No.	Issue	Information Requested	Proponent Response
Local road crossings			
1	Detailed plans	The proposed pipeline crosses multiple local roads, which are administered by Gladstone Regional Council. In order for Council to understand the impacts of the pipeline on local roads, further detail on the crossing angles and construction methods are required. **The proponent is requested to** provide plans detailing the crossing angle and construction method (eg: under bore, trenching) for where the pipeline crosses Council administered local roads.	The current project design is at 30% completion and will be further developed and finalized after a contractor is engaged for construction. GAWB acknowledges that approval for works on Council roads will be required for any activities within GRC road reserves, allowing GRC the opportunity to review and approve the progressed design.
State transport interests			
2	Pipe orientation	The proposed orientation of the pipe crossing under Gladstone – Mount Larcom Road (Road 181) at approximate chainage 16.75km is at a greater oblique angle to the state-controlled road alignment. Under TMR Technical Note 163 – Third Part Utility Infrastructure Installation in State Controlled Roads Technical Guidelines, July 2023 s5.2.2, underground utility services should be located as close as to 90 degrees as practical. **The proponent is requested to** amend the plans to ensure the alignment is as close as 90 degrees as possible or alternatively, provide justification as to why the proposed alignment should be adopted.	Acknowledged and will be considered as the design progresses. GAWB notes that Road Corridor Permits will be required for works within the State-Controlled Road Corridor, allowing TMR the opportunity to review and approve the progressed design.

3	Proposed cover	Proposed cover at the start and end of the bore are non-compliant in accordance with TMR's Technical Note 163 - Third Party Utility Infrastructure Installation in State Controlled Roads Technical Guidelines, July 2023. Shortfalls are approximately 200mm and 300mm in the northern and southern sides of Gladstone Mount Larcom Road respectively. **The proponent is requested to** amend the plans to ensure the alignment is as close as 90 degrees as possible or, alternatively, provide justification as to why the proposed alignment should be adopted.	Acknowledged and will be considered as the design progresses. GAWB notes that Road Corridor Permits will be required for works within the State-Controlled Road Corridor, allowing TMR the opportunity to review and approve the progressed design.
Environment			
4	Waterways	The pipeline intersects waterways. The Construction Environment Management Plan identifies activities that may occur in preparation for and during construction, including the use of trenchless drilling or tunnelling. **The proponent is requested to** provide details of trenchless methods to be committed to for crossing the larger waterways, particularly for Spring Creek.	GAWB's contractor will review the accepted development requirements for operational work related to constructing or raising temporary waterway barrier works (reference). The contractor will assess whether the requirements can be met while undertaking construction within the existing easement to determine the most suitable crossing method of waterways. Where determined necessary, GAWB proposes to use horizontal directional drilling (HDD). The installation of a pipeline by HDD involves drilling a pilot hole, at a shallow angle beneath the surface, from an entry point on one side of the crossing to an exit point on the other side of the crossing. The hole is then enlarged by reaming to allow for the pipe string to be pulled back through the drill hole from the exit point to the entry point without damaging the pipe. The pipeline string is then welded to adjoining sections of the pipeline. Once the pipe string is installed and tied into the main section of the pipeline, the entry and exit points are remediated.

			Drilling is conducted by a specific HDD rig, operated by a specialist contractor. The size of the HDD rig and its associated footprint depends upon the size of the pipe, the nature of the subsurface geology and the length of the drill. Drilling mud (typically bentonite) is used to hydraulically drive the drilling head, as a coolant, to wash in-situ material (cuttings) from the drilled hole and to seal and line the hole to facilitate insertion of the pipe. Additives are also sometimes used in the drilling mud to aid in the drilling process depending on the geologic formation or substrate being drilled through. These additives may include soda ash (sodium carbonate) for pH control and surfactants to disperse clay particles. Cuttings are screened at the HDD rig to remove drilling mud, which is recycled. Screened cuttings are typically diverted to skip bins, though settlement pits may also be used, prior to disposal in landfill. The preferred method of circulating drilling mud between the HDD exit and entry point is though return lines made of small diameter high density polyethylene pipe. No clearing or ground disturbance is required for surface return lines as they will be laid on the ground surface within existing cleared areas and along access tracks. Surface return lines will be removed once the HDD is complete. Where surface return lines are not feasible, mud return lines can be drilled or trucks used to deliver and capture muds.
5	Biodiversity	The proposal is located on sites identified as being within the Biodiversity Overlay under the Gladstone Regional Council Planning Scheme. To determine if the proposal impacts any state or local biodiversity interests, and the adequacy of proposed management and mitigation measures, an assessment against the requirements of Section	Refer attached report.

		8.2.3 Biodiversity Overlay Code in the Gladstone Regional Council Planning Scheme is required. **The proponent is requested to** provide an assessment of the proposal against Section 8.2.3 Biodiversity Overlay Code in the Gladstone Regional Council Planning Scheme to determine the impact of the proposal on biodiversity in the region, including MSESs.	
Bushfire hazard			
6	Bushfire hazard	The proposal is located on sites identified as being within the Bush Fire Hazard Overlay under the Gladstone Regional Council Planning Scheme. While a Bushfire Management and Mitigation Management Plan has been provided with the application, an assessment against the requirements of Section 8.2.4 Bushfire Hazard Overlay Code in the Gladstone Regional Council Planning Scheme is required to determine the adequacy of the proposed management and mitigation measures. **The proponent is requested to** provide an assessment of the proposal against Section 8.2.4 Bushfire Hazard Overlay Code in the Gladstone Regional Council Planning Scheme to determine the adequacy of management and mitigation measures proposed in the Bushfire Management and Mitigation Management Plan.	Refer attached report.

Bush Fire Hazard Overlay under the Gladstone Regional Council Planning Scheme

Requirements of Section 8.2.4 Bushfire Hazard Overlay Code, Assessment Benchmarks

Performance outcome	Acceptable outcome	Response
Site Suitability		
PO1 Development maintains the safety of people and property by not exposing them to an unacceptable risk from bushfire. Note—A site specific bushfire hazard assessment may demonstrate that the site is not within a bushfire hazard area or has a low degree of bushfire risk.	No acceptable outcome is nominated.	**Complies with PO1** Bushfires are a design and operational consideration. A minimum 10 m cleared buffer will be maintained around the Landing Road Pump Station (LRPS) i.e. GAWB controlled land will extend a minimum of 10 m outside of the compound fence. The LRPS will be fully enclosed with a building structure suitably detailed to be bushfire resistant e.g. RC tilt panel walls, sealed metallic roof with no gutters, and bushfire resistant ventilation design.
PO2 Development does not result in a higher concentration of people living, working or congregating in a high or very high bushfire hazard area unless it can be demonstrated: a. there is an overriding community need in the public interest, and b. no other site is suitable and reasonably available. Note—A 'medium, high or very high bushfire risk hazard area' means land mapped on the bushfire overlay map as having medium, high or very high potential bushfire risk.	**AO2** The following uses are not located on land within a confirmed medium, high or very high bushfire hazard area: a. child care facility b. community care centre c. educational establishment d. hostel e. hospital f. multiple dwelling g. non–resident workforce accommodation	**Complies with PO2** The purpose of the development is for buried infrastructure and a water pump station. Post construction, infrequent operational access is required onsite.

Performance outcome	Acceptable outcome	Response
	h. residential care facility i. retirement facility j. shopping centre k. short–term accommodation l. tourist attraction m. tourist park.	
Water supply		
PO3 Development in areas with a reticulated water supply has adequate flow and pressure for fire–fighting purposes at all times.	**AO3** The water supply network has a minimum sustained pressure and flow of at least 10L per second at 200kPa.	**Complies with PO3** The purpose of the development is for pumping high volumes of water. The facility will have an estimated pump pressure of 350 L/s.
PO4 Development in areas without a reticulated water supply has an appropriate dedicated water supply for fire–fighting purposes that are safely located and freely accessible for fire–fighting purposes at all times.	**AO4.1** Development involving a gross floor area greater than 50m^2 where a reticulated water supply is not available is: a. provided with an easily accessible fire resistant on–site water storage of not less than 5,000L (e.g. concrete tank with fire brigade fittings, in–ground swimming pool, dam fed by a permanent water source) that is within 100m of each class 1, 2, 3, or 4 building, and b. has a hard standing area allowing a heavy rigid fire	**Complies with PO4** The LRPS is not a habitable dwelling. The LRPS will have sufficient area allowing a heavy rigid fire appliance safe access to the compound.

Performance outcome	Acceptable outcome	Response
	appliance safe access to within 6m of the storage facility. Note—Plastic water tanks are not considered to be fire resistant unless they are submerged.	
	AO4.2 The location of water supplies is readily identifiable from the street frontage with clear signage directing firefighters to its access point.	Water access point(s) will be clearly identifiable with clear signage directing firefighters to its access point.
Roads, fire access trails and firebreaks		
PO5 Roads and fire access trails are designed and constructed to: a. enable efficient access to buildings and structures for fire–fighting purposes for emergency services, and b. swift evacuation in emergency situations.	**AO5.1** Roads and fire access trails are designed and constructed to: a. separate the development from the hazardous vegetation b. have a maximum gradient of 12.5% c. a minimum cleared width of 6m and a minimum formed width of 4m d. have adequate drainage and erosion control devices e. provides passing and turning areas for fire–fighting	**Complies with PO5** Access to the LRPS will be via a 6 m access track within ~18 m wide existing East End pipeline.

Performance outcome	Acceptable outcome	Response
	appliances at intervals of not less than 200m f. have a vehicular access at each end to roads or a bushfire trail g. not involve any cul–de–sac h. have gates locked with a system authorised by QFES, and i. have suitable arrangements in place to ensure maintenance in perpetuity.	
	AO5.2 Development has direct access to an evacuation route with a potential fire intensity exposure no greater than 2kw/m2. Note—The distance from hazardous vegetation to achieve 2kw/m2 is generally: • 58m in a very high bushfire hazard areas • 52m in a high bushfire hazard area, and • 44m in a medium bushfire hazard area.	The LRPS has direct access south and north along the existing ~18m wide cleared and maintained easement.
	AO5.3	A minimum 10 m separation from the perimeter to the hazardous vegetation will be maintained.

Performance outcome	Acceptable outcome	Response
	Development incorporates an area of managed vegetation that separates lot boundaries from hazardous vegetation by a distance of: a. 20m to a high or very high bushfire risk area, or b. 10m to a medium risk bushfire area and includes a fire access trail.	
PO6 Development provides for adequate fire breaks that minimise bushfire hazard by: a. separating hazardous vegetation from development areas, and b. facilitating access for firefighting and emergency vehicles.	No acceptable outcome is nominated.	**Complies with PO6** Bushfires are a design and operational consideration. A minimum 10 m cleared buffer will be maintained around the Landing road Pump Station (LRPS) i.e. GAWB controlled land will extend a minimum of 10 m outside of the compound fence.
Hazardous materials		
PO7 The potential for the release of hazardous materials as a result of a bushfire event is avoided. Note—The term 'hazardous material' is defined in the Glossary of the relevant State Planning Policy.	**AO7** Development involving the production or storage of hazardous materials in bulk: a. is not located within a high or very high bushfire hazard area, or b. complies with a site specific bushfire management plan	**N/A** the development does not involve the production or storage of hazardous materials in bulk.
Reconfiguration of a lot		

Performance outcome	Acceptable outcome	Response
PO8 Additional lots avoid the risk of bushfire hazard to personal and property safety and increased risk of damage to assets. Note—A site specific bushfire hazard assessment may demonstrate that the site is not within a bushfire hazard area or has a low degree of bushfire risk. Any site specific bushfire assessment should be carried out in accordance with the method set out in Appendix 3 of *State Planning Policy 1/03 Guideline Mitigating the adverse impacts of Flood, Bushfire and Landslide*.	**AO8** New residential lots (including rear lots) do not occur in a bushfire hazard area.	**N/A**
Community infrastructure		
PO9 Development for community infrastructure is located, designed and sited to: a. protect the safety of people during a bushfire b. not increase the exposure of people to the risk from a bushfire event, and c. function effectively during and immediately after bushfire events.	No acceptable outcome is nominated	**N/A**

Information Request Response

Attn: Trent Williams
EEPL Approvals Project Manager

Date: 6/05/2025Our
reference: J0309

Dear Trent,

This document addresses the item 5 of the Information Request received in early April 2025 from Gladstone Regional Council (GRC) via the Office of the Coordinator General concerning a State Development Application for a Material Change of Use within 130CTN1912, 2SP250625, 31SP253027, 32SP253027, 27RP619929, 31SP129157, 25SP115226, 23SP115225, 13RP620157, 13RP620157, 20SP115224, 21SP115224, 21SP115224, 3SP260764, 7SP177782 in the Gladstone State Development Area.

Please refer to Table 1 and Attachment A for responses to Item 5 of the Information Request, namely to address Biodiversity Overlay Code in the Gladstone Regional Council Planning Scheme.

Table 1: Responses to the Information Request.

Responses to Information Request Items
Item 5 – Biodiversity The proposal is located on sites identified as being within the Biodiversity Overlay under the Gladstone Regional Council Planning Scheme. To determine if the proposal impacts any state or local biodiversity interests, and the adequacy of proposed management and mitigation measures, an assessment against the requirements of Section 8.2.3 Biodiversity Overlay Code in the Gladstone Regional Council Planning Scheme is required. **The proponent is requested to** provide an assessment of the proposal against Section 8.2.3 Biodiversity Overlay Code in the Gladstone Regional Council Planning Scheme to determine the impact of the proposal on biodiversity in the region, including MNES.
Background: An assessment against Section 8.2.3 Biodiversity Overlay Code in the Gladstone Regional Council Planning Scheme is attached to this letter, and a summary of the project's MNES and MSES assessments and management measures is provided below. The proposed pipeline infrastructure will be located within an existing and largely cleared services infrastructure easements where some regrowth has begun to encroach on the cleared easement. Vegetation clearing will be for construction of the pipeline and mitigation and avoidance measures (including trenchless construction methods) are in place to manage potential impacts to ecological values. The proposed pump station is located within an area of least concern remnant vegetation and will require a small section of clearing. An ecological assessment report (EAR) for the project is available in Appendix D of the planning report. The assessment included a combination of field-validated data, desktop information and interpolated field survey results. An MNES assessment report and protected plants survey report is attached to the EAR. An approved Construction Environmental Management Plan (CEMP) is available in Appendix E of the planning report, and an approved Species Management Plan (SMP) has been prepared for the project. Due to the existing cleared nature of the pipeline alignment, the EAR concluded that the project is unlikely to result in a significant impact to any known or potential ecological values within the project area, provided identified mitigation measures are implemented. Detailed plans of desktop and ground truthed ecological mapping are included in the appendix D to the planning report. The EAR identifies potential impacts to MSES as: • MSES Regulated Vegetation (defined watercourse) and • MSES Regulated Vegetation – Essential Habitat.

Responses to Information Request Items
Eleven regional ecosystems were confirmed as present in the Project Area including two that are endangered. However, only 0.002ha of endangered vegetation occurs and all will be avoided. Two fauna species, koala and squatter pigeon, were confirmed as present within the Project Area. However, disturbance to habitat for these species will be largely avoided as outlined in appendix D of the planning report. The field assessments also identified three habitat types as occurring within the Project Area that can provide habitat values for a range of species that were classified as likely to occur in the likelihood of occurrence assessment and/or essential habitat was present. These species include: • yellow-bellied glider (south-eastern) • greater glider (southern) • black-faced monarch • satin flycatcher • eastern osprey • short-beaked echidna. Direct and indirect impacts to these matters are assessed in the EAR and the MNES reports. Potential impacts to these values during the operation phase of the project were assessed as very low. The pipeline infrastructure will be located underground and will have negligible requirements for ongoing maintenance activities. Landing Road Pump Station will require a small amount of clearing of category B least concern remnant vegetation, consistent with schedule 3 (3) of the GSDA development scheme. An assessment of the project against the GSDA development scheme, including self-assessment vegetation clearing requirements, is in Section 7 of the planning report. The construction phase has greater potential to impact ecological values through disturbance of vegetation and microhabitat features. Due to the predominately cleared nature of the pipeline easement, vegetation clearing for pipeline installation will be minimal. Mitigation measures have been designed for trenching construction methods and are outlined in the CEMP and include, for example, narrowing the construction corridor to avoid vegetation encroaching on the easement where feasible. Given the limited extent of clearing required within the already disturbed Project Area (1.145ha of remnant vegetation and 0.015ha of regrowth) and the limited habitat values surrounding the Project Area as outlined in the planning report, significant impacts to the MSES are not expected to occur. Areas mapped as regulated vegetation associated with defined watercourse occur within the project area and existing easement; however, as the existing easement is largely devoid of vegetation, no riparian vegetation will be cleared at these locations. Nevertheless, the crossing at Boat Creek will be via trenchless methods and the construction contractor will undertake further assessments to determine the most suitable crossing methods at watercourses.

If you require any further information, please feel free to contact me on craigstreatfeild@basecg.com.au or on 0432 949 073.

Regards,

Dr Craig Streatfeild

Principal Ecologist

Base Consulting Group PTY LTD

Attachment A

Performance outcomes	Acceptable outcomes	Response
Environmental Protecting and Buffering		
PO1 Development maintains and protects MNES (Matters of National Environmental Significance) and MSES (Matters of State Environmental Significance) by: a. locating in areas that avoid adverse impacts on MNES and MSES, or b. where adverse environmental impacts cannot be avoided, impacts are minimised and an environmental offset is provided for any residual adverse impacts, and c. the underlying ecological processes and biodiversity values of MNES and MSES are maintained or enhanced. *Note—For MNES, consideration must be given to the requirements of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).* *Note—To assist in demonstrating achievement of this performance outcome, a detailed environmental and ecological assessment to confirm the extent and nature of values is required to be undertaken by applicants.*	**AO1** Development locates outside of an area supporting MSES (Matters of State Environmental Significance).	**Alternative solution** An EAR was developed for the project, which details the location of MNES and MSES and provides further information on avoidance and mitigation measures to maintain and protect ecological values. The EAR identifies potential impacts to MSES as: • MSES Regulated Vegetation (defined watercourse) and • MSES Regulated Vegetation – Essential Habitat. The project has been designed to avoid areas of high ecological value to the greatest extent possible through locating the pipeline infrastructure within the existing easement which has been cleared in the past. Mitigation measures to minimise impacts on native vegetation during construction will be in place. The construction contractor will also assess management measures and undertake an assessment to determine the most suitable construction methods required to avoid and/or impacts. Given the existing easement is largely cleared and the clearing of vegetation encroached is minimal (e.g. (1.145ha of remnant vegetation and 0.015ha of regrowth), the project will not have residual adverse impacts and the surrounding MSES and MNES biodiversity values will be maintained. The EAR is included in Appendix D of the planning report and supported by an MNES report. A CEMP is available in Appendix E of the planning report, and a pre-emptive high-risk Species Management Program has been prepared and approved by the Department of Environment, Tourism, Science and Innovation (DETSI).

Performance outcomes	Acceptable outcomes	Response
PO2 Development is setback from and provides an adequate vegetated buffer to significant vegetation, habitats and areas containing MSES in order to: a. protect these areas and their values from threatening processes b. avoid edge effects such as undesirable microclimate effects and threats from non–native or pest fauna or flora, and c. maintain and enhance ecological connectivity. *Note—Any setbacks or other areas required for bushfire management, safety, recreation, maintenance or any other purpose are provided in addition to a vegetated buffer provided for ecological and environmental protection purposes.* *Note—An alternative buffer width may be proposed where buffers for significant species and ecological communities, including areas of habitat for listed threatened and migratory species, are based on best practice and current scientific knowledge of individual species requirements and supported by an ecological assessment. Other legislation, including the Nature Conservation Act and EPBC Act may establish other requirements with which applicants must comply.*	**AO2** A buffer extending from the outside edge of an area of MSES is provided and has a minimum width of: a. 200m where located outside an urban area, or b. 50m where located within an urban area.	**Alternative solution** The pipeline will be located underground and within an existing and largely cleared pipeline easement. Therefore, setback requirements are not applicable.
PO3 Development within 500m of turtle nesting beaches is located, designed and operated to: a. protect the habitat values of the rookery for turtle breeding b. maintain a vegetated buffer adjacent to the beach c. ensure access to the beach nesting area is managed in a way that protects a turtle nesting area, and	**AO3.1** Development within 500m of a turtle nesting beach ensures any lighting: a. does not spill onto beach areas b. is on a structure no higher than 8.5m c. is directed away from the beach, and **d.** includes characteristic wavelengths that will not affect turtles. **AO3.2**	**Not applicable** Proposed development is not located within 500m of a turtle nesting beach.

Performance outcomes	Acceptable outcomes	Response
d. ensure lighting does not impact on the ecological and habitat values of turtle nesting areas and rookery.	Development is setback from and maintains at least a 200m wide vegetated buffer to turtle nesting beaches. The buffer is maintained in a natural state and is kept free from development.	
Wetland and Waterway Buffers		
PO4 An adequate buffer to a wetland in a wetland protection area is provided and maintained to: a. protect and enhance habitat values, connectivity and other ecological processes and values b. protect water quality and aquatic conditions c. maintain natural micro–climatic conditions d. maintain natural hydrological processes e. prevent mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding, and f. prevent loss or modification of chemical, physical or biological properties or functions of soil. *Note—Any setbacks or areas required for bushfire management, safety, recreation, maintenance or any other purpose, are provided in addition to a vegetated buffer provided for ecological purposes.*	**AO4** A development free buffer surrounding a wetland in a wetland protection area is provided and has a minimum width of: a. 200m where the wetland is located outside an urban area, or b. 50m where the wetland is located within an urban area. *Note—To avoid conflict, where a development requires multiple buffers to be established by this code to protect waterways, ecological corridors, wetlands or MSES, the greatest distances required by this code will prevail to the extent of any inconsistency.*	**Not applicable** Proposed development is not located in a wetland or wetland protection area.
For all assessable development		
PO5 Alterations to natural landforms, hydrology and drainage patterns do not adversely impact on areas containing MSES.	No acceptable outcome is nominated.	**Compliant** The proposed infrastructure may result in temporary alterations to localised hydrology and/or drainage patterns during construction. However, as the pipeline will be buried, the pipeline will not result in any long-term or permanent alterations to natural landforms, hydrology and drainage patters.
PO6		**Compliant**

Performance outcomes	Acceptable outcomes	Response
Development retains and enhances riparian vegetation along watercourses and drainage corridors, and vegetation along timbered ridgelines.	No acceptable outcome is nominated.	The pipeline alignment crosses 11 mapped watercourses. Mitigation measures are in place for vegetation management to minimise impacts on native vegetation during trenchless construction methods. Minimal riparian vegetation is present within the existing easement clearing of riparian vegetation at the watercourse locations is currently not proposed. To further minimise impacts to watercourses and the surrounding environmental values, the crossing at Boat Creek will be trenchless. The construction contractor will assess watercourse crossings and amend the construction methods if required, in order to protect riparian ecological values and maintain riparian vegetation. Watercourse crossings are identified in section 4.2 of the planning report, and regulated vegetation, including where associated with watercourses is discussed in section 4.3 of the planning report.
PO7 Buffering, rehabilitation or restoration, protects and enhances MSES and their underlying ecological processes, habitat and biodiversity values by: a. using site appropriate and locally occurring native species b. replicating as far as practicable, the species composition and structural components of healthy remnant vegetation and associated habitats, including understorey vegetation, and c. excluding environmental weeds, declared plant and other non-native plants likely to displace native flora or fauna species or degrade habitat *Note – to assist in demonstrating achievement of this performance outcome, an ecological assessment and rehabilitation plan is undertaken by the applicant*	No acceptable outcome is nominated.	**Compliant** Section 6.2.5 of the planning report provides an overview of rehabilitation for the project. Vegetation clearing requirements will be minor, and all affected areas will be rehabilitated to pre-construction conditions as far as practicable. Rehabilitation measures will be conducted according to recommendations in the *Australian Pipeline Industry Association Code of Environmental Practice – Onshore Pipelines Revision 5 2022.* Rehabilitation, and weed and pest management are further discussed in the EAR in Appendix D and the CEMP in Appendix E of the planning report. An approved Species Management Plan (SMP) has also been developed for the project.
PO8		**Compliant**

Performance outcomes	Acceptable outcomes	Response
Degraded areas supporting MSES or other environmental values important to the maintenance of underlying ecological processes required to maintain biodiversity, are rehabilitated as near as is practical to the naturally occurring state of native plant species and ecological communities.	No acceptable outcome is nominated.	Section 6.2.5 of the planning report outlines rehabilitation for the project. All areas affected by construction including work areas, temporary access tracks (if required) and temporary site office areas will be rehabilitated to pre-construction conditions as far as practicable. Rehabilitation measures will be conducted according to recommendations in the *Australian Pipeline Industry Association Code of Environmental Practice – Onshore Pipelines Revision 5 2022.*
PO9 Development: a. Avoids the introduction of pest species (plant or animal) that pose a risk to the ecological integrity and biodiversity values of MSES, and b. Includes appropriate pest management practices to control any existing threat of pest species in a way that provides for the long term ecological integrity of MSES	No acceptable outcome is nominated.	**Compliant** Weed and pest species were identified through ecological survey, and the results are presented in the EAR that was included in appendix D of the planning report. Biosecurity management measures are also included in section 8 of the planning report. Measures include vehicle wash-downs and inspections, hygiene certification for materials to be used during construction, and active weed control onsite. A CEMP has been developed to ensure avoidance and mitigation activities are in place during construction and will be updated as necessary pending approval conditions. An OEMP will be developed for the operational phase of the project.
Significant species, wildlife nesting and breeding areas		

Performance outcomes	Acceptable outcomes	Response
PO10 Development avoids direct and indirect impacts on significant ecological communities and significant species and their habitats, including disturbance from the presence of vehicles, pedestrian use, increased exposure to domestic animals and noise and lighting impacts. *Note—To assist in demonstrating achievement of this performance outcome, a detailed environmental and ecological assessment to identify any significant species or communities that may be impacted by development, is undertaken by applicants.*	No acceptable outcome is nominated.	**Compliant** An approved high-risk SMP has been developed for the project and the SMP includes detailed and specific management measures to mitigate impacts to fauna species and their breeding places, if encountered during construction. Section 8 and appendix D of the planning report includes potential impacts and measures to mitigate those impacts. During the construction phase, trenchless construction methods will be used for areas of high ecological value where other mitigation measures are insufficient. Other temporary construction impacts, including impacts from vehicles, are addressed in the CEMP.
PO11 Areas of habitat that support a critical life cycle stage such as feeding, breeding or roosting or ecological function for threatened species, ecological communities or migratory species are protected and not impacted by development.	No acceptable outcome is nominated.	**Compliant** The project is located within an existing and largely cleared easement. As such, only 1.145ha of remnant vegetation and 0.015ha of regrowth vegetation is proposed to be cleared and this vegetation has limited habitat values for fauna species and is not habitat that would support a critical life cycle stage (e.g. breeding, foraging or dispersal.). An approved high-risk SMP has been developed for the project. Temporary construction impacts, including exclusion areas where relevant, are included in the CEMP.
Ecological corridors		
PO12 Development protects ecological corridors, enhances ecological connectivity to habitats on and/or adjacent to the site. Ecological corridors and habitat linkages have dimensions and characteristics to support: a. ecological processes and functions that enable the natural change in distributions of species	**AO12.1** Development does not occur in an ecological corridor **AO12.2** No acceptable solution is nominated where in an urban residential zone or centre zone. In all other zones including the Rural Zone, Environmental Management Zone, Conservation Zone, all Industry Zones, Emerging	**Compliant** Landscape connectivity is discussed in section 4.10 of the MNES report. Within the project area, limited riparian vegetation exists that could provide movement opportunities for fauna across the landscape. Further, the existing easement is already heavily disturbed and largely cleared. As such, locating the pipeline in this existing

Performance outcomes	Acceptable outcomes	Response
and provide connectivity between populations of species over long periods of time. b. ecological responses to climate change c. connectivity between large tracts and patches of remnant vegetation, habitat areas and areas supporting MNES and MSES, and d. effective and unhindered day–to–day and seasonal movement of avian, terrestrial and aquatic fauna.	Community Zone and Limited Development Zone: Where an ecological corridor is intended to facilitate fauna movement, access or use of an area supporting MNES or MSES, the ecological corridor is maintained and restored to achieve a minimum width of 350m consisting of: a. a 250m wide core corridor to support avian species and most arboreal mammals, and **b.** a 50m wide vegetated buffer extending from the outside edges on both sides of the core corridor.	easement avoids any potential adverse impact on connectivity that would occur if the project was not located within the existing easement. Aas such, the pipeline infrastructure being located underground, will not have additional impacts on existing levels of ecological connectivity. Temporary impacts during construction will be managed through the CEMP.
PO13 Isolated habitat areas are linked by a continuous corridor to provide effective ecological connectivity and to create additional linkages along waterways, wetlands, drainage lines, ridgelines, coastlines and other areas where possible.	**AO13** Development provides a continuous corridor having a minimum width of 100m linking areas of protected vegetation to each other and other vegetation areas off–site.	**Not Applicable** The project is located within an existing and largely cleared easement. Therefore, the project does not have any isolated habitat areas and will not create new isolated habitat areas. An assessment of habitat fragmentation is in section 6.1.1.2 of the MNES report.
PO14 Development facilitates the unimpeded use and movement of terrestrial and aquatic fauna accessing the site or likely to use an ecological corridor as part of their normal life cycle by: (a) ensuring that development (e.g. roads, pedestrian access, in–stream structures) during both construction and operation does not create barriers to the movement of fauna along or within ecological corridors (b) providing wildlife movement infrastructure where necessary and directing fauna to locations where wildlife movement infrastructure has been provided to enable fauna to safely negotiate a development area, and (c) separating fauna from potential hazards through the use of appropriate barriers, fencing and buffers.	No acceptable outcome is nominated	**Compliant** The pipeline will be underground and as such, the operational phase of the project will have no additional impact to movement of terrestrial or aquatic fauna. Further, the Landing Road Pump Station is connected to woodland vegetation to the south and will not result in impeded movement of any fauna. Mitigation measures for temporary impacts to fauna during construction phase are described in Section 8 of the planning report and a CEMP is available in Appendix E of the planning report.

Performance outcomes	Acceptable outcomes	Response
Monitoring		
PO15 During construction and operation of development, ongoing management, monitoring and maintenance is undertaken to ensure impacts on areas supporting MNES or MSES and their underlying ecological processes and biodiversity values are avoided or minimised. *Note—Compliance with this requirement can be achieved by preparing a Monitoring and Remediation Plan in accordance with best practice. Where necessary, remedial action is identified and carried out on land managed by the entity carrying out the development.*	No acceptable outcome is nominated	**Compliant** The potential for impacts is greatest during construction, and a CEMP has been developed ensure avoidance and mitigation activities are undertaken and the project has no adverse impacts on MNES or MSES. In addition, management and monitoring of impacts is included in the approved high-risk SMP as well as section 8 and appendix D of the planning report The potential for impacts during operations is negligible. The pipeline will be located below the ground surface and operational activities will be limited to minor maintenance. The pump station is located next to existing cleared road access. An OEMP will be developed for ongoing management, monitoring, and maintenance of potential impacts.
Environmental offsets		
PO16 Where it is not possible to avoid adverse impacts on MSES and development has minimised adverse impacts to the greatest extent possible, development provides an offset for any significant residual impact in accordance with the *Queensland Environmental Offset Policy 2014*.	No acceptable outcome is nominated.	**Not Applicable** No significant residual impacts are expected from construction of the project due to the existing and disturbed nature of the easement and the minimal clearing of vegetation required. As such, no MSES offset is required for the project.
Wetland protection area		
PO17 Development is not carried out in a wetland in a wetland protection area, unless there are no feasible alternatives	**AO17.1** Development is not carried out: a. in a wetland in a wetland protection area, or b. within an alternative mapped boundary of a wetland in a wetland protection area, as shown in a site assessment prepared in accordance with the Department of Environment and Heritage Protection Queensland Wetland	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.

Performance outcomes	Acceptable outcomes	Response
	Definition and Delineation Guidelines (or current version). OR **AO17.2** Where AO17.1 cannot be achieved, development is to comply with PO17 – PO26. OR **AO17.3** Where AO17.1 or AO17.2 cannot be complied with, an environmental offset as described in PO27, is provided.	
Wetland and waterway buffers		
PO18 An adequate buffer to a waterway is provided and maintained to: a. protect and enhance habitat values, connectivity and other ecological processes and values b. protect water quality and aquatic conditions c. maintain natural micro–climatic conditions d. maintain natural hydrological processes e. prevent mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion or scalding, and f. prevent loss or modification of chemical, physical or biological properties or functions of soil. *Note—Any setbacks or areas required for bushfire management, safety, recreation, maintenance or any other purpose, are provided in addition to a vegetated buffer provided for ecological purposes.*	No acceptable solution is nominated where in an urban residential zone or centre zone. **AO18** In all other zones including the Rural Zone, Environmental Management Zone, Conservation Zone, all Industry Zones, Industry Investigation Zone, Emerging Community Zone and Limited Development Zone: Other than where cropping for forestry for wood production, a vegetated and development free buffer is provided and maintained extending from the high bank of the waterway or plan position of a waterway (whichever is the greater) and with a minimum width of: a. stream order 1 or 2: 25m, or b. stream order 3 or 4: 50m, or c. stream order 5 and above: 100m. *Note—Stream order is mapped on Fish habitat area mapping in OM.*	**Compliant** The pipeline will be confirmed to the existing easement and as such, it cannot be re-located. Therefore, buffers are not applicable to construction within the easement. The pump station is not located within 100 metres of a waterway, and pipeline infrastructure will be located underground and will have no impact on waterways during operation phase. Temporary impacts during construction will be managed through the CEMP, including rehabilitation.
Wetland hydrology and stormwater management		

Performance outcomes	Acceptable outcomes	Response
PO19 The existing surface water hydrological regime of the wetland protection area (including the area of the wetland) is enhanced or maintained. *Note—The hydrological regime of surface waters includes:* • *peak flows* • *volume of flows* • *duration of flows* • *frequency of flows* • *seasonality of flows* • *water depth (seasonal average)* • *wetting and drying cycle.*	**AO19.1** Development must: 1. provide a net ecological benefit and improvement to the environmental values and functioning of a wetland in a wetland protection area, or 2. rehabilitate the existing hydrological regime, or restore the natural hydrological regime of a wetland in a wetland protection area. OR **AO19.2** If the development cannot enhance existing values in accordance with AO19.1, development does not change the existing surface water hydrological regime of a wetland in a wetland protection area, including through channelisation, redirection or interruption of flows. OR **AO19.3** If AO19.1 or AO19.2 cannot be complied with, the extent of any change to the existing surface water hydrological regime is minimised to ensure the wetland values and functioning are protected. The change is minimised if, at least: 1. there is no change to the reference high–flow duration and low–flow duration frequency curves, low–flow spells frequency curve and mean annual flow to, and from, the wetland 2. any relevant stream flows into the wetland comply with relevant environmental flow objectives (EFOs) of the applicable water resource plan under the *Water Act 2000* for the area 3. for development resulting in an increase to the velocity or volume of stormwater flows into the wetland – the collection and reuse of	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.

Performance outcomes	Acceptable outcomes	Response
	stormwater occurs in accordance with (a) and (b).	
PO20 The existing groundwater hydrological regime of the wetland protection area (including the area of the wetland) is enhanced or protected	**AO20.1** The water table and hydrostatic pressure in the wetland protection area are returned to their natural state. OR **AO20.2** If AO20.1 cannot be complied with: 1. the water table and hydrostatic pressure within the wetland protection area is not lowered or raised outside the bounds of variability under pre–development conditions, and 2. the ingress of saline water into freshwater aquifers is prevented. *Note—Groundwater modelling is recommended where groundwater hydrology for a wetland in a wetland protection area represents a significant environmental constraint for, and interference is proposed by, the proposed development.*	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.
PO21 During construction and operation of development in a wetland in a wetland protection area: a. the wetland is not used for stormwater treatment, and b. the buffer and water quality values of the wetland are protected from stormwater impacts	**AO21** Development does not result in any measurable change to the quantity or quality of stormwater entering a wetland in a wetland protection area during construction and operation. *Note—Measurable Change is to be determined by comparing the overall development impact with existing baseline (pre–development) conditions, and should not exceed reference environmental values or be inconsistent with water quality objectives provided under the Environmental Protection (Water) Policy 2009, the Urban Stormwater Quality Planning Guidelines 2010, or other relevant supporting technical reference documents as outlined in the guidelines.*	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.

Performance outcomes	Acceptable outcomes	Response
Wetland ecological values		
PO22 Development involving the clearing of vegetation protects the biodiversity, ecological values and processes, and hydrological functioning of a wetland in a wetland protection area, including: 1. water quality values 2. aquatic habitat values 3. terrestrial habitat values 4. usage of the site by native wetland fauna species or communities.	**AO22** Vegetation clearing undertaken as a consequence of development does not occur in: 1. a wetland in a wetland protection area, or 2. a buffer area for a wetland as described in PO18.	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.
PO23 Development avoids land degradation in a wetland protection area, including: 1. mass soil movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding 2. loss or modification of chemical, physical or biological properties or functions of soils.	**AO23.1** Development is not carried out in: 1. a wetland in a wetland protection area, or 2. a buffer area for a wetland as described in PO18. OR **AO23.2** Based on the prevailing soil and slope characteristics for the development area, all reasonable and practical measures are implemented to establish development specific engineering designs and solutions for the horizontal and vertical alignment of infrastructure, so as to avoid land degradation in a wetland protection area. AND **AO23.3** Filling and excavation operations are carried out, and an erosion and sediment control plan is prepared, and implemented, to minimise land degradation in a wetland protection area.	**Not Applicable** No wetland protection areas occur within the Project Area.
PO24	**AO24.1**	**Not Applicable**

Performance outcomes	Acceptable outcomes	Response
Development in a wetland protection area ensures that any existing ecological corridors are enhanced or protected and have dimensions and characteristics that will: 1. effectively link habitats on or adjacent to the site 2. facilitate the effective movement of terrestrial and aquatic fauna accessing or using a wetland as habitat.	Development in a wetland protection area does not occur within an existing ecological corridor. OR **AO24.2** If AO24.1 cannot be complied with and an ecological corridor is required to facilitate fauna movement: 1. an alternative ecological corridor with an appropriate width is provided and maintained in accordance with the Wetland Rehabilitation Guidelines for the Great Barrier Reef Catchment, Department of Environment and Heritage, 2008, or 2. the design, construction and operation of development does not impede movement of fauna that may use, is likely to use or may move through a wetland in a wetland protection area as part of their normal life cycle.	No wetland protection areas occur within the Project Area.
PO25 Development does not result in the introduction of non–native pest plants or animals that pose an increased risk to the ecological values, integrity and processes of a wetland in a wetland protection area. In particular: 1. pest dispersal prevention measures are provided in appropriate locations to manage the threat of pest species to a wetland in a wetland protection area, and 2. (b) any pest dispersal prevention measures do not result in a barrier or hazard to the movement of wetland fauna in the wetland protection area.	**AO25.1** Existing non–native pest plants or animals are removed or their threat is controlled by adopting pest management practices that provide for the long–term function of a wetland in a wetland protection area. AND **AO25.2** Development does not result in the introduction of any non–native or pest species in a wetland in a wetland area.	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.
PO26 During construction and operation of development in a wetland protection area, wetland fauna are protected	**AO26.1** Development in a wetland protection area does not result in noise, light or visual disturbance impacts on wetland fauna, during construction and operation.	**Not Applicable** No wetland protection areas occur within the Project Area.

Performance outcomes	Acceptable outcomes	Response
from impacts associated with noise, light or visual disturbance	OR **AO26.2** Where AO26.1 cannot be complied with, an assessment of adverse impacts of the development in a wetland protection area on wetland fauna from the impacts of noise, light or visual disturbance is carried out by a qualified ecologist or equivalent, and recommendations for mitigation of these impacts are identified and implemented.	
Environmental offsets		
PO27 For development, where it is not possible to enhance existing values or avoid adverse effects or alternatively minimise adverse effects any remaining environmental impacts are offset in accordance with the *Queensland Environmental Offset Policy 2014*.	**AO27** Where environmental offsets are required in this code, they must be provided in accordance with the *Queensland Environmental Offset Policy 2014.*	**Not Applicable** No offsets are required for the proposed project.
Monitoring		
PO28 Development is monitored to ensure environmental values of a wetland in a wetland protection area are maintained.	**AO28.1** A monitoring plan for development construction is prepared and implemented to monitor the effects of development on the ecological and hydrological functioning of a wetland in a wetland protection area. AND **AO28.2** Remedial action is carried out on land managed by the entity carrying out the development, where monitoring determines that compliance with the acceptable outcomes is not achieving the relevant policy outcome.	**Not Applicable** No wetlands or wetland protection areas occur within the Project Area.