Review of Environmental Factors

Glenfield Interim Operation Procedures – Discharge Facility

Determination

This Review of Environmental Factors (REF) assesses potential environmental impacts of the Glenfield Interim Operation Procedures (IOP) Discharge Facility. The REF was prepared under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), with Sydney Water both the proponent and determining authority.

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

Certification

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

Prepared by:	Reviewed and endorsed by:	Endorsed by:
[redacted]		
Jennifer Shaw Environment Representative Sydney Water Date: 12 Nov 2025	Jude Gregory Environmental Assessment Team Manager, Sydney Water Date: 12 Nov 2025	Iain Macleod Project Manager Date: 13 Nov 2025

Decision Statement

The main potential construction environmental impacts of the proposal include impacts from traffic and noise. During operation, the main potential impacts are associated with traffic. 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 [redacted]	Senior Manager Environment and Heritage, Sydney Water Date: 21 Nov 2025

1. Proposal description

Table 1 Proposal need, objectives and consideration of alternatives

Aspect	Relevance to proposal
Proposal need and objectives	Sydney Water requires temporary Interim Operation Procedures (IOPs) to support accelerated developments in Sydney Water's South West Region and Greater Macarthur Region growth servicing areas (Sydney Water, 2023b). This interim solution allows Sydney Water to meet developer commitments ahead of permanent wastewater infrastructure and support the NSW Government's priority for increased housing supply. IOP operation involves: • capturing wastewater flows from developments and storing in holding tanks • pumping wastewater from the holding tanks into road tankers • discharging wastewater from the road tankers to water resource recovery facilities (WRRF) for treatment. This REF assesses the following: • construction of IOP infrastructure in the Glenfield WRRF and the adjacent road • operation of IOP infrastructure • vehicle movements on the local road network near the Glenfield WRRF during construction and operation. The individual developers are responsible for construction and operation of the wastewater holding tanks at the developments and road tanker operations. Except for road tanker operation within the Glenfield WRRF, Victoria Road, and the intersection of Harold Street, Canterbury Road and Victoria Road (i.e. the local road network shown on Figure 3), developer activities are not included in the scope of this REF.
Proposal description and methodology	The proposal is at Glenfield WRRP at the end of Victoria Road, in the Macquarie Fields suburb (refer to Figure 2). Glenfield WRRF operates under Environment Protection Licence (EPL) 372. The proposal includes installing: • 3 new bunded hardstand areas designed for truck washdown, parking and road tanker discharge (i.e. the discharge facility) in the Glenfield WRRF • automated entry gate, bollards and a new bitumen road connecting Victoria Road to the discharge facility • a drive-in laydown area • a new wastewater discharge pipeline (excavation about 100 m long, 0.5 m wide and 1.5 m deep) connecting from the discharge facility to an existing maintenance hole • a stormwater pipeline connecting to an existing swale drain (excavation about 100 m long, 0.5 m wide and 1.5 m deep)

Aspect	Relevance to proposal
	• new electrical conduit connecting to the existing distribution board • a bunded discharge facility and drain sump • a water supply pipeline (excavation about 80 m long, 1 m wide and 1.5 m deep) to connect to the existing water supply. Indicative construction methodology includes: • site survey, boreholes and test pits to determine site condition • site mobilisation – install fencing, security gates and signage • remove vegetation • install concrete hardstand including grading to capture site stormwater • install a wastewater pipeline, water supply line and stormwater pipeline by open trenching • remove existing concrete blocks at Victoria Street and install an automated entry gate • install bollards, electrical infrastructure, odour control unit and washdown station • demobilise from site – remove any temporary construction facilities and complete landscaping. The construction footprint refers to the areas impacted by the proposal (see Figure 1 and Figure 2).
Consideration of alternatives/options	Following an internal review of Sydney Water's network, systems, and operational constraints, a shortlist of potential sites was developed for a new discharge facility. This process considered key issues to align developer expectations and Sydney Water's operational capabilities. Based on this analysis, Glenfield WRRF was selected as the preferred site. Glenfield WRRF is strategically located within a reasonable driving distance to key growth areas and has available treatment capacity to accommodate additional tankered wastewater. The 'do nothing' option was not deemed feasible as it would not allow developments to progress before delivering permanent wastewater infrastructure.
Location and land ownership	The proposal is at the Glenfield WRRF at 100 Victoria Road, Macquarie Fields NSW 2564 on: • Lot 1 and 4, DP 960 • Lot 1, DP 544820 • Lot 1, DP 554059 • Lot 2, DP 586064.
Ancillary facilities (compounds)	Any construction compound(s) required for site sheds, construction amenities and materials laydown, would be within the construction footprint. The exact location of these will be chosen by the Delivery Contractor.

Aspect	Relevance to proposal
	During construction and operation, heavy vehicles will enter and exit the discharge facility via Victoria Road and the new bitumen road.
Construction work hours	Work and deliveries will be scheduled during standard construction hours (daytime hours): • 7 am to 6 pm, Monday to Friday • 8 am to 1 pm, Saturdays. Sydney Water's Project Manager can approve construction work outside of standard daytime hours, following the approval process described in the mitigation measures in Section 4.
Proposal timing	Construction is expected to start mid 2026 and take about 12 months.
Operational requirements	During operation, it is anticipated that at peak, about 50 road tanker trips to Glenfield WRRF would occur each day. The IOP would operate for about 3 years. This REF only assesses the potential operational impacts of the discharge facility and road tanker traffic on the local road network, (refer to Figure 3). Developers would operate in accordance with their individual Service Delivery Agreement and IOP Sewage Discharge – Operating Plan, managed by Sydney Water's Innovation and Customer Program team. These aspects are outside the scope of this REF. The Operating Plans can include provisions and mitigation measures for: • operating outside of daytime hours • odour management at the tank collection points • noise or other potential impacts associated with the wastewater collection • traffic impacts due to road tankers using the road network beyond the local road network assessed in this REF (refer to Section 4).

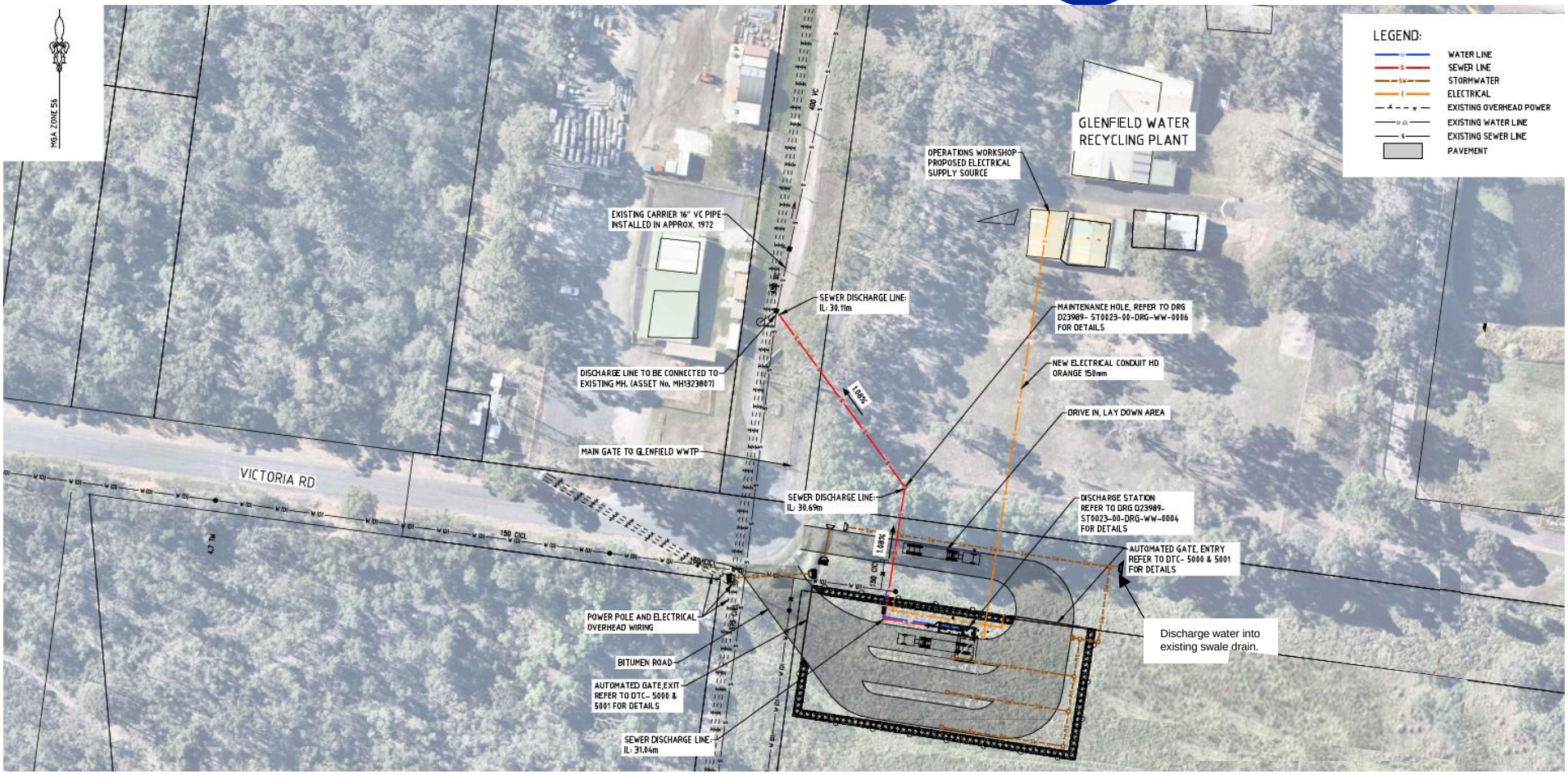

Figure 1 Proposal layout (concept design)

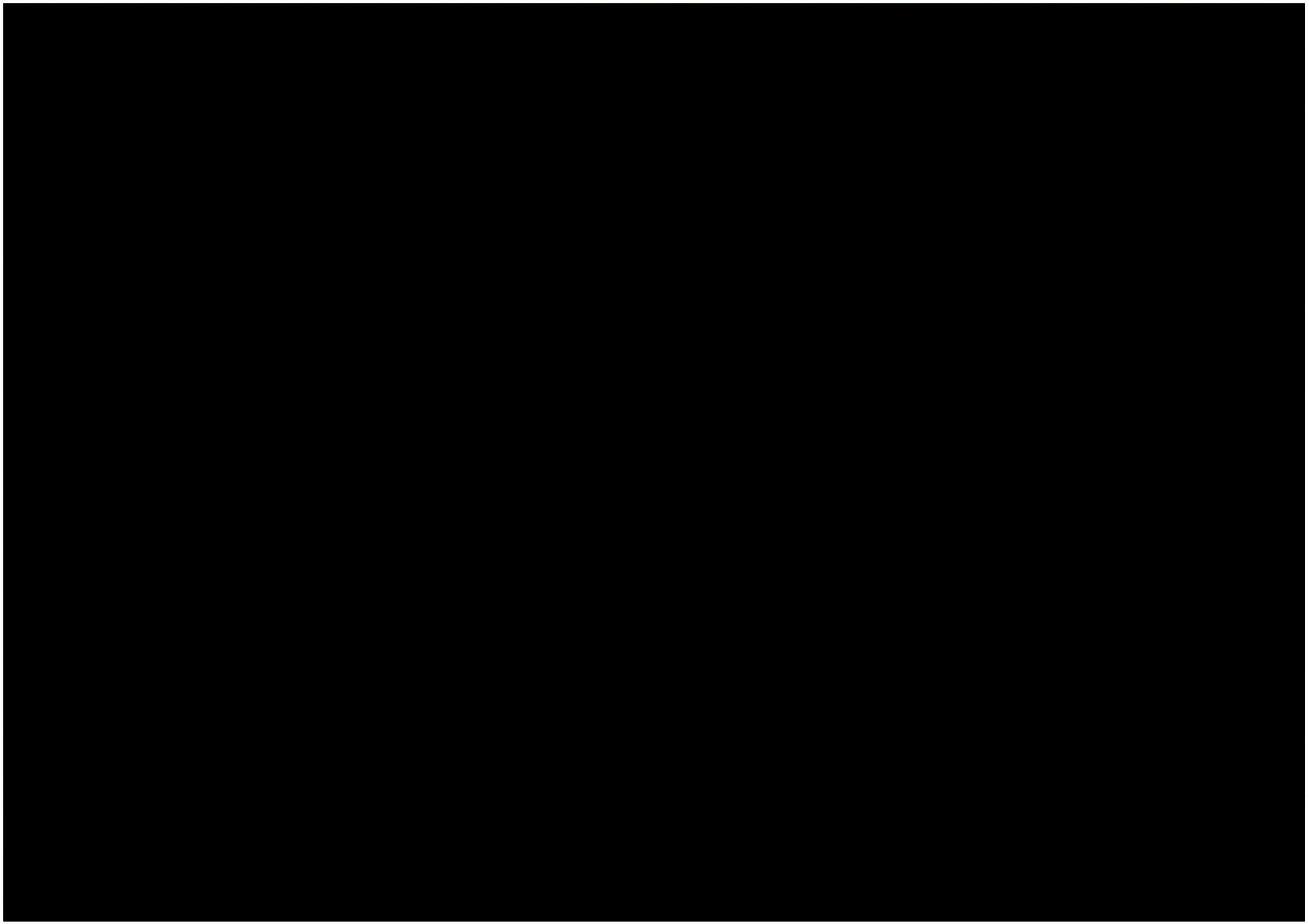

Figure 2 Environmental constraints

Figure 3 Local road network (shown in orange)

2. Consultation

2.1 Community and stakeholder consultation – general

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

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

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

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

We will also provide local councils with reasonable notice when we would like to commence works. Local council(s) will be consulted about matters identified in environmental planning instruments such as public safety issues, temporary works on council land, and full or partial road closures of council managed roads (refer below).

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).

Consultation was required under s2.10(1)(b) of the TISEPP as the proposal is likely to generate operational traffic on a council road. It should be noted that consultation was also undertaken for s2.10(1)(f) of the TISEPP for excavation of a council road. However, the section of Victoria Road that would be excavated forms part of Sydney Water's private property. Campbelltown City Council (council) was consulted on 10 February 2025, with no response received.

Early engagement was carried out with council at the start of the project in 2025 (prior to TISEPP consultation). This identified their potential concerns with increased operational traffic due to additional heavy vehicle movements on local roads near the Glenfield WRRF. A traffic assessment was undertaken to assess operational traffic related impacts on the local road network and found that there would be minimal delays and negligible impacts to public transport, parking and road safety. This is discussed further in Section 4 and Appendix E. The Delivery Contractor will continue consultation to ensure closeout of any council concerns prior to construction commencing.

3. Legislative requirements

Table 3-1 Environmental planning instruments relevant to the proposal

Environmental Planning Instrument	Relevance to proposal
Campbelltown Local Environmental Plan 2015 (Campbelltown LEP)	The proposal is on land zoned SP2 Infrastructure (Sewerage System) within the Campbelltown LEP.
State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP)	Section 2.126(6) of the TISEPP permits development by or on behalf of a public authority for sewage reticulation systems without consent on any land in the prescribed circumstances. The proposal involves development of a sewage reticulation system. Under section 2.126(1)(a), the development is carried out in the prescribed circumstances as it is being carried out by a public authority. The proposal also involves development of a water reticulation system. Section 2.159(1) of the TISEPP permits development by or on behalf of a public authority for water reticulation systems without consent on any land. As Sydney Water is a public authority, the proposal is permissible without consent.
State Environmental Planning Policy (Biodiversity and Conservation) 2021 (BCSEPP)	**Vegetation in non-rural areas (Chapter 2)** The proposal is in an area or zone listed in subsection 2.3(1). However, subsection 2.4(1) states: '*This Policy does not affect the provisions of any other SEPP….*', and as the works are permissible under the TISEPP, a council permit to clear vegetation under the BCSEPP is not required. **Koala habitat protection (2020 and 2021) (Chapter 3 and 4)** These chapters aim to encourage the proper conservation and management of areas of natural vegetation that provide koala habitat. This is to ensure that permanent free-living populations are protected in their present range, and to reverse the current trend of population decline. The BCSEPP contains prescriptions for the consideration of 'potential koala habitat' and 'core koala habitat' for developments within local government areas listed in schedule 2 of the BCSEPP, including council. Council have developed a Koala Plan of Management. However, development that is being carried out under TISEPP is not subject to the planning provisions of the BCSEPP. Nonetheless the objectives of the plan have been considered when assessing potential impacts on koalas and koala habitat (see Section 4). **Water catchments (Chapter 6)** Chapter 6 of the BCSEPP applies as the proposal is within the Georges River Catchment, a regulated catchment. Section 4 of this REF assessed potential environmental impacts on

Environmental Planning Instrument	Relevance to proposal
	water quality and quantity, aquatic ecology, flooding, recreation and public access. The assessment confirmed that potential impacts are minimal and meet the requirements of part 6.2 of the BCSEPP (refer to Appendix A).

Table 3-2 Consideration of key environmental legislation

Legislation	Relevance to proposal	Permit or approval	Timing and responsibility
Protection of the Environment Operations Act 1997 (POEO Act)	The Glenfield WRRF is part of the Malabar wastewater system which operates under EPL 372. The proposal is consistent with existing activities and compliance requirements under this EPL. A variation to EPL 372 is not required.	N/a	N/a
Biodiversity Conservation Act 2016 (BC Act)	The proposal is on land applicable to the Cumberland Plain Conservation Plan (CPCP). As the land in the construction footprint is uncategorised under the CPCP, a flora and fauna assessment was undertaken (refer to Appendix D). The flora and fauna assessment included Tests of Significance (ToS) prepared in accordance with the BC Act to assess the impact of this proposal on threatened species, communities, and their habitats. The assessment concluded that the works are unlikely to result in a significant impact.	REF	Pre-construction, Sydney Water
National Parks and Wildlife Act 1974 (NPW Act)	This Act provides for the establishment, preservation, and management of areas such as national parks, state conservation areas, nature reserves, and Aboriginal areas. This Act also provides for the protection of Aboriginal heritage, including Aboriginal objects and places. The proposal is not within National Parks, State Conservation areas or nature reserves. [redacted] No impacts on Aboriginal heritage are anticipated.	N/a	N/a
Water Management Act 2000	Section 60A of the *Water Management Act* states that it is an offence to take water without a licence. A Water Supply Work Approval (WSWA) is required under Section 90(2) for all activities that involve dewatering groundwater (e.g. dewatering an excavation such as a trench, or HDD), irrespective of volume. If groundwater is likely to be encountered, a WSWA will be obtained. This will be confirmed during site	WSWA	Pre-construction, Sydney Water

Legislation	Relevance to proposal	Permit or approval	Timing and responsibility
	investigations during the detailed design phase.		
Roads Act 1993	Under the *Roads Act 1993,* approval under Section 138(1) of this Act is required for carrying works in, digging up or disturbing a public road. The proposal will impact a council managed road (Victoria Road). A Traffic Management Plan (TMP) will be prepared for the proposal and approved by council.	TMP	Pre-construction, Delivery Contractor
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Under the EPBC Act, actions that have, or likely to have, a significant impact on Matters of National Significance (MNES) require Commonwealth approval. A flora and fauna assessment (refer to Appendix D) was prepared to assess vegetation trimming and clearing. Significant Impact Criteria (SIC) assessments were prepared in accordance with the EPBC Act to assess the impact of this proposal on threatened species and communities. The assessment concluded that the works are unlikely to result in a significant impact.	N/a	N/a

4. Environmental assessment

The environmental impacts checklist (SWEMS0019.01) was considered for the proposal. Table 4-1 includes only the potentially impacted aspects and Table 4-2 lists relevant mitigation measures.

Table 4-1 review of environmental aspects

Aspect	Potential impacts
Topography, geology and soils	The proposal is in the Blacktown and South Creek soil landscape. The general limitations correlated with the Blacktown unit is moderately reactive highly plastic subsoil, low fertility and poor drainage. The general limitations correlated with the South Creek unit are flood hazard, seasonal waterlogging, localised permanently high water tables, localised water erosion hazard and localised surface movement potential. Geology mapped within the proposal site consists of Hawkesbury Sandstone. Hawkesbury Sandstone is a sedimentary geological unit part of the Permian-Triassic Basin. It typically comprises medium to coarse grained quartz sandstone, with very minor shale, mudstone, siltstone and laminite lenses. The construction footprint is not within an area of known acid sulfate soils (ASS) occurrence. A Detailed Site Investigation (DSI) (Sydney Water, 2023a) which included sections of the construction footprint indicated there is a low potential for ASS. A review of overall salinity hazard in the construction footprint has been undertaken through the eSPADE portal (NSW Department of Planning, Industry and Environment, 2025). The construction footprint is within the Upper South Creek HGL (Hydrogeological Landscape) which is categorised as 'high salinity hazard'. During construction, excavation and ground disturbance is required in the construction footprint. This has the potential to result in exposed soils and stockpiled materials/spoil which could result in sedimentation of local waterways. Inappropriate management of saline soils may also result in the saline soils leaching offsite. However, impacts from excavation are assessed as minor, as exposure of soil and stockpiling of spoil would be temporary and short-term. Further, mitigation measures would be implemented to manage potential impacts. During operation, minimal soil disturbance is expected during operation as all truck movements would be along the sealed driveway. There would be minor changes to the surface topography as the existing ground slopes down towards the Georges River in the east, and the new bunded hardstand areas would be made level. As such, the hardstand areas would be level with the existing ground on the west, and about 1 m above the ground on the east.
Water and drainage	The proposal is 200 m west of the Georges River and 350 m south of Bunbury Curran Creek, which are both listed as Key Fish Habitat (KFH). The construction footprint is not in flood prone land. No groundwater borehole data within the construction footprint is available from WaterNSW or MinView websites (NSW Government, 2025). Groundwater was recorded at a depth of 4.40 metres below ground level (mbgl) at borehole MP1-GF-BH09, about 170 m southeast of the proposal. The DSI included 3 boreholes within the Glenfield WRRF site. Results indicated that groundwater levels range from 4.8 to 8.2 mbgl. The DSI also indicated the potential to

encounter groundwater with high levels of dissolved heavy metals and per and polyfluoroalkyl substances (PFAS). Further geotechnical investigations will be undertaken prior to construction to determine groundwater levels, potential contamination and treatment/disposal measures.

If groundwater dewatering is required during construction, Sydney Water will obtain a WSWA. Dewatering would be managed with appropriate mitigation measures, including management and treatment of potentially contaminated groundwater. Impacts are expected to be minor.

The proposal will require temporary storage of fuels and chemicals during construction. Tanker refueling will occur on site during construction but would not be required during operation.

The proposal is unlikely to significantly modify drainage patterns during operation. The discharge facility will include bunding to capture any wastewater or fuel spills which would be sent back to the head of works for treatment. Outside of the bunding, the discharge facility would capture clean run-off from the hardstand and connect to an existing stormwater swale drain at the north of the construction footprint. Erosion control at the connection to the existing swale drain will be implemented to manage potential sedimentation from concentrated flows. Further stormwater and drainage planning will occur during the detailed design phase.

Flora and fauna

Arcadis prepared a flora and fauna assessment for the proposal (Appendix D). A field survey was conducted on 18 June 2025 to validate biodiversity desktop analysis, and to detect any additional threatened biota. The flora and fauna assessment study area is a 100 m buffer around the construction footprint.

Database searches identified 74 threatened and migratory fauna species, and 57 threatened flora species recorded or predicted to occur within a 10 km radius of the study area.

The field survey confirmed the presence of one Plant Community Type (PCT) within the study area, also mapped by the SVTM (NSW DCCEEW, 2025). This was identified as PCT 3616 – Sydney Hinterland Grey Gum Transition Forest, restricted to the north and central parts of the study area, covering 2.97 hectares (ha). This PCT is not associated with any threatened ecological community. There is 0.36 ha of planted native vegetation in the study area, including *Corymbia maculata* (Spotted Gum) trees. The study area also includes 4.91 ha of exotic lawn (see Figure 4 for vegetation mapping).

Flora and vegetation community impacts

Under a worst-case scenario, the proposal would remove up to 0.87 ha of vegetation within the construction footprint, including native, planted, and exotic species. Of this, 0.02 ha is PCT 3616, and 0.02 ha is planted native vegetation. No threatened flora species were recorded during the field survey. Given the disturbed and degraded understory vegetation, the study area is considered unlikely to support threatened flora species. No impacts on threatened flora species are expected.

Fauna impacts

No threatened fauna species were recorded during the field survey. [redacted] However, no

koala signs were observed within the study area during the current survey, likely due to fencing restricting their access.

Suitable habitat for the Cumberland Plain Land Snail (*Meridolum corneovirens),* listed as Endangered under the BC Act, was identified in the form of woody debris within PCT 3616. The proposal would remove up to 0.02 ha of this habitat. A Test of Significance (ToS) under the BC Act was prepared, concluding that the removal of habitat would not fragment the population, affect critical habitat, or hinder recovery efforts. Therefore, the proposal is not considered to pose a significant impact on the Cumberland Plain Land Snail.

The proposal would also remove up to 0.02 ha of potential koala habitat, including koala feed trees. A ToS and a Significant Impact Criteria assessment under the EPBC Act was prepared for the koala. The assessment concluded this tree removal is unlikely to significantly affect koalas, as it would not fragment local populations, degrade critical habitat, or interfere with species recovery. Consequently, the proposal is not expected to have a significant impact on koalas.

Aquatic impacts

The two sludge lagoons within the study area present important habitat for waterbirds and aquatic species. There would be no direct impacts to these sludge lagoons. Potential sedimentation to these sludge lagoons during construction would be managed through implementation of mitigation measures in Table 4-2.

Due to the distance between the construction footprint and mapped KFH (Georges River and Bunbury Curran Creek), these aquatic habitats are unlikely to be affected and impacts to KFH are considered unlikely.

The Georges River and Bunbury Curran Creek are associated with a moderate to high potential for groundwater dependent ecosystems (GDEs). However, there is a low potential for GDEs to occur within the Study Area and by extension, a low potential for GDEs to be impacted by the proposal.

The proposal will include bunding to capture any wastewater/fuel leaks during operation, which will be sent back to the Glenfield WRRF head of works to be treated. As such, impacts to nearby aquatic habitat is unlikely.

Indirect impacts

Indirect impacts from construction noise and vibration to suitable habitat outside of the construction footprint are possible. During operation, noise and vibration from the road tankers at the discharge facility could potentially disturb fauna and lead to long-term avoidance of habitat in the area. Additionally, any lighting proposed during nighttime hours also has the potential to impact on the suitability of some habitat for nocturnal species. These impacts could cause adjacent areas of habitat in patches of native vegetation to become temporarily or permanently unsuitable.

However, by implementing the mitigation measures in Table 4-2, potential indirect fauna construction impacts are expected to be low.

Offsetting

No statutory offsetting applies. However, Sydney Water will replant 0.08 ha to offset non-threatened native vegetation removal in accordance with Sydney Water's Biodiversity Offset Guide.

Heritage	**Aboriginal heritage** A review of historical aerial imagery indicates that the proposal would be constructed on previously disturbed land. A search of the Aboriginal Heritage Information Management System (AHIMS) database on 14 August 2025 did not identify any Aboriginal heritage items within 200 m of Lot 1 DP 960. The [redacted] The proposal is unlikely to impact any object or place of Aboriginal cultural heritage significance during construction or operation. However, to minimize residual risk an unexpected finds procedure would be implemented during construction. **Non-Aboriginal heritage** The following heritage items were identified within the 250 m of the construction footprint: • Commonwealth listed heritage property (Cubbitch Barta National Estate) 250 m east of the proposal site. • Local heritage item, Holsworthy Group (I32) listed under Liverpool Local Environmental Plan 2008, 200 m east of the proposal site. These heritage items are located on the eastern side of Georges River (see Figure 2) and would not be impacted by the proposal.
Noise and vibration	The proposal is predominantly within a bushland environment. The proposal is immediately south of the operational Glenfield WRRF within Sydney Water property. The closest sensitive receiver is a residential property about 250 m west of the proposal site, and buffered from the proposal by dense vegetation. The likelihood of noise impact from construction and operation of the proposal was reviewed against risk factors following Table 2 of the EPA's 2020 Draft Construction Noise Guideline. The review indicated that the likelihood of noise impact will be low to medium risk and therefore a qualitative noise impact assessment was undertaken. Construction is of medium duration (up to 12 months) with day time hours proposed. Noisy equipment such as chainsaws, stump grinders, dump trucks, concrete trucks, excavators and hand power tools will be used. Impacts are expected to be minor as the works would be undertaken during standard construction hours and because of the distance to the nearest receiver (about 250 m), which does not have a direct line of sight to the works. There would be about 30 additional vehicles arriving and leaving the Glenfield WRRF each day during construction. This includes occasional delivery and concrete trucks. Impacts to receivers during construction would be minor and temporary. During operation, the noisiest activity would be road tanker discharging. Due to the distance from sensitive receivers to the discharge facility, and daytime operations, the potential noise impacts would be low. The proposal will generate vibration during construction. However, there are no sensitive receivers or any significant structures nearby which are likely to be impacted. There will be no vibration impacts during operation.
Air and energy	During construction, the proposal will potentially result in: • dust generated during excavation

- dust emissions generated by construction vehicles travelling on disturbed surfaces
- emissions from machinery, equipment and vehicles during construction.

Construction is relatively small-scale and short term and equipment emissions will be minor. Potential dust and emissions impacts can be adequately managed by the proposed mitigation measures.

During operation, the nearest receivers should not experience any change to background odour. Each of the discharge bays would be equipped with a water hose for washdown and odour control purposes. Any accidental wastewater spills would be washed to a drain sump in the bunded hardstand area that drains to the new wastewater discharge pipeline. An electrically actuated knife gate valve will close the drain line to prevent wastewater escaping from the new wastewater discharge pipeline.

The developers will operate in accordance with any odour mitigation measures included in the IOP Sewage Discharge – Operating Plan.

Waste and hazardous materials

The proposal requires spoil disposal following excavation. Other minor waste streams may include green waste, excess packaging material and office waste generated from the compound. The Delivery Contractor will seek opportunities to reduce, reuse and recycle materials. This will be documented in the CEMP.

Asbestos Contaminated Material (ACM) has been identified in areas adjacent to the construction footprint. These have since been removed and followed by a visual clearance inspection. However, illegal dumping has been known to occur in some areas near the construction footprint. During construction, the risk of encountering ACM or other contamination can be managed through unexpected finds procedures. Potential waste and hazardous material impacts are expected to be minor and can be managed by the proposed mitigation measures.

Traffic and access

Victoria Road will provide vehicle access to the proposal area during construction and operation. It is a local road within a low-density residential area. A traffic assessment was prepared (Appendix E) and identified that:

- The AM peak hour occurred between 6:00 am and 7:00 am, with 16 eastbound and one westbound vehicles.
- The PM peak hour occurred between 2:00 pm and 3:00 pm, with 2 eastbound and 12 westbound vehicles.

During operation, up to 50 additional heavy vehicles (i.e. the road tankers) are expected to access and egress the Glenfield WRRF per day (100 movements total). For the purposes of the traffic analysis on the local road network, it was assumed that the road tanker movements would occur for an 8-hour period (7:00 am – 3:00 pm). Therefore, on average, about 6 road tankers are expected to access/egress the Glenfield WRRF per hour. All road tankers would access the site via the intersection of Harold Street, Canterbury Road and Victoria Road (Figure 3).

SIDRA intersection modelling has been undertaken for 2027 to account for the additional vehicle trips and background traffic growth. The traffic assessment concluded that in the 2027 horizon year, the intersection of Harold Street, Canterbury Road and Victoria Road is expected to continue to operate to a Good Level of Service (e.g. good quality of traffic flow on a transportation network) with minimal delays. Additionally, the IOP is expected to have a negligible impact on active transport, public transport, parking and road safety.

	The anticipated construction vehicle movements are lower than operation (see noise section above), and potential construction traffic impacts would be minor. Potential impacts will be managed in accordance with the mitigation measures in Table 4-2.
Social and visual	Temporary social impacts related to amenity issues such as increased traffic levels, noise and vibration are assessed above. Potential temporary visual impacts would be largely confined to the construction footprint. Visual impacts to residential receivers would be limited to temporary views of construction vehicles driving along Victoria Road. During operation, new infrastructure would be within Sydney Water property and screened by existing surrounding vegetation. Visual impacts are expected to be minimal. The proposal is on Sydney Water property, which is not accessible to the public and would not impact public recreational areas.
Cumulative and future trends	A search of the NSW Department of Planning Housing and Infrastructure's Major Projects Register on 30 May 2025 and 25 September 2025 did not identify any major projects that could lead to cumulative impacts. A search of Council's Development Tracker on 30 May 2025 and 25 September 2025 identified multiple small scale residential projects within 1 km of the proposal. Due to the small-scale nature of this proposal, potential cumulative impacts would be negligible. Construction of the proposal may coincide with the construction of other Sydney Water projects at the Glenfield WRRF including the Glenfield WRRF Upgrades Project. The Delivery Contractor will coordinate with the Glenfield WRRF operations team and concurrent projects to minimise potential cumulative impacts. The proposal is unlikely to exacerbate future trends such as those related to climate change, due to the limited scope of works. The proposal would involve constructing a new hardstand area however, the additional impermeable surface is unlikely to contribute to flooding.

Figure 4 Ground-truthed vegetation, PCT, fauna species and habitat features identified within the study area and construction footprint.

Note: the construction footprint shown above is smaller than that shown in Figure 1, due to changes in the stormwater drainage design since undertaking the flora and fauna surveys.

Table 4-2 Mitigation measures

Mitigation measures
General
Prepare a Construction Environmental Management Plan (CEMP) addressing the requirements of this environmental assessment. The CEMP should identify licence, approval and notification requirements. Prior to the start of work, all project staff and contractors will be inducted in the CEMP. The CEMP must be readily available on site and include a site plan which shows: • go/ no go areas and boundaries of the work area including locations of lay-down and storage areas for materials and equipment • location of environmental controls (including erosion and sediment controls, any fences or other measures to protect vegetation or fauna, spill kits) • location and full extent of any vegetation disturbance.
Sydney Water's Project Manager (after consultation with the environmental and community representatives and affected landowners) can approve temporary ancillary construction facilities (such as compounds and access tracks), without additional environmental assessment or approval if the facilities: • limit proximity to sensitive receivers • do not disrupt property access • have no impact to known items of non-Aboriginal and Aboriginal heritage • are outside high risk areas for Aboriginal heritage • use existing cleared areas and existing access tracks • have no impacts to remnant native vegetation or key habitat features • have no disturbance to waterways • do not require additional mitigation measures beyond those included in the EIA • do not disturb contaminated land or acid sulfate soils • will be rehabilitated at the end of construction. The Delivery Contractor must demonstrate in writing how the proposed ancillary facilities meet these principles. Any facilities that do not meet these principles will require additional environmental impact assessment. The agreed location of these facilities must be shown on the CEMP site plan and appropriate environmental controls installed.
Prepare an Incident Management Plan (IMP) outlining actions and responsibilities for: • predicted/onset of heavy rain during works • spills • unexpected finds (e.g. heritage and contamination) • other potential incidents relevant to the scope of works. All site personnel must be inducted into the IMP.

Should the methodology or alignment change from the REF, no further environmental assessment is required provided the change:

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

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

The Delivery Contractor will continue consultation with Campbelltown City Council regarding any impacts to council assets and closeout any concerns prior to construction.

Topography, geology and soils

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

- develop a Soil and Water Management Plan (SWMP) as part of the CEMP
- divert surface runoff away from disturbed soil and stockpiles
- install sediment and erosion controls before construction starts
- reuse topsoil where possible and stockpile separately
- inspect controls at least weekly and immediately after rainfall
- rectify damaged controls immediately
- remove controls once surfaces have been stabilised, including removing trapped sediment in drainage lines.

Minimise ground disturbance and stabilise disturbed areas progressively.

Delivery Contractor to ensure imported material is Virgin Excavated Natural Materials (VENM) or meets a relevant NSW EPA Resource Recovery Order and Resource Recovery Exemption, or is a commercially supplied material that is not waste.

If using materials that are subject to a NSW EPA Resource Recovery Order/Exemption the Delivery Contractor must ensure the conditions in that Order/Exemption are strictly adhered to.

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

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

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

Eliminate ponding and erosion by restoring natural landforms to the pre-works condition.

Adopt appropriate soil salinity mitigation measures in accordance with Western Sydney Salinity Code of Practice (Western Sydney Regional Organisation of Councils, 2003). This may include:

- treating existing salinity with gypsum
- establishing salt tolerant species in existing or potential salinity problem areas after construction
- stabilising existing areas of erosion
- minimising water use on site
- avoiding rotation and vertical displacement of the original soil profile
- backfilling excavations deeper than one metre in the same order, or treating or using this material as fill at depths more than one metre from the finished level.

Water and drainage

The Delivery Contractor will undertake site investigations prior to construction and develop mitigation measures to manage and dispose of any potential contaminated groundwater.

If groundwater dewatering is required, Sydney Water will obtain a groundwater Water Supply Works Approval. The Delivery Contractor is responsible for:

- preparing a Dewatering Management Plan prior to construction
- complying with the approval conditions (such as protecting water quality; minimising aquifer extraction volumes, monitoring extraction with flow meters and recording volumes).

Keep functioning spill kits on site for clean-up of accidental chemical/fuel spills. Keep the spill kits stocked and located for easy access.

Locate portable site amenities, chemical storage and stockpiles of erodible materials away from watercourses, drainage lines and flood prone areas.

Store all chemicals and fuels in accordance with relevant Australian Standards and Safety Data Sheets. Record stored chemicals on site register. Bund potential contaminants and store on robust waterproof membrane, away from drainage lines. Ensure bunded areas have 110% capacity of the largest chemical container, or an additional 25% capacity of the total volume stored within (whichever is greater). Tightly secure chemicals and fuels in vehicles. Clearly label all chemicals.

Conduct refueling, fuel decanting and vehicle maintenance in compounds where possible. If field refueling is necessary, designate an area away from waterways and drainage lines with functioning spill kits close by.

Conduct any equipment wash down within a designated washout area.

Ensure equipment is leak free. Repair oil/fuel leaks immediately or remove from site and replace with a leak-free item.

Flora and fauna

Vehicles, equipment, materials, and footwear are to be clean on entry (free of soil, mud and/or seeds) to minimise the risk of introduction or spread of *Phytophthora cinnamomia*.

Offset residual impacts to native vegetation and trees in accordance with the Biodiversity Offset Guideline (SWEMS0019.13).

Consider offsetting in an area with the potential to have a positive impact on a known population of koalas, such as the replanting of preferred koala feed trees.

Physically delineating areas of native vegetation that will not be removed and designate those areas as 'no-go zones'.

A suitably qualified ecologist will accompany the Delivery Contractor to complete a pre-clearing assessment within 72 hours before work starts. Pre-clearing surveys would include:

- Targeted searches for Cumberland Plain Land Snail (*Meridolum corneovirens*) at the base of any eucalypts in habitat mapped as PCT 3616. If the species is detected, the ecologist will relocate the species before works continue.
- Identification of any breeding or nesting activities by native fauna. If breeding or nesting activities will be disrupted, further assessment is required.
- Any hollow-bearing trees not previously identified in or near the study area would be marked by an ecologist so that they are retained and avoided by contractors.
- Clearing must not commence until the proposed area has been inspected for koalas. Clearing of native vegetation and/or earthworks must be temporarily suspended within 25 m of any tree concurrently occupied by a koala, and must not resume until the koala has moved from the tree of its own volition.

Any unexpected threatened species or ecological communities identified during the pre-clearing assessment should be appropriately assessed through a supplementary impact assessment.

Where fauna species are identified in vegetation to be cleared, animals would be removed and relocated to adjacent bushland prior to felling. If this is not possible, the tree would be sectionally dismantled or soft felled under the supervision of an ecologist or wildlife carer, before relocating the animal.

If any priority weeds are identified during the Project, these would be removed and disposed of at an appropriately licenced waste facility. The equipment used for removing them would be cleaned to minimise the likelihood of transferring and exotic plant materials.

Cover open trenches overnight to avoid fauna becoming trapped. Additionally, trenches should be checked each morning for possible trapped fauna.

Construction should occur during standard daylight hours to avoid potential indirect impacts from lighting on nocturnal fauna such as owls, amphibians, and mammals. Any permanent lighting proposed as part of the development should adopt directional fittings and lighting posts to minimise light spill into adjacent areas of native vegetation.

Due to the high likelihood of occurrence of Koala within the construction footprint, the discharge facility will incorporate the following mitigation measures from the Campbelltown Comprehensive Koala Plan of Management (2018):

- Keep speed limits below 40 km/h and erect wildlife signage during construction and operation.
- Approved wildlife exclusion fencing should be installed around the discharge facility, with the lower half clad in galvanised tin sheeting on the outside face. This is recommended to exclude koalas from accessing the discharge facility during operation.
- Sliding gates (or other) should be installed at fence-ends, driveways, and other access points to prevent koala access to the discharge facility during operation.
- Koala access to the facility should be prevented at all times. Temporary fencing should be installed to restrict koala access during construction.

Heritage

Repeat the basic AHIMS search if it is older than 12 months. Conduct additional assessment if new sites are registered and could be impacted by the works.

Do not make publicly available or publish, in any form, Aboriginal heritage information on sites / potential archaeological deposits, particularly regarding location.

If any Aboriginal object or non-Aboriginal relic is found, cease all excavation or disturbance in the area and notify the Sydney Water Project Manager in accordance with SWEMS0009.

Construction noise and vibration

Construction works must comply with the EPA Construction Noise Guideline (Draft, 2021), including scheduling work and deliveries during standard daytime working hours of 7am to 6pm Monday to Friday and 8am to 1pm Saturday. No work to be scheduled on Sunday nights or public holidays.

The proposal will also be carried out in accordance with Sydney Water's Noise Management Procedure SWEMS0056.

All reasonable and feasible noise mitigation measures should be justified, documented and implemented on-site to mitigate noise impacts.

Incorporate standard daytime hours noise management mitigation measures into the CEMP, including but not limited to:

- Identify and consult with the potentially affected residents prior to commencement of works. This should:
    - describe the nature of works, the expected noise impacts, approved hours of work, duration, complaints handling and contact details
    - determine need for, and appropriate timing of respite periods (e.g. times identified by the community that are less sensitive to noise such as mid-morning or mid-afternoon for works near residences).
- Implement a noise complaints handling procedure.

- Do not warm-up plant or machinery near residential dwellings before the nominated working hours.
- Select appropriate plant for each task, to minimise the noise impact (e.g. all stationary and mobile plant will be fitted with residential type silencers).
- Do not use engine brakes when entering or leaving the work site(s) or within work areas.
- Regularly inspect and maintain equipment in good working order.
- Arrange work sites where possible to minimise noise (e.g. generators away from sensitive receivers, site set up to minimise use of vehicle reversing alarms, site amenities and/ or entrances away from noise sensitive receivers).
- Use natural landforms/ mounds or site sheds as noise barriers.
- Schedule noisy activities around times of surrounding high background noise (local road traffic or when other noise sources are active).

If works **beyond standard daytime hours are needed**, the Delivery Contractor would:

- justify the need for out of hours work (OOHW) and why it is not possible to carry out the works during standard daytime hours
- consider potential noise impacts and implement the relevant standard daytime hours mitigation measures, follow Sydney Water's Noise Management Code of Behaviour (SWEMS0056.01) and document all reasonable and feasible management measures to be implemented
- identify additional community notification requirements and outcomes of targeted community consultation
- seek approval from the Sydney Water Project Manager in consultation with the environment and communications representatives.

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

- justify the need for night works
- consider potential noise impacts and implement the relevant standard daytime and out of hours mitigation measures and document consideration of all reasonable and feasible management measures
- identify community notification requirements (e.g. for scheduled night work (not emergency works)
- notify all potentially impacted residents and sensitive noise receivers not less than one week prior to commencing night work
- seek approval from the Sydney Water Project Manager in consultation with the environment and communications representatives.

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

- justify why all other times are not feasible
- consider potential noise impacts and implement relevant standard daytime, out of hours and night-time mitigation measures and other reasonable and feasible management measures

- identify community notification requirements
- seek approval from the Sydney Water Project Manager in consultation with the environment and communications representatives.

Air and energy

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

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

Switch off vehicles/machinery when not in use.

Implement measures to prevent offsite dust impacts, for example:

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

Cover all transported waste.

During operation, washdown hoses at the discharge facility will be used to clean up any spills to reduce odour.

Waste and hazardous materials

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

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

Minimise the generation of waste, sort waste streams to maximise reuse/recycling in accordance with the *Waste Avoidance and Resource Recovery Act 2001*.

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

Prevent pollutants from escaping including covering skip bins.

Dispose excess vegetation (non-weed) that cannot be used for site stabilisation at an appropriate green waste disposal facility.

If fibro or other asbestos containing material is identified, restrict access and follow Sydney Water's Asbestos Management – Minor Works procedure, Document Number 746607 and SafeWork NSW

requirements. Contact Sydney Water Project Manager (who will consult with the Contamination and Hazardous Materials team propertyenvironmental@sydneywater.com.au).

Traffic and access

Consult with the relevant traffic authority about managing impacts to pedestrian traffic, signposting, parking, line-marking or if traffic control or pavement restoration is required.

Develop management measures to minimise traffic impacts near residential properties and businesses by consulting with them.

Erect signs to inform road users of the proposed works.

Social and visual

Undertake works in accordance with Sydney Water Communications policies and requirements including:

- notify impacted residents and businesses
- erect signs to inform the public on nature of work
- personnel treat community enquiries appropriately.

Minimise visual impacts (e.g. retain existing vegetation where possible).

Maintain work areas in a clean and tidy condition.

Regular engagement with the local community will be performed in accordance with the project Community and Stakeholder Engagement Plan to manage any impacts and ensure the scope of works performed by Sydney Water is communicated accurately.

Cumulative impacts

The Delivery Contractor will coordinate with the Glenfield WRRF operations team and Project Managers for concurrent projects to minimise potential cumulative impacts.

5. Conclusion

Sydney Water has prepared this REF to assess the potential environmental impacts of Glenfield IOP Discharge Facility. The proposal is required to meet the higher forecast growth for development. The IOP will be a wastewater pump-out system which allows temporary wastewater servicing of Sydney Water customers ahead of delivering permanent services.

The main potential construction environmental impacts of the proposal include impacts from traffic and noise. During operation, the potential impacts are associated with traffic. Given the nature, scale and extent of impacts and implementation of the mitigation measures outlined in this REF, the proposal is unlikely to have a significant impact on the environment. Therefore, an environmental impact statement is not required under Division 5.1 of the EP&A Act.

The REF considers how the proposal aligns with the principles of ESD. The proposal will 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

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NSW Government. (2025). MinView. Retrieved from https://minview.geoscience.nsw.gov.au/#/?lon=148.5&lat=-32.5&z=7&l=

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SW134 11/25

Appendix A – Section 171 and 171A checklist

A1 Section 171 checklist

Section 171 checklist	REF finding
Any environmental impact on a community	There may be minor impacts on the community from noise, traffic and odour. There will be environmental improvements by providing a temporary reliable wastewater service to Sydney Water's South West Region and Greater Macarthur Region growth areas ahead of permanent wastewater infrastructure.
Any transformation of a locality	The proposal will result in a minor transformation of a locality through the addition of new infrastructure. However, the proposal site is screened by vegetation and is adjacent to Glenfield WRRF, within Sydney Water property. As such, it is consistent with surrounding landscapes.
Any environmental impact on the ecosystems of the locality	The proposal will not result in environmental impacts on the ecosystems of the locality. Vegetation removal would not result in a significant impact to native ecosystems. Replanting will offset potential impacts.
Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality	The proposal will not reduce these factors.
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 will not have any effect upon these factors. The new infrastructure would be largely screened by existing vegetation surrounding the Sydney Water property and would have a minimal effect on aesthetic values.
Any impact on the habitat of any protected animals (within the meaning of the *Biodiversity Conservation Act 2016*)	The proposal will remove potential habitat for the Cumberland Plain Land Snail (*Meridolum corneovirens)* and koala (*Phascolarctos cinereus*). However, the proposal is not expected to have a significant impact on these species and replanting will offset potential impacts.
Any endangering of any species of animal or plant or other form of life, whether living on land, in water or in the air	Habitat for fauna species will be removed (see above comment). However, with the implementation of mitigation measures, the proposal will not endanger any species.
Any long-term effects on the environment	The proposal will not have any long-term impacts on the environment but will provide a short-term benefit by providing wastewater services to accelerated development.

Section 171 checklist	REF finding
Any degradation of the quality of the environment	The proposal will maintain the quality of the environment.
Any risk to the safety of the environment	The proposal will ensure the safety of the environment.
Any reduction in the range of beneficial uses of the environment	The proposal will maintain the range of beneficial uses of the environment. The proposal is in Sydney Water property and the use of the land would be consistent with its current use.
Any pollution of the environment	Construction of the proposal may result in temporary additional noise. Environmental mitigation measures will mitigate the potential for noise pollution and no other pollution is expected.
Any environmental problems associated with the disposal of waste	The disposal of wastes will be conducted in accordance with the environmental mitigation measures, and no environmental problems associated with the disposal of waste are expected.
Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply	The proposal will not affect demand on resources.
Any cumulative environmental effect with other existing or likely future activities	The proposal may have temporary cumulative traffic and noise impacts with other projects proposed at the Glenfield WRRF. Coordination between these projects will minimise potential cumulative impacts.
Any impact on coastal processes and coastal hazards, including those under projected climate change conditions	The proposal will not have any impact on these factors.
Any applicable local strategic planning statements, regional strategic plans or district strategic plans made under the EP&A Act, Division 3.1	The proposal is to temporarily service growth. Applicable strategic planning statements and plans have been considered in the system planning and options selection process.
Any other relevant environmental factors.	The proposal has been assessed against the factors listed above, and there are no other relevant environmental factors to consider.

Section 171A of the EP&A Regulation requires a determining authority to take into account the matters a consent authority must consider under Part 6.2 of the BCSEPP for a proposal within a 'regulated catchment'. As the proposal is within the Georges River Catchment, the requirements of Section 171A(1) are applicable and are considered in Table A2 below.

A2 Section 171A checklist

Section 171A checklist (Development in regulated catchments)	REF finding
BCSEPP – Section 6.6(1) - Water quality and quantity In deciding whether to grant development consent to development on land in a regulated catchment, the consent authority must consider the following:	
(a) whether the development will have a neutral or beneficial effect on the quality of water entering a waterway	Mitigation measures will be implemented to ensure that the proposal has a neutral impact on water quality in the Georges River and Bunbury Curran Creek. Environmental mitigation measures will mitigate the potential for the proposal to pollute the environment during construction.
(b) whether the development will have an adverse impact on water flow in a natural waterbody	The proposal will not modify or adversely affect water flows in the catchment during construction or operation.
(c) whether the development will increase the amount of stormwater run-off from a site	The proposal will result in a minor increase in the area of impervious surfaces.
(d) whether the development will incorporate on-site stormwater retention, infiltration or reuse	Drainage for the new hardstand areas would capture clean run-off from the hardstand and connect to an existing stormwater swale drain north of the discharge facility.
(e) the impact of the development on the level and quality of the water table	The proposal may encounter groundwater during construction, however, impacts to groundwater levels and quality are expected to be minor.
(f) the cumulative environmental impact of the development on the regulated catchment	The proposal addresses the need for wastewater services to cater for accelerated growth. Potential impacts from the proposal are expected to be limited and localised. By implementing environmental mitigation measures in section 4, the potential for cumulative impacts between the proposal and other projects within the catchment is low.
(g) whether the development makes adequate provision to protect the quality and quantity of ground water.	Impacts to the level and quality of the groundwater are expected to be minor (see 6.6(1)(e) above).
BCSEPP – Section 6.6(2) - Water quality and quantity Development consent must not be granted to development on land in a regulated catchment unless the consent authority is satisfied the development ensures:	

Section 171A checklist (Development in regulated catchments)	REF finding
(a) the effect on the quality of water entering a natural waterbody will be as close as possible to neutral or beneficial	Mitigation measures are included in Table 4-2 to ensure that the proposal will have a neutral effect on the water quality of the catchment.
(b) the impact on water flow in a natural waterbody will be minimised	The proposal will not modify or adversely affect water flows within the regulated catchment during construction or operation.
BCSEPP – Section 6.7(1) - Aquatic Ecology In deciding whether to grant development consent to development on land in a regulated catchment, the consent authority must consider the following:	
(a) whether the development will have a direct, indirect or cumulative adverse impact on terrestrial, aquatic or migratory animals or vegetation	The proposal requires up to 0.87 ha of vegetation removal which will be offset. An ecology assessment confirmed potential impacts on terrestrial, aquatic or migratory animals or vegetation would not be significant.
(b) whether the development involves the clearing of riparian vegetation and, if so, whether the development will require: (i) a controlled activity approval under the *Water Management Act 2000*, or (ii) a permit under the *Fisheries Management Act 1994*	The proposal will not clear riparian vegetation. Sydney Water is exempt from the need to obtain a controlled activity approval under the *Water Management Act 2000*. A permit under the *Fisheries Management Act 1994* is not required.
(c) whether the development will minimise or avoid: (i) the erosion of land abutting a natural waterbody, or (ii) the sedimentation of a natural waterbody	Mitigation measures to minimise or avoid the potential for erosion and sedimentation to surrounding waterways within the catchment are included in Table 4-2.
(d) whether the development will have an adverse impact on wetlands that are not in the coastal wetlands and littoral rainforests area	There are no wetlands near the construction footprint.
(e) whether the development includes adequate mitigation measures and rehabilitation measures to protect aquatic ecology	Mitigation measures to protect aquatic ecology within the catchment are included in Table 4-2.
(f) if the development site adjoins a natural waterbody, whether additional measures are required to ensure a neutral or beneficial effect on the water quality of the waterbody	Mitigation measures are included in Table 4-2 to ensure that the proposal will have a neutral or beneficial effect on water quality within the catchment.
BCSEPP – Section 6.7(2) - Aquatic Ecology	

Section 171A checklist (Development in regulated catchments)	REF finding
Development consent must not be granted to development on land in a regulated catchment unless the consent authority is satisfied of the following:	
(a) the direct, indirect or cumulative adverse impact on terrestrial, aquatic or migratory animals or vegetation will be kept to the minimum necessary for the carrying out of the development	Mitigation measures are included in Table 4-2 to ensure that impacts on terrestrial, aquatic or migratory animals or vegetation are limited to the minimum extent necessary.
(b) the development will not have a direct, indirect or cumulative adverse impact on aquatic reserves	There are no aquatic reserves near the proposal.
(c) if a controlled activity approval under the *Water Management Act 2000* or a permit under the *Fisheries Management Act 1994* is required in relation to the clearing of riparian vegetation—the approval or permit has been obtained	Sydney Water is exempt from the need to obtain a controlled activity approval under the *Water Management Act 2000*. A permit under the *Fisheries Management Act 1994* is not required for the proposal.
(d) the erosion of land abutting a natural waterbody or the sedimentation of a natural waterbody will be minimised	Mitigation measures to minimise the potential for erosion and sedimentation impacts to these areas within the catchment are included in Table 4-2.
(e) the adverse impact on wetlands that are not in the coastal wetlands and littoral rainforests area will be minimised	There are no wetlands near the construction footprint.
BCSEPP – Section 6.8(1) – Flooding	
In deciding whether to grant development consent to development on land in a regulated catchment, the consent authority must consider the likely impact of the development on periodic flooding that benefits wetlands and other riverine ecosystems	The proposal is not in flood prone land and will not have adverse impacts on beneficial flooding events.
BCSEPP – Section 6.8(2) – Flooding Development consent must not be granted to development on flood liable land in a regulated catchment unless the consent authority is satisfied the development will not:	
(a) if there is a flood, result in a release of pollutants that may have an adverse impact on the water quality of a natural waterbody, or	The proposal is not on flood liable land. Mitigation measures to minimise the potential for erosion and sedimentation and potential contamination impacts to areas within the catchment are included in Table 4-2.
(b) have an adverse impact on the natural recession of floodwaters into wetlands and other riverine ecosystems	The proposal will not alter the existing contours of the land and will not affect the overland flow path(s) of floodwaters.

Section 171A checklist (Development in regulated catchments)	REF finding
BCSEPP – Section 6.9(1) - Recreation and public access In deciding whether to grant development consent to development on land in a regulated catchment, the consent authority must consider:	
(a) the likely impact of the development on recreational land uses in the regulated catchment	The proposal will not have any impact on recreational land uses.
(b) whether the development will maintain or improve public access to and around foreshores without adverse impact on natural waterbodies, watercourses, wetlands or riparian vegetation	Not applicable.
BCSEPP – Section 6.9(2) - Recreation and public access Development consent must not be granted to development on land in a regulated catchment unless the consent authority is satisfied of the following:	
(a) the development will maintain or improve public access to and from natural waterbodies for recreational purposes, including fishing, swimming and boating, without adverse impact on natural waterbodies, watercourses, wetlands or riparian vegetation	Not applicable.
(b) new or existing points of public access between natural waterbodies and the site of the development will be stable and safe	Not applicable.
(c) if land forming part of the foreshore of a natural waterbody will be made available for public access as a result of the development but is not in public ownership—public access to and use of the land will be mitigation measured	Not applicable.

Appendix B – Consideration of Ecologically Sustainable Development

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 there is no scientific uncertainty relating to the proposal.
Inter-generational equity – *the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*	The proposal will help to meet the needs of future generations by providing a temporary wastewater service to service growth.
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. Vegetation removal for the proposal will be offset.
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? Note: refer to Section 4 – additional traffic unlikely to strain the road capacity however, consultation has still been undertaken.	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

TISEPP section	Yes	No
Section 2.15, consultation with public authorities other than councils		
Will the proposal be on land adjacent to land reserved under the *National Parks and Wildlife Act 1974* or land acquired under Part 11 of that Act*? If so, consult with DPE (NPWS).*		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