage system?		✓
Connect to, and use a substantial volume of water from a council owned water supply system?		✓
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?		✓
Excavate a road, or a footpath adjacent to a road, for which the council is the roads authority, that is not minor or inconsequential?		✓
Section 2.11, local heritage – consultation with council		
Is the work likely to affect the heritage significance of a local heritage item, or of a heritage conservation area (not also a State heritage item) more than a minor or inconsequential amount?		✓
Section 2.12, flood liable land – consultation with council		
Will the work be on flood liable land (land that is susceptible to flooding by the probable maximum flood event) and will works alter flood patterns other than to a minor extent?		✓
Section 2.13, flood liable land – consultation with State Emergency Services		
Will the work be on flood liable land (land that is susceptible to flooding by the probable maximum flood event) and undertaken under a relevant provision*, but not the carrying out of minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance? * (e) Div.14 (Public admin buildings), (g) Div.16 (Research/ monitoring stations), (i) Div.20 (Stormwater systems)?		✓
Section 2.14, development with impacts on certain land within the coastal zone– council consultation		
Is the work on land mapped as coastal vulnerability area and inconsistent with a certified coastal management program?		✓
Section 2.15, consultation with public authorities other than councils		
Will the proposal be on land adjacent to land reserved under the *National Parks and Wildlife Act 1974* or land acquired under Part 11 of that Act*? If so, consult with DPE (NPWS).*		✓
Will the proposal be on land in Zone C1 National Parks and Nature Reserves or on a land use zone that is equivalent to that zone? *If so, consult with DPE (NPWS).*		✓
Will the proposal include a fixed or floating structure in or over navigable waters? *If so, consult TfNSW.*		✓
Will the proposal be on land in a mine subsidence district within the meaning of the *Coal Mine Subsidence Compensation Act 2017*? *If so, consult with Subsidence Advisory NSW.*		✓
Will the proposal be on land in a Western City operational area specified in *the Western Parkland City Authority Act 2018,* Schedule 2 and have a capital investment value of $30		

million or more? *If so, consult the Western Parkland City Authority*.		
Will the proposal clear native vegetation on land that is not subject land (ie non-certified land)? *If so, notify DPE at least 21 days prior to work commencing. (Requirement under s3.24 Chapter 3 Sydney Region Growth Centres - of the SEPP (Precincts – Central River City) 2021).*		✓

Appendix C – Site plans

PDF detailing the site plans for each MH, annotating indicative compound areas and traffic control plans. Used to inform the project traffic and access impact assessment

Appendix D – Uber Cat A Checklist

Excel spreadsheet including SWEMS0019.01 Environmental Checklist and site-specific uber categorisation for all 25 sites. Refer to this spreadsheet for background for toolbox talk on Spotted-tailed Quolls.

Appendix E – Noise and vibration scope

Excel spreadsheet detailing scope of works used to inform the project noise and vibration impact assessment.

Appendix F – Noise mitigation measures – definition of recommendations

Additional noise mitigation measures and description, taken from TfNSW noise estimator tool in relation to the assessment (section 6.2.5)

Abbreviation	Mitigation measure and description
N	Notification (letterbox drop or equivalent): 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.
SN	Specific notifications: 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. This form of communication is used to support periodic notifications, or to advertise unscheduled works.
PC	Phone calls: 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.
RO	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)
R1	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
R2	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 11pm.
DR	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. RDC staff should engage with the community where noise levels are expected to exceed the NML to demonstrate support for Duration Respite.
AA	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.

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