Review of Environmental Factors Addendum

Yallah Marshall Mount Water and Wastewater Servicing – Gravity Main Realignment

Determination

This Review of Environmental Factors Addendum (REFA) assesses potential environmental impacts of the Yallah Marshall Mount Water and Wastewater Servicing – Gravity Main Realignment. The REFA was prepared under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), with Sydney Water both the proponent and determining authority.

The Sydney Water Project Manager is accountable for ensuring the proposal is carried out as described in this REFA and the Yallah Marshall Mount Water and Wastewater Servicing (May, 2024) (approved REF). Additional environmental impact assessment may be required if the scope of work or work methods described in this REFA change significantly following determination.

Certification

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

Prepared by:	Reviewed and endorsed by:	Endorsed by:
[redacted]	[redacted]	[redacted]
Hayley Scapin Environmental Scientist Sydney Water Date: 05/08/2025	Sarah Mitchell Senior Environmental Scientist Sydney Water Date: 12/08/2025	Piro Chandran Project Manager Sydney Water Date: 18/08/2025

Decision Statement

The main potential additional construction environmental impacts of the proposal change include impacts to Aboriginal heritage, hydrology and geomorphology. During operation, no additional impacts are expected. The proposal will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats. Therefore, a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR) is not required.

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

Determined by:		Murray Johnson Senior Manager Environment and Heritage Sydney Water Date: 22/08/2025

1. Proposal description

Table 1-1 Proposal need, objectives and consideration of alternatives

Aspect	Relevance to proposal
Approved REF	Yallah Marshall Mount Water and Wastewater Servicing (May, 2024). Yallah Marshall Mount Water and Wastewater Servicing – Wastewater Extension and Watermain Realignment (April, 2025) (approved REFA).
Proposal need and objectives	The West Lake Illawarra Growth Area is about 550 hectares in size and will require wastewater and drinking water services for about 30,000 residential and non-residential properties by 2048. The proposal will provide water and wastewater services to the Yallah Marshall Mount Precinct in the West Lake Illawarra Growth Area. It will manage the future service demand expected from about 4,000 new properties within this precinct.
Proposal change description and methodology	The proposal change includes the realignment of about 260 m of gravity main between maintenance hole (MH) J and MH L. The alignment would be shifted southeast of the approved corridor to avoid impacting a Moreton Bay Fig tree and to allow for the necessary groundcover required for microtunnelling. The proposal change would also include an extension to the construction corridor in Lot 5, DP 1280030. The gravity main would be installed at a depth of around 8 metres via microtunnelling (between MH J and MH K) and open cut trenching (between MH K and MH L). The section of alignment that crosses a tributary of Duck Creek would be open cut and concrete encased. It may require the use of a coffer dam and bypass if the ephemeral waterway is flowing at the time of construction. The impact area of the microtunnel launch and receival pit would be about 24 m x 21 m. This includes: • 8 m x 5 m pit • 4 m benching zone with a ratio of 1:1.5 • 2 m batter • fencing installed at 2 m from the edge of the top of the batter. Restoration of the construction area would be consistent with the approved REF. The tributary of Duck Creek would be reinstated with topsoil and endemic species. The proposal change is shown on Figure 1.
Justification for proposal change	Following detailed geotechnical investigations, microtunnelling under the tributary was deemed unfeasible due to insufficient clearance to the creek invert level. Several alternative design options were explored: • One option proposed installing the gravity main between MH J and MH L via open cut trenching across Duck Creek. [redacted]

Aspect	Relevance to proposal
	• Another option proposed open cut trenching and shifting the alignment southeast of the approved corridor, out to the edge of Marshall Mount Road. While this avoided the Moreton Bay Fig tree protection zone, consultation with Wollongong City Council revealed it would conflict with future development plans. As a result, the final design involves: • Installing the gravity main between MH J and MH K via microtunnelling, southeast of the approved corridor. • Installing the gravity main between MH K and MH L via open cut trenching. This approach [redacted] and preserves the health and structural integrity of the Moreton Bay Fig tree.
Location and land ownership	The proposal change is in the suburb of Marshall Mount in the Wollongong City Council local government area (LGA). The proposal change is located on Lot 5, DP 1280030 and the land is privately owned.
Site establishment and access tracks	Site establishment would include stripping and stockpiling topsoil. The topsoil would be reused for constructing bunds around the work area and during restoration. Any excess topsoil would be disposed of offsite at an appropriate licenced facility. No additional access roads are required for the proposal change.
Ancillary facilities (compounds)	An additional compound and laydown area to support construction of the proposal change would be located within the mapped construction corridor extension.
Work hours	Work and deliveries will be scheduled during standard daytime hours: • 7 am to 6 pm, Monday to Friday • 8 am to 1 pm, Saturdays. The proposal change is expected to require work outside these hours to enable continuous work, e.g. dewatering. Potential noise impacts can be managed in accordance with the mitigation measures in the approved REF.
Proposal timing	Construction is expected to start late 2025 and take about 5 months.

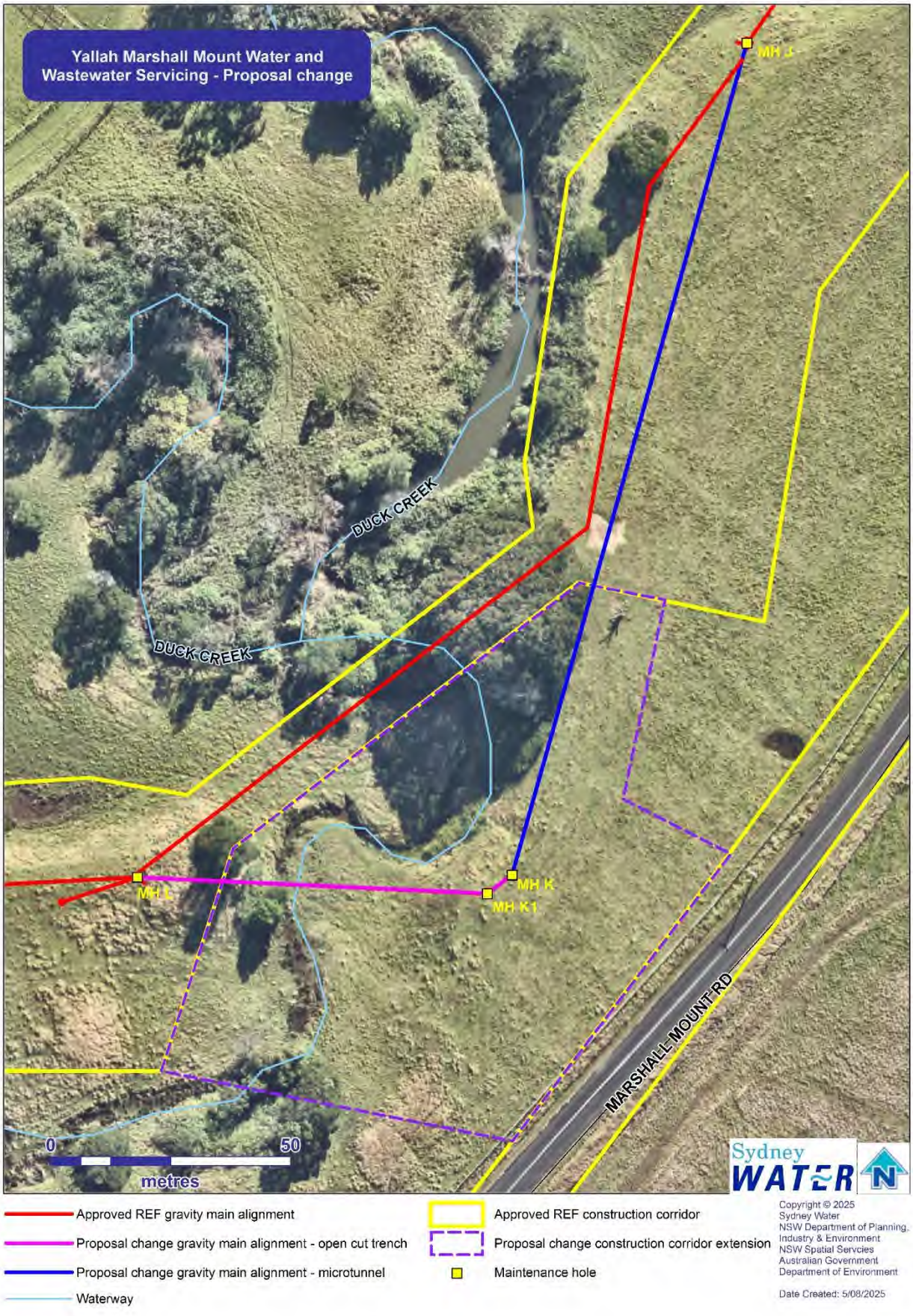


Figure 1 Proposal change - gravity main realignment and construction corridor extension

2. Consultation

Additional consultation matters above those already assessed in the approved REF are detailed below.

2.1 Community and stakeholder consultation – proposal

A summary of the additional consultation performed for the proposal change is shown in Table 2-1, including some consultation outcomes.

Stakeholder	Consultation Type	Queries	Outcomes
Wollongong City Council	• Regular meetings • Emails	• Interface between proposal change and future town centre. Sharing future town centre design drawings and land use zonings to inform design. • Sharing proposal change design drawings.	• Council feedback during early iteration of design noted gravity main is proposed in the middle of community centre. • Council feedback noted proposal change area is heavily constrained with limited flexibility in future town centre building locations. • Following review of design options, Council feedback noted support for one option to install gravity main around the Moreton Bay Fig tree and town centre via microtunnelling (between MH J and MH K) and open cut trenching (between MH K and MH L).
Impacted property owners including residential receivers	• Regular meetings • Emails • Notification letters	• Notification of investigation work to inform proposal change design and planning approval. • Sharing proposal change finalised design. • Temporary impacts to property including access, temporary fencing and movement of livestock.	• Impacted property owners to be kept informed during construction when progressing works through private property. • Impacted property owners to be provided ample notice prior to commencement of works in proposal change area to allow for movement of livestock. • Estimated construction timeframe of proposal change shared.
Registered Aboriginal Parties	Additional consultation was undertaken with Registered	Queries from the stakeholders about the archaeological	Responses have been provided to specific queries raised from these stakeholders.

	Aboriginal Parties. Consultation on the addendum ACHAR was completed by the heritage specialist, Kelleher Nightingale Consulting (KNC), with stakeholders provided a draft copy for review.	survey, test excavation methodology, [redacted] and salvage excavation methodology is detailed in Appendix C of the addendum ACHAR.

Sydney Water and/or the delivery contractor will continue to consult with stakeholders throughout pre-construction and construction of the proposal change.

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

No formal consultation was required under the TISEPP for the proposal change. Further detail is provided in Appendix C.

3. Legislative requirements

Additional legislative requirements above those already assessed in the approved REF are detailed in **Error! Reference source not found.**.

Table 3-1 Consideration of key environmental legislation

Legislation	Relevance to proposal	Permit or approval	Timing and responsibility
National Parks and Wildlife Act 1974 (NPW Act)	Following determination of the approved REF for the Yallah Marshall Mount Water and Wastewater Servicing project, AHIP [redacted] was granted on 5 November 2024. An addendum Aboriginal Cultural Heritage Assessment Report (ACHAR) was undertaken for the proposal change (Appendix D). Based on the results of the archaeological survey, text excavation and impact assessment, [redacted] a variation to AHIP [redacted] under section 90D of the NPW Act is required.	Variation to AHIP [redacted]	Pre-construction, Sydney Water
Water Act 1912/ Water Management Act 2000	A Water Supply Works Approval (WSWA) was obtained for the Yallah Marshall Mount Water and Wastewater Servicing project ([redacted]) from the Department of Climate Change, Energy, the Environment and Water (DCCEEW). Sydney Water is exempt from needing a Water Access Licence (WAL). A variation to the WSWA has been applied for to account for additional groundwater likely to be extracted during construction of the proposal change.	Variation to WSWA [redacted]	During or post REF if >3ML known during planning (Sydney Water to initiate). If unknown, pre-construction, contractor.

4. Environmental assessment

The environmental impacts checklist (SWEMS0019.01) was considered for the proposal change. Table 4-1 includes only the potentially changed aspects and Table 4-2 lists additional mitigation measures. All other environmental impacts in the approved REF remain the same and will be incorporated into the contractor's Construction Environmental Management Plan (CEMP).

Table 4-1 review of environmental aspects

Aspect	Potential additional impacts
Topography, geology and soils	The proposal change includes the extension of the construction corridor and the realignment of gravity main via microtunnelling and open cut trenching. **Potential impacts - Construction** An area where the microtunnelling launch and receival pit would be constructed is mapped as potentially unstable areas due to slopes of more than 15% (Figure 2). This has the potential to impact slope stability or cause soil movement. To minimise this, a benching zone, batter and protective fencing would be installed to ensure a stable and safe excavation. Open cut trenching of a tributary of Duck Creek would require the excavation of the tributary creek bed and bank and would result in additional ground disturbance. Additional stockpiling may be required. Additional excavation and stockpiling activities, if not appropriately managed, could result in increased: • erosion of exposed soils and stockpiled materials • dust generation during excavation and vehicle movements over exposed soil • increased sediment loads entering the tributary of Duck Creek reducing water quality and increasing turbidity. Excavation of the tributary creek bed and bank has the potential to increase the risk of future scouring and erosion, if not appropriately restored. To minimise this, Sydney Water would reinstate the tributary of Duck Creek to pre-existing level and stabilise banks with topsoil and endemic species. **Potential impacts - Operation** Restoration of the construction area would be consistent with the approved REF. Sydney Water would maintain operational assets which may involve excavation for access. As the section of gravity main that crosses a tributary of Duck Creek would be concrete encased, damage to, or the breakage of these assets is considered unlikely. Maintenance of these assets would likely be via the maintenance holes which would be accessible from the surface and are unlikely to require any excavation. **Mitigation measures** Potential impacts to topography, geology and soils can be managed in accordance with the mitigation measures in the approved REF and additional mitigation measures in Table 4-2.

Aspect	Potential additional impacts
Water and drainage	The proposal change includes open cut trenching in a 2nd order stream (tributary of Duck Creek) (Figure 3) and may require temporary instream structures to provide a protected work area within the waterway. These structures include coffer dams and shoring boxes. A bypass to divert water flow may also be required. Following construction, the gravity main that crosses the waterway would be about 2 m beneath the tributary creek bed. **Potential impacts - Construction** Excavations would require the extraction of groundwater to provide accessible and safe working conditions. Excessive dewatering may result in the drawdown of the groundwater table, potentially impacting nearby groundwater dependent ecosystems (GDEs) (Figure 2). A variation to the WSWA obtained for the Yallah Marshall Mount Water and Wastewater Servicing project ([redacted]) has been applied for to account for additional groundwater likely to be extracted during construction of the proposal change. As part of the submission, a groundwater technical memorandum has been prepared (D4C, 2025). The memorandum documented the groundwater inflow, environmental impact and groundwater 'take' assessment to inform dewatering considerations during construction. The assessment concluded that there is a reasonable risk of impact to environmental creek flows and GDEs adjacent to the proposal change. To mitigate the risk, the recommended groundwater management measures identified in the memorandum would be implemented. These management measures are captured in the approved REF and the Dewatering Management Plan, which forms part of the CEMP prepared by the contractor. Open cut trenching of the tributary of Duck Creek has the potential to cause increased scouring and erosion. This can lead to sedimentation impacting water quality and aquatic fauna, if not appropriately managed. The temporary instream structures have the potential to impact the hydrologic and geomorphic function of a waterway affecting flows, bed and bank stability. As a Public Authority, Sydney Water does not require approval for works on waterfront land. However, the Guidelines for Controlled Activities on Waterfront Land – Instream works have been considered for the proposal change. This guideline focuses on maintaining natural functions of the stream. Based on aerial imagery and visual inspection, the tributary of Duck Creek is considered an ephemeral waterway. The limited vegetation along the riparian corridor where open cut trenching is proposed has been assessed in the approved REF (Figure 2). Scouring has also occurred along the tributary. The works would maintain the current tributary characteristics as much as possible and would avoid further degradation to its natural condition and function. Controls that would be implemented during construction to preserve waterway conditions include: • limiting the removal of riparian vegetation as per the approved REF • minimising the construction footprint and proposed extent of disturbance to soil and vegetation during works • minimising disturbed areas and rehabilitate areas through topsoil and revegetating with endemic species

Aspect	Potential additional impacts

- the diversion of water flows that would minimise impact to hydrology of the tributary
- the retention of excavated creed bed material and its reinstatement following completion of works where possible
- the establishment and use of silt curtains and other sediment control devices to avoid sediment from entering the tributary
- locating portable site amenities away from watercourses or drainage lines
- keeping a functioning spill kit on site for clean-up of accidental chemical/fuel spills
- bunding potential contaminants and storing on robust waterproof membrane, away from drainage lines
- locating temporary stockpiles outside the channel zone (above the upper banks) and as far away from the waterway as practicable to prevent any sediment entering the waterway
- minimising the duration of works to reduce construction impacts to the tributary
- monitoring the weather forecast and scheduling works outside of predicted heavy rain periods to reduce diversion of water flows
- monitoring and maintaining in-stream restoration works until suitably stabilised.

Potential impacts - Operation

Instream installations have the potential to exacerbate erosion and scouring and impacts the hydrological and geomorphic function of the waterway. Other potential impacts include reduction in water quality (increased nutrients and bacterial concentrations) in the event of wastewater overflows, or leakage.

The proposed design, considering the Guidelines for Controlled Activities on Waterfront Land – Instream works, aims to preserve current waterway conditions and minimise potential degradation with controls such as:

- installing the gravity main at a sufficient depth below the tributary creek bed to minimise scouring
- matching the reinstated level of the tributary creek bed with the existing bed upstream and downstream of the works
- stabilising banks with topsoil and endemic species and be reformed to resemble the pre-works condition and form.

The risk of leaking wastewater has been minimised by encasing the gravity main with a 200 mm thick concrete encasement. The concrete would minimise the risk of geomorphology causing a leak while also containing any leaks should they occur.

The works associated with the proposal change are short-term and temporary. If required, obstruction to flows would be limited to construction of the tributary crossing and once completed natural flow would be restored.

Mitigation measures

Aspect	Potential additional impacts
	Potential impacts to water and drainage can be managed in accordance with the mitigation measures in the approved REF and additional mitigation measures in Table 4-2.
Flora and fauna	The proposal change is located across an elevated terrace landform on the southern side of Duck Creek. This area has been extensively cleared of native vegetation and is currently covered by pasture grasses with scattered regrowth trees. A dead tree is located above the confluence of Duck Creek and its tributary. The tributary of Duck Creek is not identified as Key Fish Habitat. An Arboricultural Impact Assessment (AIA) was completed by Arbor Express during design development in July 2024 (Appendix E) and is summarised below. **Potential impacts - Construction** One subject tree in the proposal change area, *Ficus macrophylla* (Moreton Bay Fig) was inspected in the AIA. The location of the tree is provided on Figure 2. The tree is in good health and has a high retention value. Generally, tree roots do not grow deeper than 2 m as most of the roots grow horizontally to expand the area for water and nutrients absorption. However, some tap roots used for structural stability can grow beneath the trunk for anchorage and can reach a depth of 2 to 3 m. The gravity main between MH J and MH K would be installed via microtunnelling at a depth of around 8 m. The AIA has concluded that microtunnelling is acceptable in maintaining the health and structural condition of the tree since it is unlikely there would be roots growing to this depth. A Tree Protection Zone (TPZ), defined in the AIA as the dripline of the tree, would be established to protect the tree. In addition to the above, groundtruthed vegetation mapping undertaken for the approved REF has identified an area of planted exotic/native vegetation adjacent to the Moreton Bay Fig tree (Figure 2). The proposal change would not impact this vegetation. The proposal change will require the removal of about 3 trees and groundcover species adjacent to the Duck Creek tributary. This vegetation falls partially within and partially outside the area approved for removal in the approved REF. However, the vegetation outside the approval REF construction corridor is within the study area of the approved REF's Flora and Flora assessment. No plant community types, threatened ecological communities or threatened species are associated with this area. The additional vegetation that requires removal will be offset in accordance with the Sydney Water Biodiversity Offset Guide. Ground disturbance would result in a minor impact to pasture grasses. This impact is considered negligible. It is likely that pasture grasses would passively recover after the completion of works. Potential impacts to flora and fauna within the tributary of Duck Creek include: • erosion and sedimentation which can increase turbidity and reduce water quality and potentially smoother benthic community habitats • reduction of habitat through impacts to vegetation

Aspect	Potential additional impacts
	• obstruction of fish passage • aquatic fauna species becoming stranded following coffer dam construction • dispersal of weeds. Potential impacts to benthic community habitats within the tributary of Duck Creek can be managed as part of the mitigation measures associated with topography, geology and soils. Potential impacts to GDEs are discussed above and would be managed in accordance with the recommended groundwater management measures. **Mitigation measures** Potential impacts to flora and fauna can be managed in accordance with the mitigation measures in the approved REF and additional mitigation measures in Table 4-2.
Aboriginal Heritage	An addendum to the ACHAR completed for the approved REF was carried out by Kelleher Nightingale Consulting (KNC) to assess the potential impact of the proposal change on Aboriginal archaeological heritage (Appendix D). The addendum ACHAR study area occupies the same overall landscape context as the project area of the approved REF. [redacted] Following detailed geotechnical investigations, constructability issues were identified with microtunnelling under the Duck Creek tributary. [redacted] After several design options were explored, the proposal change location was selected [redacted] An updated search of the AHIMS database was conducted to identify registered (known) Aboriginal sites or declared Aboriginal places within or adjacent to the addendum ACHAR study area. [redacted] Other sources of information including heritage registers and lists were also searched for known Aboriginal heritage in the vicinity of the addendum ACHAR study area. No Aboriginal archaeological sites or Aboriginal heritage items were recorded on these databases. An Aboriginal archaeological field survey of the addendum ACHAR study area was subsequently undertaken by KNC. [redacted] an additional test excavation program carried out by KNC and field representatives of registered Aboriginal stakeholder groups, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. [redacted]

Aspect	Potential additional impacts
	[redacted] The results of the additional test excavation program were consistent with the findings of previous archaeological test excavations undertaken for the project. [redacted] **Potential impacts - Construction** [redacted] A variation to AHIP [redacted] issued under section 90D of the *National Parks and Wildlife Act 1974* would be required [redacted] **Mitigation measures** Potential impacts to Aboriginal heritage can be managed in accordance with the mitigation measures in the approved REF and additional mitigation measures in Table 4-2.
Noise and vibration	The proposal change is located between two construction corridors already assessed in the approved REF. Since the construction methodology and equipment to be utilised for microtunnelling and open cut trenching remains unchanged, the approved REF has already accounted for potential noise impacts. No additional sensitive receivers would be affected. Given this, noise and vibration impacts would be consistent with the approved REF. **Mitigation measures** Potential impacts on noise and vibration can be managed in accordance with the mitigation measures in the approved REF.
Social and visual	**Potential impacts - Construction** Open cut trenching through the tributary of Duck Creek would have a short-term visual impact during construction. Being within private property, it is not considered to have any recreation value to the public. Considering the location and limited number of receivers in the area, and the short-term, temporary nature of the works, additional impacts to visual and social amenity are considered minor. **Potential impacts - Operation** [redacted] **Mitigation measures** Potential impacts can be managed in accordance with the mitigation measures in the approved REF.

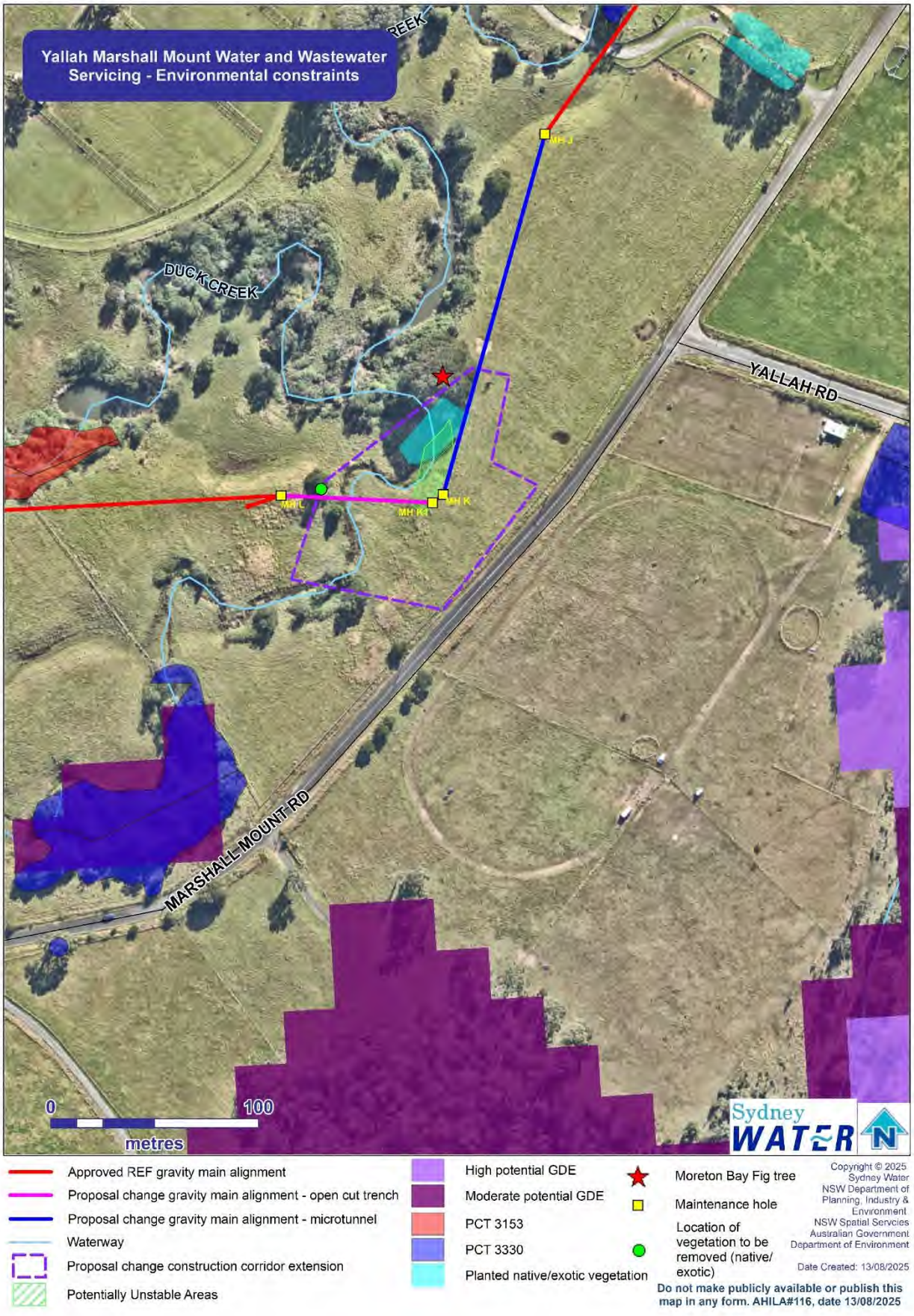


Figure 2 Proposal change and environmental constraints

Figure 3 Duck Creek tributary

Figure 4 Moreton Bay Fig tree

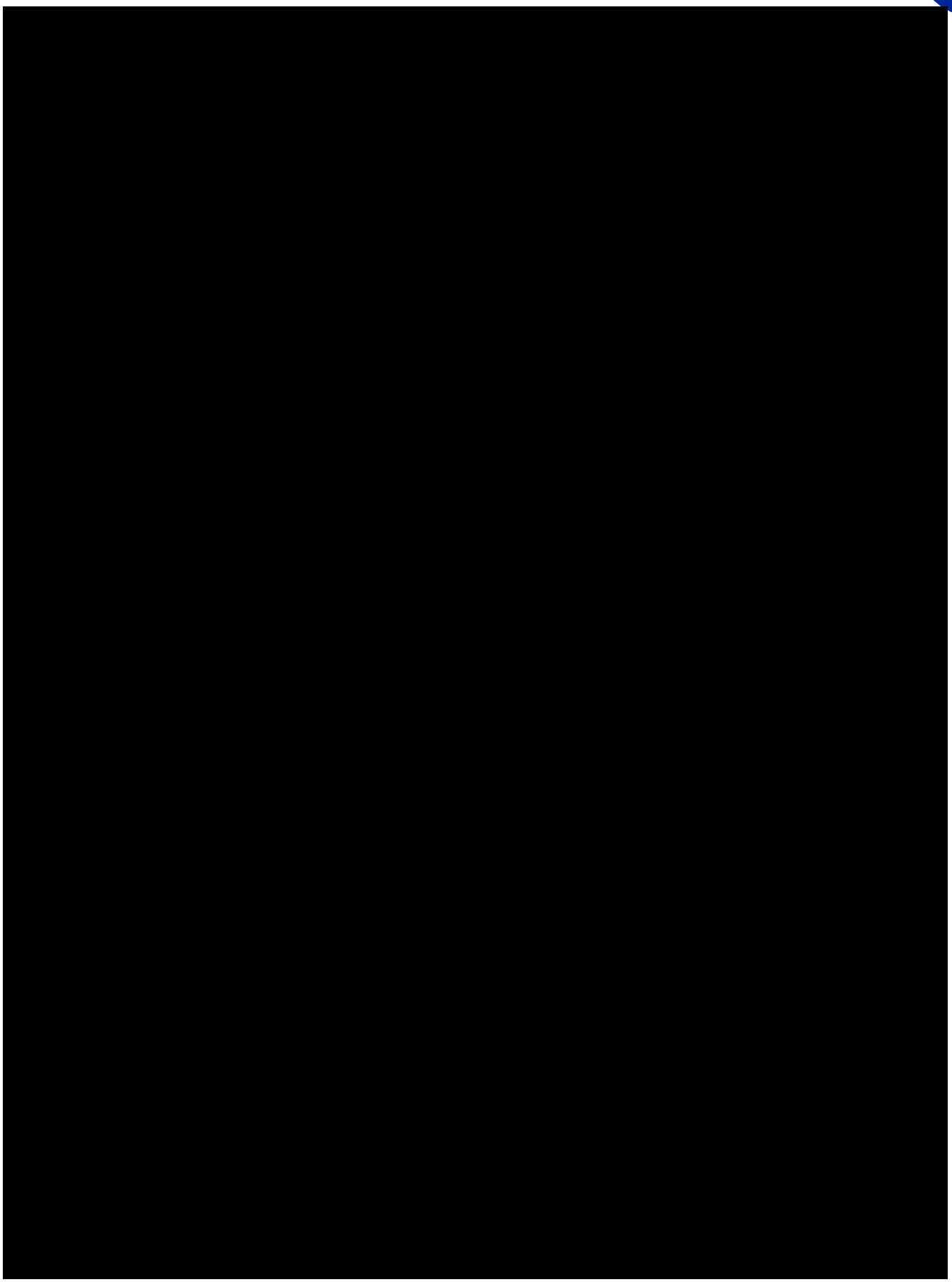


Figure 5 AHIMS extensive search results

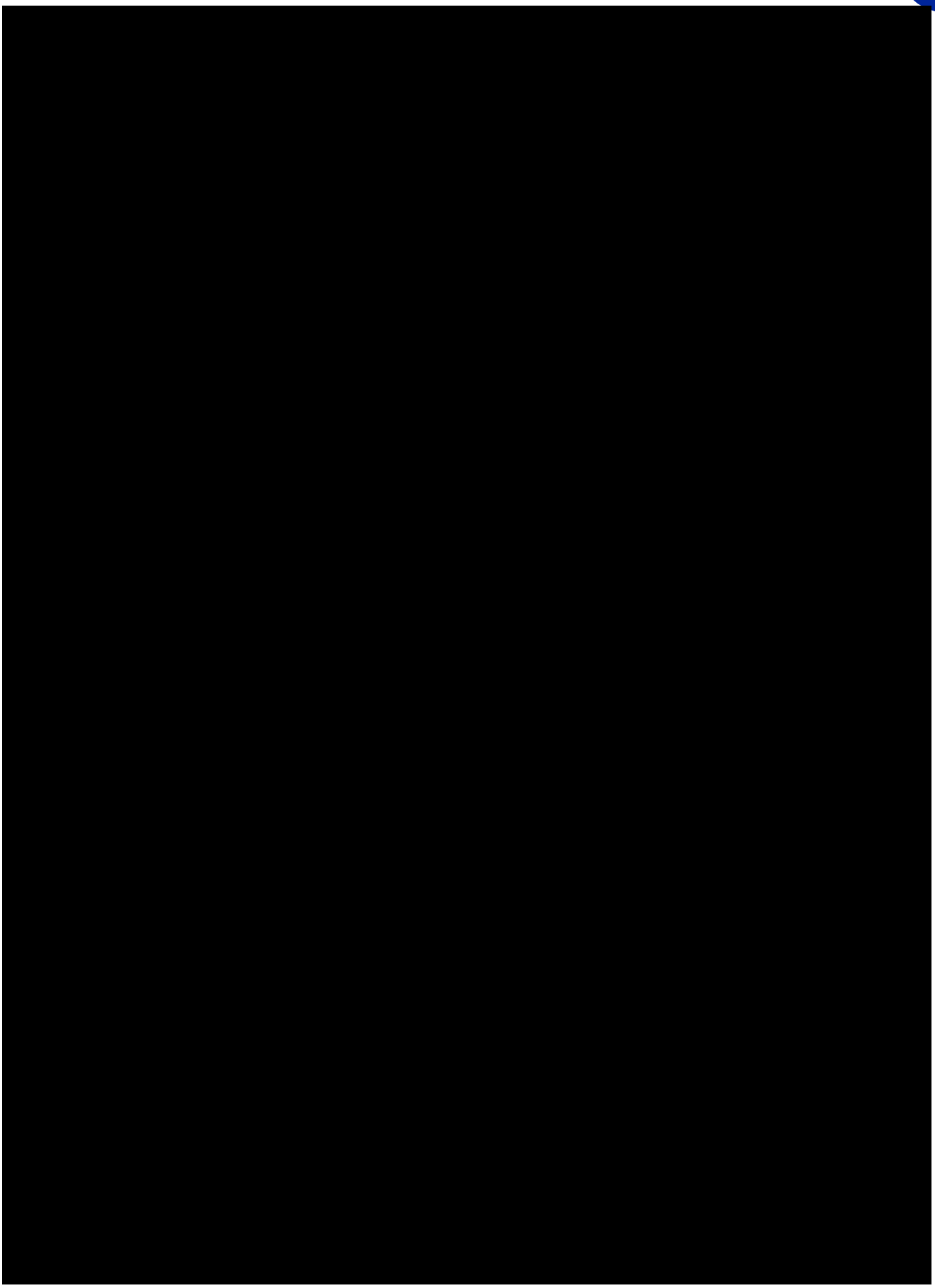


Figure 6 Proposed impact area, Aboriginal heritage within addendum ACHAR study area

Table 4-2 Mitigation measures

Mitigation measures
Stabilise and reinstate the tributary of Duck Creek with topsoil and endemic species.
Excavated creek bed is to be stockpiled and reinstated upon completion, where possible.
Any material which needs to be temporarily stockpiled during works must be located outside the riparian zone.
The top of the reinstated tributary creek bed should be flush with the adjacent bed of the creek and be set at a grade that is aligned with the natural creek bed.
Works should be started gradually to allow time for aquatic fauna to remove themselves from the area while works occur. This may involve preparing the works site one day (increasing human activity), moving equipment to the works site the following day then starting works the day after.
Minimise duration of instream work to prevent aquatic fauna from being impacted for prolonged periods of time.
If required, the upstream dam is to be built first allowing water to naturally drain downstream and permitting aquatic fauna to relocate themselves while the waterway is still connected.
If required, engage a suitably qualified ecologist to relocate any remaining fauna from pooled water left in the work area.
Cage all pump inlets to protect aquatic fauna.
Place a silt curtain immediately downstream of the works and upstream of the tributary diversion outlet.
Monitor sedimentation down slope of excavated areas.
Works should be scheduled outside of predicted heavy rain periods and works should stop during heavy rainfall to reduce risk of mobilising sediment.
All trees to be retained must be protected in accordance with AS 4970-2009.
Tree protection fencing is required around the Tree Protection Zone (TPZ) (where viable) of the Moreton Bay Fig tree.
Mulch ground cover protection is required over the TPZ (where viable) of the Moreton Bay Fig tree. This is to consist of 100 mm depth layers of clean and certified Eucalyptus species mulch.
Project Arborist to hold pre construction site meeting with principle contractor to discuss methods and importance of tree protection measures and resolve any issues in relation to feasibility of tree protection requirements that may arise.
If any emergency excavation is required within the TPZ it is to be supervised by the project Arborist to limit impacts to the Moreton Bay Fig tree.

Mitigation measures

After the proposal change is complete the Project Arborist should assess that the Moreton Bay Fig tree has been retained in the same condition and vigour. If changes to condition are identified the project Arborist should provide recommendations for remediation.

Impact to Aboriginal heritage sites can only occur when the AHIP variation has been granted and any required surface collection and salvage has been complete. Works within the AHIP variation area must be undertaken in accordance with AHIP variation conditions. Comply with all AHIP variation conditions during construction.

[redacted]

Toolbox talk covering Aboriginal heritage and Cultural Awareness Training should be completed by all onsite staff, prior to commencement of all activities within the AHIP variation area.

5. Conclusion

Sydney Water has prepared this REFA to assess the potential environmental impacts of Yallah Marshall Mount Water and Wastewater Servicing – Gravity Main Realignment. The proposal is required to provide water and wastewater services to the Yallah Marshall Mount Precinct in the West Lake Illawarra Growth Area. This proposal change was required to avoid impacting a Moreton Bay Fig tree and to allow for the necessary groundcover required for microtunnelling.

The main potential additional construction environmental impacts of the proposal change include impacts Aboriginal heritage, hydrology and geomorphology. During operation, no additional impacts are expected. Given the nature, scale and extent of impacts and implementation of the mitigation measures outlined in this REFA and the approved REF, the proposal is unlikely to have a significant impact on the environment. Therefore, an environmental impact statement is not required under Division 5.1 of the EP&A Act.

The REF considers how the proposal aligns with the principles of Ecologically Sustainable Development (ESD) (Appendix B). The proposal will not result in the degradation of the quality of the environment and will not pose a risk to the safety of the environment.

6. References

D4C (August 2025) 20029545-MEM-0001 Rev04: Dewatering Groundwater ‘take estimation for the Proposed Yallah Marshall Mount Package 32 – Technical Memorandum

Appendix A – Section 171 checklist

Requirements in addition to the approved REF are considered in the table below.

Section 171 checklist	REF finding
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 change will have a minor impact 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. [redacted] The proposal change will have a positive impact 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. [redacted]

Appendix B – Consideration of Ecologically Sustainable Development

Additional ESD consideration are covered in the table below.

Principle	Proposal alignment
Precautionary principle – *if there are threats of serious or irreversible environmental damage, lack of scientific uncertainty should not be a reason for postponing measures to prevent environmental degradation. Public and private decisions should be guided by careful evaluation to avoid serious or irreversible damage to the environment where practicable, and an assessment of the risk-weighted consequences of various options.*	The proposal will not result in serious or irreversible environmental damage and mitigation measures have been designed to reduce scientific uncertainty relating to the proposal. Scientific confidence has been achieved through archaeological investigations including a detailed review of previous archaeological work in the region, comprehensive field survey and an additional archaeological test excavation program. A high level of scientific confidence relating to the site types, contents and archaeological significance has been achieved in the addendum ACHAR. [redacted]
Inter-generational equity – *the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*	The proposal change will help to meet the needs of future generations by providing a reliable wastewater service. [redacted]
Conservation of biological diversity and ecological integrity – *conservation of the biological diversity and ecological integrity should be a fundamental consideration in environmental planning and decision-making processes.*	The proposal will not significantly impact on biological diversity or impact ecological integrity. The proposal change location has been selected to avoid impacts to a Moreton Bay Fig tree [redacted]
Improved valuation, pricing and incentive mechanisms–- *environmental factors should be included in the valuation of assets and services, such as 'polluter pays', the users of goods and services should pay prices based on the full life cycle costs (including use of natural resources and ultimate disposal of waste) and environmental goals*	The proposal will provide cost efficient use of resources and provide optimum outcomes for the community and environment.

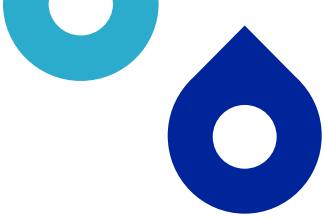
Appendix C – Consideration of TISEPP consultation

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?		X
Be likely to generate traffic that will strain the capacity of the road system in the LGA?		X
Connect to, and have a substantial impact on, the capacity of a council owned sewerage system?		X
Connect to, and use a substantial volume of water from a council owned water supply system?		X
Require temporary structures on, or enclose, a public space under council's control that will disrupt pedestrian or vehicular traffic that is not minor or inconsequential?		X
Excavate a road, or a footpath adjacent to a road, for which the council is the roads authority, that is not minor or inconsequential?		X
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?		X
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?		X
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 consultation		
Is the work on land mapped as coastal vulnerability area and inconsistent with a certified coastal management program?		X
Section 2.15, consultation with public authorities other than councils		

TISEPP section	Yes	No
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).*		X
Will the proposal be on land in Zone C1 National Parks and Nature Reserves or on a land use zone that is equivalent to that zone? *If so, consult with DPE (NPWS).*		X
Will the proposal include a fixed or floating structure in or over navigable waters? *If so, consult TfNSW.*		X
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.*		X
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*.		X
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).*		X

Appendix D – Yallah Marshall Mount Water and Wastewater Servicing Aboriginal Archaeological Assessment – Addendum to Cultural Heritage Assessment Report

Appendix E – 240 Marshall Mount Road Marshall Mount NSW 2530 Arboricultural Impact Assessment



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