



SP0041 rising main relining, Stage 4B, 5A and 5B works, Homebush, Strathfield and North Strathfield.

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) (May 2023). Together both documents assess the potential environmental impacts of SP0041 rising main relining, Stage 4B, 5A and 5B works, North Strathfield. 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 vegetation removal, disturbance of heritage, traffic, access and noise. The proposal will result in positive operational impacts, as it aims to improve wastewater system performance. 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:
Alexandra Northam Environmental Scientist, Sydney Water Date: 29/07/2025	John Eames	Ryan Cush	Murray Johnson
	Senior Environmental	Project Manager,	Senior Manager Environment
	Scientist, Sydney Water	Sydney Water	and Heritage, Sydney Water
	Date: 30/07/2025	Date: 31/07/2025	Date: 31/07/2025

Review of Environmental Factors Multi-program Category B | SP0041 rising main relining, Stage 2 and Stage 4A works, North Strathfield.



2 Proposal Summary

Table 1 Description of proposal

Aspect	Detailed description	
Location	The proposal is located within the suburb of Homebush, Strathfield and North Strathfield in the Strathfield Local Government Area (LGA) and Canada Bay LGA.	
	Stage 4B works	
	A portion of SP0041 pressure main 'PM1' is being relined between:	
	 Site 1: launch pit located within Ismay Reserve (north), which is a Public Recreation zone (RE1 Public Recreation) (2/-/DP1002876) 	
	 Site 2: receival pit located within Ismay Reserve (south), which is a Public Recreation zone (RE1 Public Recreation) (1/-/814227). 	
	Stage 5A works	
	A portion of SP0041 PM1 is being relined as a part of the Stage 5A works, between:	
	 Site 2: receival pit located within Ismay Reserve (south), which is a Public Recreation zone (RE1 Public Recreation) (1/-/814227) 	
	 Site 3: launch pit located within 'Strathfield Railway Triangle', which is Transport Asset Holding Entity (TAHE) land (SP2 Rail Infrastructure) (1/-/1002421). 	
	Stage 5B works	
	A portion of SP0041 PM1 is being relined as a part of the Stage 5B works, between:	
	 Site 3: launch pit located within Strathfield Railway Triangle, which is TAHE land (SP2 Rail Infrastructure) (1/-/1002421) 	
	 Site 4: receival pit located on Elva Street, adjacent to 60 Albert Rd, Strathfield (R3 Medium Density Residential) (3/-/302827). 	
	Note that:	
	 the receival pit for Stage 4B works is at the same location as the receival pit for the Stage 5A works (Site 2) 	
	 the launch pit for Stage 5A is at the same location as the launch pit for Stage 5B (Site 3). 	
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 covered under the programs of work with equivalent relining scopes detailed in the Multi-program REF. The wastewater pipeline will be relined to improve the wastewater system performance and to reduce the likelihood of asset failure that results in environmental harm. In recent years,	



Aspect	Detailed description

there have been multiple failures along the rising main, and inspections have revealed extensive corrosion within the rising main affecting its structural integrity.

Stage 4B, Stage 5A and Stage 5B works form part of a larger program of works that is being completed to ensure that Sydney Water complies with Special Condition E3 in Environment Protection Licence (EPL) 372.

Clause E3.1 of EPL 372 states that:

The Licensee must complete relining of the pressurised section of the 750mm rising main at Homebush/Strathfield (which receives flows from sewer pumping station SP0041) as soon as is reasonably practicable and by no later than 31 December 2025.

The proposal involves the following activities:

- trim, remove and replant vegetation
- fence and/or barricade site
- demolish portion of western face of Powells Creek canal wall
- construct temporary access tracks, bridge and a ramp into Powells Creek stormwater canal
- install pre-engineered temporary flood barrier
- remove then replace existing light poles
- excavate land and Powells Creek canal to create entry/exit pits to the rising main
- shore excavation for stabilisation
- install cofferdam via sacrificial sheet piling, and shotcrete walls to seal off pipe penetrations
- groundwater dewatering
- · construct recessed sump pit flush for screening of sediment
- construct sandbag barrier to prime the pump for stormwater bypass and collect sediment
- relocate Transport for NSW (TfNSW) equipment temporarily
- · cut existing rising main
- · remove casing and flange from rising main
- clean and CCTV rising main
- reline the existing rising main
- pressure test the rising main
- backfill site





Aspect	Detailed description	
	construct deep scour pit chamber, which will involve trenching connect relief pipe to scour pit restore all sites, including reinstating canal walls and floor panels and reinstating hard stand area on TfNSW land remove all temporary structures and waste. the proposal relies on the use of an overland bypass approved under a revious stage of this project. Thile the existing site compound area for the program of works (located at 6 Pomeroy Street, Homebush) will be used during the Stage 2 and Stage A works, plant and equipment will also be stored at Site 1, Site 2, Site 3 and ite 4. In access track for Site 1 has already been approved under the Stage 2 and tage 4A approval process. The existing footpath within Ismay Reserve (south) will be used to access ite 2. In addition, a temporary access ramp will be constructed to provide coess for personnel, plant and equipment into the canal at Site 2. Existing roads and access tracks will be used to access Site 3. In addition, a temporary access ramp will be constructed to provide access to personnel, plant and equipment into the canal at Site 3. Existing roads will be used to access Site 4. No new access tracks are equired at Site 4. The proposal is shown in Figure 1, Figure 2, Figure 3, Figure 4 and Figure 1.	
Plant and equipment	Plant and equipment required include, but are not limited to:	
	 skip bins generators portable traffic booms concrete saws road saws sheet piling excavators hand tools concrete agitators site facilities and amenities (caravan setup) tipper trucks medium-heavy rigid trucks semi and flatbed delivery trucks light vehicles fencing and water filled barriers portable traffic booms excavators concrete agitators welding machine oxy acetylene cutting pumps wellpoint spears cranes 	



Aspect	Detailed description	
	vacuum trucks steel plates	
	overland scour pipe setup wire saws	
	 plate compactors shotcreting equipment 	
	 compactor rammer road milling machine and/or posi track. 	
Proposal timing	The majority of work and deliveries will be scheduled to occur during standard daytime hours:	
	7am to 6pm, Monday to Friday	
	8am to 1pm, Saturdays.	
	Some works will be required outside of these hours for the following reasons:	
	work at all sites, to allow for continuation of construction activities during peak dry weather flows (PDWF) as per the Flow Isolation and Flow Management (FIFM) approval, and to avoid potential delays in construction from wet weather, for a maximum of 2 weeks at any one site	
	delivery of plant and equipment for public safety and to reduce traffic impact, as per the TfNSW oversize and/or overmass (OSOM) vehicles and loads regulations and guidelines	
	dewatering equipment such as pumps and generators to manage water ingress into the work area.	
	Impacts associated with the construction working hours have been assessed and mitigation measures are provided in Section 5 .	
	Stage 4B, Stage 5A and Stage 5B are expected to take 3-6 months to complete. Enabling works, which includes the construction of the access ramps, will be complete for Stage 5A and Stage 5B first. Then, the relining of Stage 5B will be complete, then Stage 5A, then Stage 4B. Lastly, the scour pit chamber at Site 2 will be constructed, then the air valve at Site 1 will be constructed.	
	All sites will then be restored to their pre-existing condition or better.	

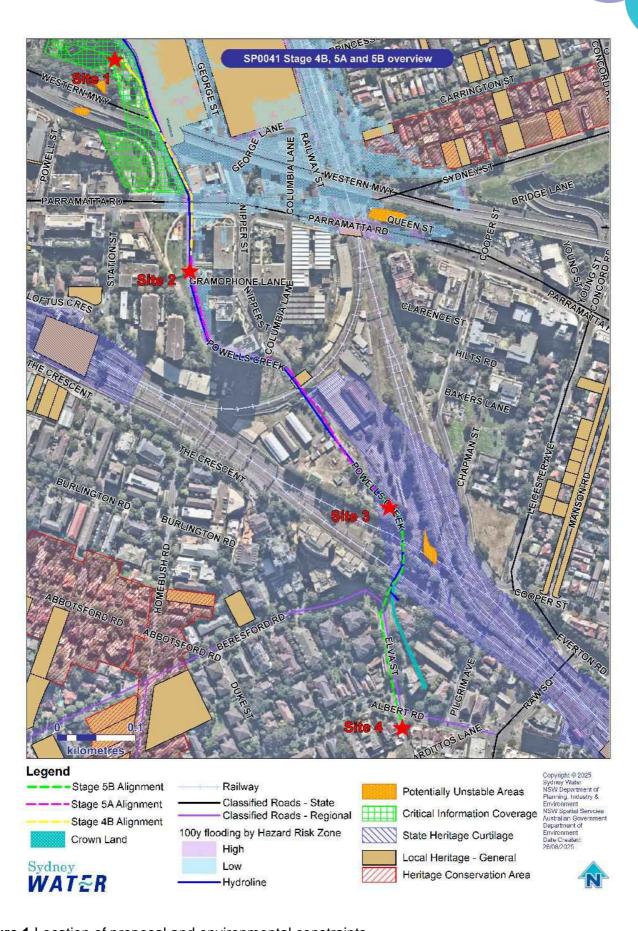


Figure 1 Location of proposal and environmental constraints.



Figure 2 Site 1 layout.

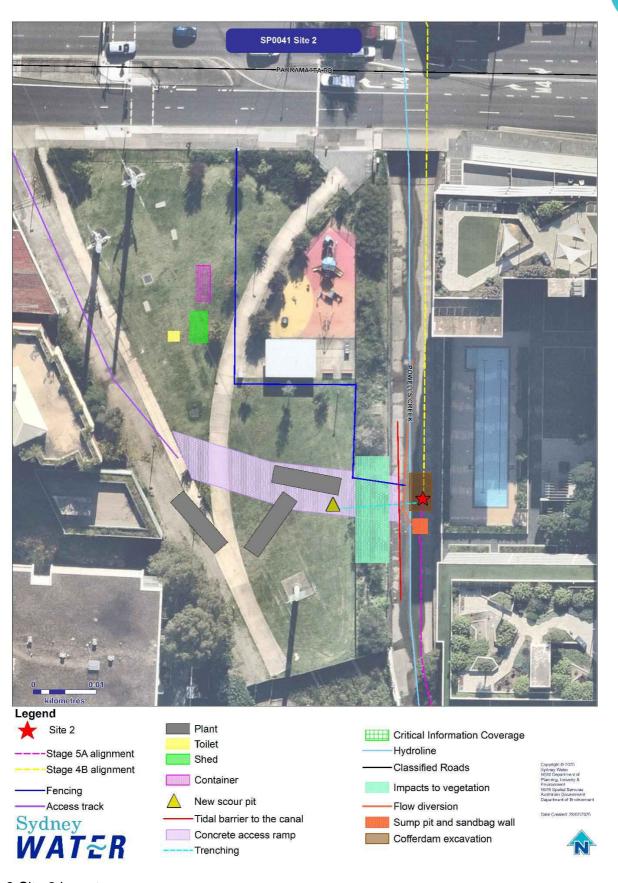


Figure 3 Site 2 layout.

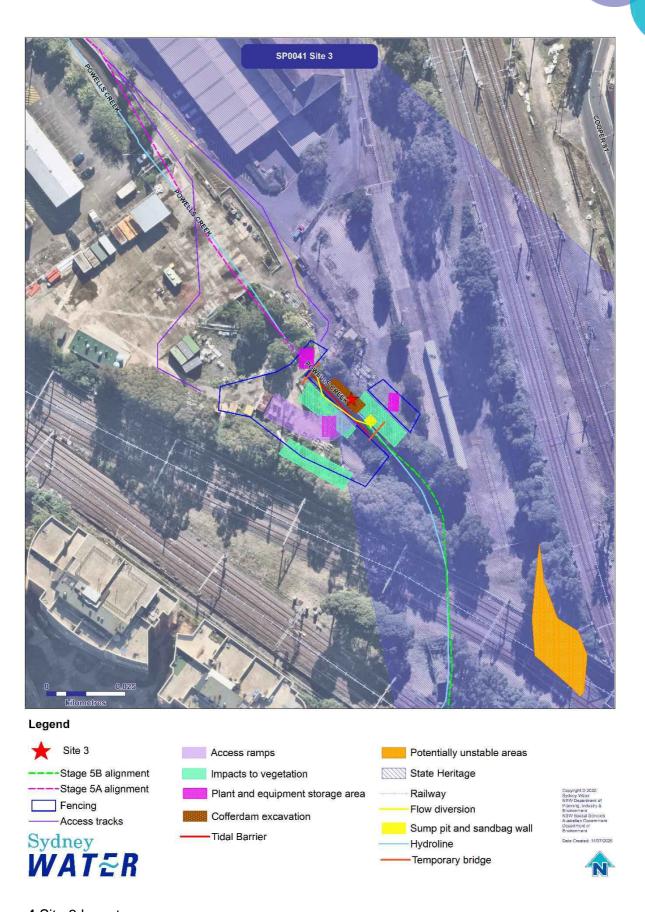


Figure 4 Site 3 layout.



Figure 5 Site 4 layout.



3 Consultation

Community and stakeholder consultation

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

Strathfield Council and TfNSW have been notified of the proposal and Sydney Water have been liaising with them on these packages of works since 2024. Feedback from Council and TfNSW regarding the Stage 4B, Stage 5A and Stage 5B works have been incorporated into the site layouts and methodology.

Landowners consent was requested via email on 29 July 2025. Confirmation of consent must be obtained before proceeding with works on TAHE land at Site 3.

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). No formal consultation was required under the TISEPP as works are considered minor or inconsequential, the majority of the works will be undertaken with only minor, short term and temporary works within reserves, canals or a local road, that will be restored to their previous condition. The contractor should notify council of works and determine any traffic management and restoration requirements. Further details are provided in **Appendix B**.

4 Legislative requirements

There are 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
State Environmental Planning Policy (Resilience and Hazards) 2021	Chapter 4 (Remediation of Land) The remediation (clean-up) of land triggers Chapter 4 of this State Environmental Planning Policy (SEPP). Section 4.6 requires that a consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated, and if the land is contaminated, the level of remediation needed to allow the proposed development to be carried out.
	Under section 4.11(b)(ii), remediation work that "may be carried out without consent under another State Environmental Planning Policy or a Regional Environmental Plan" is Category 2 remediation work. As outlined above, this work is permissible under TISEPP. The proposal is permissible without consent under the TISEPP, therefore if remediation is required it would be classified as Category 2 remediation work, and development consent for remediation under SEPP 55 would not be required.

Review of Environmental Factors Multi-program Category B | SP0041 rising main relining, Stage 4B, Stage 5A Page 11 and Stage 5B, Homebush, Strathfield and North Strathfield.



Legislation	Additional considerations
	In accordance with section 4.13, 4.14, and 4.15, we will consult with the relevant council prior to and on completion of remediation work undertaken as part of the proposal.
	Under section 4.13(2)(b), we are required to notify council no later than the day before the commencement of remediation work.
	Under section 4.14(3), a notice of completion of remediation will be provided to council within 30 days of completion.
Heritage Act 1977	The proposal is located within the curtilage of a heritage item listed on the NSW State Heritage Register, and therefore approval under the <i>Heritage Act</i> 1977 is required.
	This proposal has been assessed against the specified activities and relevant standards of the Standard, State-Agency and Site-specific Exemptions issued under Section 57(2) of the <i>Heritage Act 1977</i> (Government Gazette No. 262, 17 June 2022) and has been found to meet the requirements for the following Standard Exemption:
	Standard Exemption 3: Alteration to Non-Significant Fabric
	The assessment confirmed that the proposed works within the curtilage of Strathfield Railway Station Group will not have an adverse impact on the significance of the heritage item and will comply with the relevant standards and specified activities of Standard Exemption No.3. The works are therefore permissible without approval under Section 57(2) of the <i>Heritage Act 1977</i> .
	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 the assessment (Appendix C). The assessment in Appendix C meets the requirements for record keeping under Condition 10.

5 Additional environmental impacts and mitigation measures

Table 3 and **Table 4** 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 3 Environmental impacts table

Aspect	Additional impacts	Additional mitigation measures
Topography, geology and soils	All sites are mapped as Class 5 Acid Sulfate Soils (ASS), meaning they are located within 500 metres of areas where ASS is likely to be found.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).

Review of Environmental Factors Multi-program Category B | SP0041 rising main relining, Stage 4B, Stage 5A Page 12 and Stage 5B, Homebush, Strathfield and North Strathfield.

Aspect Additional impacts Additional mitigation measures

Site 1 is on land mapped as 'Critical Information Coverage' on MapInfo as it is a contaminated site (see **Figure 2**). The corresponding *Environmental Management Plan, Ismay Reserve Homebush NSW, January 2020, Ramboll Australia Pty Ltd* (EMP, 2020) (**Appendix D**) applies indefinitely to this land. The requirements of the EMP apply to activities on this land which could involve:

- disturbance or exposure of contaminants in soil beneath the marker and/or physical barrier, or
- partial removal of the barrier, including 'underground utility installation, maintenance or removal' or excavation.

Site 1 lies within Area C in the EMP, 2020. Previous investigations within Area C have identified fill material impacted by asbestos, Polynuclear Aromatic Hydrocarbon (PAHs) and lead. Some remediation has been undertaken within Area C, although this was undertaken at shallow depths, so contaminated material could still be encountered at Site 1.

Therefore, the EMP, 2020 should be applied to works at Site 1. The work site will be restored to existing levels using approved methods defined in the EMP, 2020.

The approximate sizes of the excavations are outlined below:

- **Site 1:** 2.5 metres deep x 7.0 metres long x 2.5 metres wide
- **Site 2:** 2.75 metres deep x 7.0 metres long x 2.5 metres wide
- **Site 3:** 2.75 metres deep x 5.0 metres long x 2.5 metres wide.
- **Site 4:** 2.5 metres deep x 5.0 metres long x 2.5 metres wide.

A Waste Classification and Virgin Excavated Natural Material Report was prepared by Alliance Geotechnical Pty Ltd (20 January 2025) (Alliance Report, 2025) (Appendix E) for Delivering for Customers (D4C). The investigations included sampling of boreholes:

 BH4-01 and BH4-02, corresponding to Site 1 of this proposal

In addition:

- Perform works at Site 1 in accordance with the framework set out in the Environmental Management Plan, Ismay Reserve Homebush NSW, January 2020, Ramboll Australia Pty Ltd (Appendix D).
 - A construction Contamination Management Plan must be prepared by a suitably qualified person as part of the CEMP and reviewed by Sydney Water's Environmental Representative in consultation with Sydney Water's Contamination and Hazardous Material Team. The plan must identify the type and location of known/potential contamination, landowner notification, management requirements (waste minimisation, waste segregation and classification) and reuse, offsite recycling and/or disposal measures.
- Perform works at all sites in accordance with the recommendations set out in Waste Classification and Virgin Excavated Natural Material Report

Aspect	Additional impacts	Additional mitigation measures
	 BH6-01 and BH6-02, sampled 5 metres away from the canal at Site 2 of this proposal BH9-01 and BH9-02, corresponding to Site 3 of this proposal 	prepared by Alliance Geotechnical Pty Ltd (20 January 2025) (Alliance Report, 2025)
	this proposal. The Stage 1 works were undertaken at Site 4 on Elva Street, and therefore, the backfill material is known. No evidence of staining, odours or visual evidence of potential asbestos containing material (PACM) was present in the samples collected by Alliance Geotechnical Pty Ltd (Site 1, Site 2 and Site 3). The material classification for all sites are as follows: Site 1 – BH4-01 and BH4-02:	 (Appendix E). Consult with Strathfield Council prior to and on completion of remediation work undertaken at Site 1, in accordance with Chapter 4 of the State Environmental Planning
	 Fill – Restricted Solid Waste – 0.0 to 2.2 metres bgl. 	Policy (Resilience and Hazards) 2021.
	 Site 2 - BH6-01, BH6-02: Fill – General Solids Waste (non-putrescible) – 0.0 to 2.5 metres bgl Natural – Virgin Excavated Natural Material (VENM) – 2.5 to 2.8 metres bgl. Site 3 - BH9-01 and BH9-02: Fill – General Solids Waste (non-putrescible) – 0.0 	Notify Strathfield Council no later than the day before the commencement of remediation work at Site 1 in accordance with Chapter 4 of the State Environmental Planning Policy (Resilience and)
to 2.1 metres bgl. Site 4: General Solids Waste and VENM, based on knowledge of backfill from Stage 1 works. to 2.1 metres bgl. Prov. Cou. com knowledge of backfill from Stage 1 works. tags rem. 1, in Cha Env. Police	 Hazards) 2021. Provide Strathfield Council with a notice of completion of remediation within 30 days of completion of remediation work at Site 1, in accordance with Chapter 4 of the State Environmental Planning Policy (Resilience and Hazards) 2021. 	
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Water and drainage

The proposal is near and within Powells Creek, a concrete lined stormwater canal (see **Figure 1**). 800 metres of the rising main to be relined is underneath Powells Creek. Powells Creek is located:

- 15 m east of Site 1
- within Site 2
- within Site 3

Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).

In addition:

 Sydney Water will obtain a groundwater Water Supply Works



155 m north of Site 4.

In addition, Site 1 and Site 2 are located in the 1 in 100 year flood level (see **Figure 1**).

Construction impacts - Surface water and flooding

During construction, activities including excavation, vegetation trimming and removal, trenching, demolition of a canal wall, shotcreting, concreting, storage of fuels and chemicals and temporary stockpiling, have the potential to produce sediment that could impact the water quality of Powells Creek.

Trenching will be required within the canal, including for the installation of a cofferdam at Site 2 and Site 3 within Powells Creek. The potential impacts of the cofferdam will be temporary and minor. The cofferdam will be designed in consultation with Sydney Water's Stormwater and FIFM team, Integrated Planning South team (within Water and Environment Services) and others, to ensure risks of inundation and flooding are minimised and appropriately managed.

The flow within Powells Creek will be diverted around the construction area via a channel and will remain in Powells Creek during works. This channel will accommodate some of the increased flows expected during wet weather events. If the flow within Powells Creek exceeds the capacity of the diversion channel, there is the risk of overtopping into the coffer dam. Site specific construction details are provided below:

- at Site 2, it was found that all diversion widths created an impact to flood levels in Gramophone Lane in a 5% Annual Exceedance Probability (AEP) (20 year flood) event. Therefore, a flow diversion width of 4.7 metre is deemed the most suitable option. This would result in an 84mm increase in water level in Gramophone Lane, and would not cause flooding to the existing residential building, nor the garage of the block
- at Site 3, it was found that all diversion widths created impacts which were acceptable and confined to the upstream channel area, at a 5% AEP. Therefore, a flow diversion width of 4.3 metre is deemed the most suitable option. This would result in a 53mm increase in water level upstream.

Approval. The Contractor is responsible for:

- preparing a
 Dewatering
 Management Plan
- complying with the conditions of the above approvals (such as protecting water quality, minimising aquifer extraction volumes, monitoring extraction with flow meters and recording volumes).
- Dewater excavations in accordance with the Program Delivery Guidance Standard 9.1 Excavation Dewatering (ENV-GS-001).
- Minimise groundwater ingress during detailed design. As part of the CEMP, prepare a Dewatering Management Plan for groundwater dewatering. This should include elements such as how water quality will be protected and how extraction volumes will be monitored.
- Minimise the impacts to creeks where creek crossings are required:
 - geotechnical and constructability issues (e.g. depth

Aspect Additional impacts Additional mitigation measures

No surface water will be taken for use or discharged to the surrounding environment.

A water management plan and a dewatering management plan will be developed for implementation during construction.

During periods of high rainfall, there is the risk that higher water levels in Powells Creek may impact active construction areas. Flooding has the potential to increase soil erosion and siltation from the construction site and poses a risk to personnel working within Powells Creek. Pollutants such as sediment, soil nutrients, construction waste, chemicals and gross pollutants have the potential to enter drainage lines and creek systems, particularly during high rain events. This could result in a reduction in water quality.

Spillage of fuel during refuelling, leakage of hydraulic and lubricating oil from plant and equipment and concrete slurries will have the potential to enter drainage lines and Powells Creek. This could result in a decline of water quality. Control of construction water run-off will therefore be necessary to avoid these potential impacts to surrounding waterways.

Construction impacts - Groundwater

Given the investigations completed to date, it's expected that groundwater will be encountered during the proposal. Therefore, a Water Supply Work Approval (WSWA) for the temporary dewatering of groundwater will be required. Groundwater impacts will be managed through the implementation of mitigation measures outlined in this REF, the Multi-program REF (2023) and the conditions within the approved WSWA.

The proposed dewatering locations do not contain groundwater dependent ecosystems or riparian vegetation. As the proposed works only involve minor vegetation trimming and removal, and the proposed dewatering volume is minimal, the potential impacts of the groundwater dewatering is minimal.

Commissioning

Once SP0041 PM1 is relined, the main will undergo hydrostatic testing, which involves filling the main with water from a hydrant or water cart up to a certain pressure. Once the testing is complete, the water will then be discharged in accordance with Sydney Water's Water

of cover, potential for future scouring)

- construction footprint and duration
- ease of reinstatement
- environmental issues (flora and fauna, geomorphology, contamination, heritage, water quality and hydrology)
- prepare a water management plan prior to construction commencing.
- Design cofferdam in consultation with Sydney Water's Stormwater and Flow Isolation and Flow Management (FIFM) team, Systems and Asset Planning team (within Water and Environment Services) and others, to ensure risks of inundation and flooding are minimised and appropriately managed.
- Groundwater quality should be tested to ensure it meets appropriate standards for discharge to the environment.
- Discharge all water in accordance with Sydney Water's Water



Aspect	Additional impacts	Additional mitigation measures
	Quality Management During Operational Activities Policy (D0001667).	Quality Management During Operational
	Operational impacts	Activities Policy (D0001667) including
	During operation, the proposal would likely improve the water quality by minimising the risk of wastewater entering drainage lines and Powells Creek.	erosion controls, discharge rate, dichlorination and monitoring. Re-use potable / groundwater water where possible.
	Flood maps show that Site 1 and Site 2 are located in the 1 in 100 year flood level (see Figure 1). The proposal will not affect flood behaviour during operation as there are no permanent changes to surface topography and drainage patterns.	
Flora and fauna	The Grey-headed Flying-fox is mapped in seven locations within 500 metres the proposal, including:	Manage potential impacts in accordance with mitigation
	 290 metres east of Site 1 	measures in the Multi-program REF (May 2023).
	365 metres west of Site 1	(
	 500 metres east of Site 2 	
	 490 metres east of Site 3 	
	 375 metres south-west of Site 3 	
	 410 metres south-east of Site 3 	
	 430 metres south-west of Site 4. 	
	Grey-headed Flying foxes are listed as Vulnerable under both the <i>Biodiversity Conservation Act 2016</i> and <i>Environment Protection and Biodiversity Conservation Act 1999</i> . While night works are proposed, there would be minimal disruption to the feeding behaviour of the bats, as there are no known Flying-fox camps within 100 metres of the proposal. Given the existing noise environment during the daytime from commercial premises and passing traffic, daytime construction works are also unlikely to impact any bats if present within in the surrounding area.	
	There are no other fauna species mapped within 500 metres of the proposal.	
	There is one flora species mapped within 500 metres of the proposal:	
	 Narrow-leaved Black Peppermint (Eucalyptus nicholii) (Vulnerable in NSW and Commonwealth) 200 metres north-east of Site 2. 	

Aspect	Additional impacts	Additional mitigation measures
	The proposal will not impact this Narrow-leaved Black Peppermint tree.	
	There are no native vegetation communities mapped within or adjacent to the proposal.	
	The proposal requires vegetation trimming and removal at Site 1, Site 2 and Site 3 (see Figure 2 , Figure 3 and Figure 4), as described below:	
	Site 1: some fig trees located along a 35 metre stretch of the pathway between within Ismay Reserve will need to be trimmed (up to 4.3 m high) to allow for safe access of vehicles and plant to sites. Strathfield Council endorsed this approach in person, then via email on 28 October 2024. The vegetation trimming at this site has been assessed and approved under the Stage 2 and Stage 4A approval	
	Site 2: low-lying vegetation is proposed to be removed to provide access for personnel, plant and equipment to the site. No trees will be removed. Strathfield Council endorsed this approach via email on 28 October 2024	
	 Site 3: vegetation is proposed to be removed within TfNSW land to provide access for personnel, plant and equipment to the site. An Arborist (Gecko Maintenance) attended site on 12th March 2025 and noted the following: 	
	- the depot area is covered predominantly in weed species	
	 trimming/removal of native species is not required to provide access to the site. 	
	D4C have been consulting with TfNSW regarding the works, including vegetation trimming and removal on TfNSW land. TfNSW's Acting Regional Maintenance Manager North West provided approval for the scope of works, which includes vegetation trimming and removal, via email on 24 July 2025.	
	Impacts to flora and fauna can be mitigated by the measures in this REF and the Multi-program REF (May 2023).	
Aboriginal	A basic search of the Aboriginal Heritage Information	Manage potential impacts in

accordance with mitigation

REF (May 2023).

measures in the Multi-program

Management System (AHIMS) register on 19 June 2025

did not identify any AHIMS sites within 200 metres of the

proposal. The proposal is located within a previously

Heritage

Aspect	Additional impacts	Additional mitigation measures
	disturbed area and impacts to Aboriginal Heritage during construction and operation are not anticipated.	
Non-Aboriginal Heritage	Six locally listed heritage items are within 200 metres of the proposal (see Figure 1), and include: • I541 – Bakehouse Quarter (about 22 metres east of Site 1). Listed in Canada Bay Local Environmental Plan (LEP) 2013 • I31 – Former Homebush Theatre (about 200)	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023). In addition: • Perform works at Site
	metres west of asset being relined). Listed in 3 in acco	3 in accordance with the recommendations in set out in the
	 I32 – Horse & Jockey Hotel (about 200 metres west of asset being relined). Listed in Strathfield LEP 2012 	Section 57 Exemption Record (Appendix C)
	 I40 – Homebush Railway Station (about 135 metres west of asset being relined). Listed in Strathfield LEP 2012 	 Perform works at Site 3 in accordance with the Specified Activities and Relevant
	 C10 – Churchill Avenue Conservation Area, Strathfield- Federation Houses Group (about 65 metres south of Site 4). Listed in Strathfield LEP 2012 	Standards of Standard Exemption No. 3 issued under Section 57(2) of the <i>Heritage</i>
	 I119 – "Wychwood" - Federation house (about 125 metres south of Site 4). Listed in Strathfield LEP 2012. 	Act 1977 (Government Gazette No. 262, 17 June 2022), located here:
	No works will occur within the curtilage of the above properties. Potential impacts resulting from vibratory activities are addressed in the <i>Noise and vibration</i> section of this REF.	https://gazette.nsw.go v.au/gazette/2022/6/20 22-262.pdf
	Three State heritage listed items are within 200 metres of the proposal (see Figure 1 and Figure 3) and include:	
	 01170 – Homebush Railway Station group (about 90 metres west of asset being relined) 	
	 01055 – Strathfield rail underbridges (flyover) (about 35 metres east of asset being relined) 	
	 01252 – Strathfield Railway Station group (Site 3 is within this curtilage). 	
	Works will occur outside the curtilage of 01170 and 01055. Due to the distance of the works from each item and the minor excavation needed for the proposal, no impacts to these State heritage items are expected.	

Aspect	Additional impacts	Additional mitigation measures
	However, the proposed works at Site 3 are within the state heritage curtilage of Strathfield Railway Station group , which is listed on the NSW Heritage Register as Item #01252 , and comprises the Railway Station, brick flyovers, Signal Box and former Substation. The current Statement of Significance for the heritage item is included in Appendix C .	
	An assessment was undertaken by Sydney Water's Heritage Advisor (see Appendix C) and concluded that the proposed works located within the curtilage of the Strathfield Railway Station group will not have an adverse impact on the significance of the heritage item and will comply with the relevant standards and specified activities of Standard Exemption No. 3 – Alteration to Non-Significant Fabric . The works are therefore permissible without approval under Section 57(2) of the <i>Heritage Act</i> 1977.	
	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 Appendix C .	
Noise and	Naine	Managa patantial impagta in

Noise and vibration

Noise

The likelihood of noise impact from the proposal was reviewed against risk factors (based on Table 2 of the EPA's 2020 Draft Construction Noise Guideline). The review indicated that the construction noise impact would be medium-high risk and therefore a quantitative noise impact assessment was undertaken.

The Transport for NSW (TfNSW) Construction and Maintenance noise estimator tool (TfNSW, 2022) was used for the assessment. Refer to **Appendix F** for the detailed assessment.

The purpose of the noise assessment is to assess the predicted worst-case noise impacts to surrounding receivers. Quantifying these impacts will assist in identifying how many receivers may be impacted at different times and during different activities. Where receivers are predicted to experience noise impacts, recommended mitigation measures at different noise impact levels have been identified, which will guide the community engagement for the sites.

Existing environment

The proposal is located across four locations across a mix of land use zones including SP2 Infrastructure, R3

Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).

In addition:

- The contractor is to consider the relevant additional noise mitigation measures from the Transport for NSW Noise Estimator Tool and offer where appropriate, as detailed in Appendix
 F. This includes:
 - Notifications
 - Specific notifications
 - Phone calls
 - Respite offers
 - Respite periods

Review of Environmental Factors Multi-program Category B | SP0041 rising main relining, Stage 4B, Stage 5A Page 20 and Stage 5B, Homebush, Strathfield and North Strathfield.



Medium Density Residential and RE1 Public Recreation, and is adjacent to MU1 Mixed Use area.

The closest residential receiver is located <5 metres from the proposal. Other sensitive receivers near the sites include a playground, places of worship, residential receivers (including a strata block) and an aged care centre. The existing noise environment is influenced by traffic noise from the Western Motorway and Parramatta Road, as well as noise from commercial activities and railway lines.

Construction noise impacts

- Dewatering at Site 1, Site 3 and Site 4 requires the use of generators during out of hours.
- Night works will include concrete sawing, cleaning and closed circuit television (CCTV) of the rising main, use of a vacuum truck and pressure testing of the main.
- There will be occasional out of hours deliveries.
- Construction will be at static locations along the alignment, with no more than 2 weeks of night work at each of these locations.
- Sensitive receivers are near work sites.

Work will be required up to 5 nights a week for a maximum 2 weeks at each site, pending weather, ROLs, community engagement outcomes, and any other unforeseen events.

Overall, construction will take about 3 to 6 months to complete.

Operational noise impacts

There will be no net increase to noise levels during the operation of PM1 once relining has been complete and the asset is recommissioned.

Assessment inputs

Given the distance and capacity of surrounding roads, the four sites were classified as R3 Noise Area category. The assumed background noise baselines and noise management levels are outlined below:

- Duration Respite
- Community engagement will commence before work starts, with notification to impacted residents and businesses within the zone of influence. Consultation will include number of night shifts per week and mitigation measures to be adopted. Community preference will determine if shifts can extend to more than 2 night shifts per week and the appropriate respite periods.
- Ongoing engagement will continue with residents throughout the project. For sensitive receivers / highly impacted residents, regular follow-up will be done (i.e. one-on-one meetings, emails, texts, phone discussions).
- Regular project update newsletters will be sent to the surrounding community and emailed to key stakeholders including Local Council.
- Residents will be notified of any night work at least seven

Aspect Additional impacts

Additional mitigation measures

R3 Noise Area category	RBL or L _{A90} Background Level (dB(A))	L _{Aeq (15 minute)} Noise Management Level (dB(A))
Day	50	60
Evening	45	50
Night	40	45

As the equipment proposed did not match the default activity scenarios from the tool, the Distance Based Assessment – Noisiest Plant option was selected to capture the worst-case scenario for the proposed work.

The 'Concrete Saw' was selected to represent the noisiest plant that will be used during construction.

The tool was run twice to capture the noise impacts from the proposal on both 'line of sight' (LOS) and 'no line of sight' (NLOS) receivers. LOS represents receivers with a clear line of sight from the construction work and NLOS represents receivers beyond those directly adjacent to the proposal.

Assessment outputs

Results from the assessment are summarised below:

- Residents with LOS within 60 m are predicted to experience noise levels of 30dB(A) or greater during night work (see Figure 6 of this REF and Figure 8 and Table 11 of Appendix F).
- Residents with NLOS within 25 m are predicted to experience noise levels of 30dB(A) or greater during night work (see Figure 6 of this REF and Figure 8 and Table 15 of Appendix F).
- Noise impacts are predicted for non-residential receivers with LOS up to 60 m of the proposal during night work (see Figure 7 of this REF and Figure 3 and Table 4 of Appendix F).
- Noise impacts are predicted for non-residential receivers with NLOS up to 25 m of the proposal during night work (see Figure 8 of this REF and Figure 4 and Table 7 of Appendix F).
- The noisiest activity is the use of a Concrete Saw at night, which will be required for saw cutting.
- Appropriate mitigation measures have been identified to reduce the risk of construction noise impacts.
- These predicted noise impacts represent a conservative approach, as they assume use of the Concrete Saw every shift.

- days' in advance of work starting.
- A Community
 Engagement Advisor has been assigned to the project. All consultation with community and stakeholders will be recorded on Sydney Water's Consultation Manager database.
- 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.
- Increase of site presence and inspections occurring to ensure proactive management of site issues. A toolbox talk will be held in advance of work starting to induct all site crew members on the requirements of the REF and CEMP.
- Noise barriers may be implemented across sites, if determined

Aspect Additional impacts Additional mitigation measures

Vibration

The use of vibration intensive equipment during construction is proposed and includes:

- 18-34 tonne excavator
- 7-13 tonne vibratory roller
- vibratory pile driver
- hand-held jack-hammer.

All sites are within the minimum working distance to prevent cosmetic damage to structures. This is demonstrated in **Appendix F**. Additional mitigation measures will minimise the impacts of construction vibration to the nearby receivers.

reasonable and feasible.

- For high impact noise affected residents, identified during community engagement consultation, the following provisions may apply:
 - earplugs for night work
 - vouchers/gift cards to allow respite away from the property
- Noisy/annoying works will be scheduled to occur before 12am, and equipment will be used intermittently.
 Less noisy works will be scheduled from 12am to 7am.
- Conduct a dilapidation survey / asset condition assessment prior to works which have potential to damage existing structures.
- Prior to construction,
 D4C will engage
 appropriately qualified
 engineers to complete
 a detailed analysis of
 all sites to derive
 alternative cosmetic
 damage objectives
 and minimum working
 distances across these
 sites (based on
 frequency dependent
 guideline vibration
 levels in BS 7385:2-

Aspect Additional impacts Additional mitigation measures

1993 and DIN 4150-3:2016. This may determine additional site-specific measures to manage potential vibration impacts at these sites.

- Monitor compliance of Site 1, Site 2, Site 3 and Site 4 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.
- Develop and implement a construction noise and vibration management plan, incorporating the measures detailed in this Category B REF and the Multi-program REF (May 2023).

Air and energy

Residents may be temporarily impacted by odour and dust emissions from the excavation, trenching, cutting and cleaning of the rising main.

Excavation activities required for the establishment of the temporary ramp is expected to take about 4 weeks to complete at each site (Site 2 and Site 3 only). Excavation activities required to expose the rising main are expected to take 2 weeks to complete at each site. In addition, excavation activities include:

 air valve construction at Site 1, which has been assessed and approved under the Stage 2 and Stage 4A approval Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).

In addition:

 Manage potential odour impacts from cutting and cleaning of the rising main at each of the sites by forced ventilation (fans).

Aspect	Additional impacts	Additional mitigation measures
	 scour pit construction at Site 2 is expected to take about 3-4 weeks to complete 	
	 required to connect the relief pipe to a nearby drain/pit at Site 4 will take less than 1 week to complete. 	
	The potential dust emissions from these activities can be adequately managed in accordance with mitigation measures in the Multi-program REF (May 2023).	
	The potential odour emissions from the cutting open and cleaning of the rising main at all sites will be managed by forced ventilation (fans).	
	Operational air quality and odour impacts are not expected.	
Waste and hazardous materials	Site 1 is on land mapped as 'Critical Information Coverage' on MapInfo as it is a contaminated site (see Figure 2). The implications of this, including waste management, are covered under the <i>Topography, Geology and Soils</i> section of this report.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).
	The proposal is expected to generate waste in the form of green waste, contaminated spoil, debris and construction waste. Waste should be managed in accordance with the Waste Classification Guidelines, EMP, 2020 and Alliance Report. Where materials are not suitable for re-use onsite or offsite, materials should be disposed of at an appropriately licenced facility.	
Traffic and access	Parking along Allen Street and Elva Street, private access tracks within TfNSW land, pedestrian access along the footpath off Powell Street and within Ismay reserve will all be temporarily impacted by the proposal. A portion of Elva Street (between Albert Road and Arditos Lane) will be closed for the duration of the works at Site 4. Traffic Control will implement a detour to divert the traffic around this site.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).
		In addition: • Consult with residents and stakeholders prior
	During work hours, Traffic Control will manage the access along impacted roads and paths, and to and from private properties where their driveways are temporarily blocked by construction supply trucks. At the end of each shift, the	to the commencement of the works regarding the impacts to their property access.
	access to the driveway will be returned in full to the residents.	 Landowners consent was requested via email on 29 July 2025.
	Residents and stakeholders will be consulted prior to the commencement of the works regarding the impacts to their property access.	Confirmation of consent must be obtained before proceeding with

Aspect	Additional impacts	Additional mitigation measures	
	Landowners consent must be obtained before works can proceed on Transport Asset Holding Entity (TAHE) land at Site 3.	works on Transport Asset Holding Entity (TAHE) land at Site 3.	
Social and visual	Social impacts relating to noise, vibration, odour, traffic and parking are assessed above. Visual impacts from the proposal could be caused by the presence of plant and equipment, increased number of vehicles, tree trimming and fencing during construction. Following construction, there may be a temporary visual change in the surfaces that are restored. Following the implementation of the mitigation measures, the social and visual impacts are expected to be minor and temporary.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023). In addition: Inform the nearby receivers of the works, including the expected duration of the works and a site contact name and phone number. Install signage on fencing informing the community of the works, the expected duration of the works and a site contact name and phone number. Schedule deliveries outside of peak hour to minimise local traffic impacts.	
Cumulative and future trends	The sequencing of the stages of work across the program may cause a minor increase in the impacts to residential receivers. However, given the small scale and short-term nature of the proposal, potential impacts during construction would be minor and localised, and unlikely to make a significant contribution to any cumulative environmental impact on a local or regional scale.	Manage potential impacts in accordance with mitigation measures in the Multi-program REF (May 2023).	



Table 4 Environmental mitigation measures

General

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

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

The 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.

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.



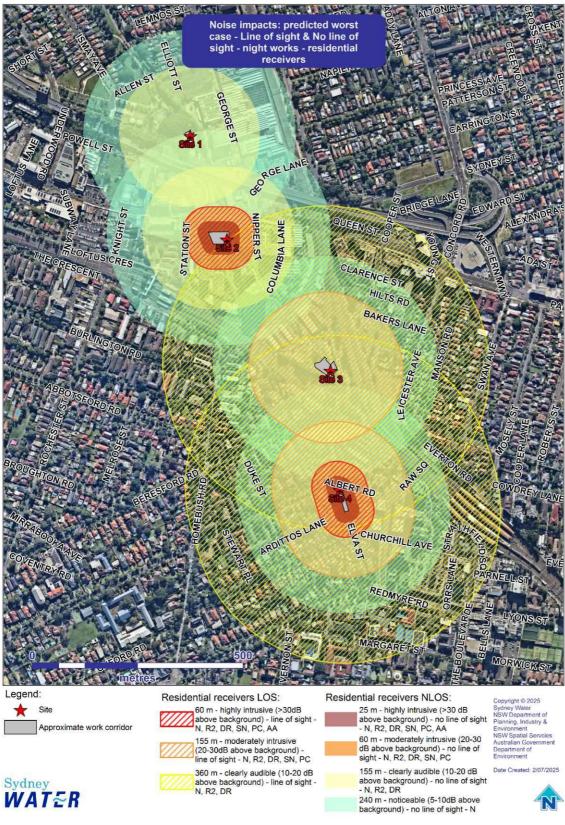


Figure 6 The predicted worst-case scenario of noise impacts during night works to residential receivers, with LOS and NLOS. Mitigation measures for each of these impact levels are included in the legend.



Figure 7 The predicted worst-case scenario of noise impacts during night works to non-residential receivers, with LOS. Mitigation measures for each of these impact levels are included in the legend.





Figure 8 The predicted worst-case scenario of noise impacts during night works to non-residential receivers, with NLOS. Mitigation measures for each of these impact levels are included in the legend.



6 Conclusion

This Category B REF outlines potential environmental impacts associated with vegetation trimming and removal, disturbance to contaminated soils, traffic and access and noise for the Stage 4B, 5A and 5B packages of works. These packages form a part of the SP0041 rising main relining program across Homebush, Strathfield and North Strathfield. 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

There are no requirements in addition to those considered in the Multi-program REF.



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?		Х			
Be likely to generate traffic that will strain the capacity of the road system in the LGA?		Х			
Connect to, and have a substantial impact on, the capacity of a council owned sewerage system?		Х			
Connect to, and use a substantial volume of water from a council owned water supply system?		Х			
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?		Х			
Excavate a road, or a footpath adjacent to a road, for which the council is the roads authority, that is not minor or inconsequential?		Х			
Section 2.11, local heritage – consultation with council		1			
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?		Х			
Section 2.12, flood liable land – consultation with council		T			
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?		Х			
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)?		X			
Section 2.14, development with impacts on certain land within the coastal zone– council const	ıltation				
Is the work on land mapped as coastal vulnerability area and inconsistent with a certified coastal management program?		Х			
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).		Х			
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>		Х			
Will the proposal include a fixed or floating structure in or over navigable waters? If so, consult TfNSW.		Х			
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.		Х			
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.		Х			
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).		Х			



Appendix C – Standard Heritage Exemption



Appendix D – Environmental Management Plan, 2020



Appendix E – Waste Classification and Virgin Excavated Natural Material Report, 2025



