PORT STEPHENS COUNCIL

Environmental Assessment

Level 4

ENVIRONMENTAL IMPACT STATEMENT

East Seaham Road Stages 5 & 6, East Seaham

EXECUTIVE SUMMARY & DECLARATIONS

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REPORT PREPARATION			
Name	**Title / Position**	**Qualification(s)**	**Organisation**
Natalie Nowlan	Project Support Environmental Officer	BSc(EnvBio) GradDip(IWM)	Port Stephens Council

DOCUMENT CONTROL			
Revision	**Date**	**Description**	**Prepared by**
1	31/03/2025	Draft	Natalie Nowlan

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ASSESSOR DECLARATION

As the Assessor of the proposed works, I certify to the best of my knowledge that:

- I am suitably qualified and competent to undertake this assessment; and
- I have adequately consulted relevant Council Officer's on pertinent aspects of the project/activity; and
- The EIS has been prepared in accordance with the NSW Planning and Assessment Regulation 2001 requirements; and
- The EIS contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure, and;
- The information contained in this EIS is not false or misleading, and
- My conclusion as to the likely environmental impact of the project/activity is reasonable.

I am satisfied that, if works are undertaken in accordance with the mitigation measures (safeguards) outlined in this REF, the project/activity will not have a significant impact on the environment during both construction and operation phases.

Name	Title / Position	Organisation	Signature	Date
Natalie Nowlan	Project Support Environmental Officer	Port Stephens Council	*N.Nowlan*	08/04/2025

PORT STEPHENS COUNCIL PROJECT MANAGER SIGNOFF

As the Project Manager of the proposed works, I certify to the best of my knowledge that:

- This EIS adequately reflects the proposed project/activity; and
- This EIS has been adequately completed; and
- The information contained in this EIS is not materially misleading; and
- The conclusion as to the likely environmental impact of the project/activity is reasonable.

I am satisfied that, if works are undertaken in accordance with the mitigation measures (safeguards) outlined in this EIS, the project/activity will not have a significant impact on the environment during both construction and operation phases. I understand that completion of this EIS does not imply permission to undertake the proposed activity, but provides a collated report suitable for the appropriately Delegated Officer to consider the proposal and determine if the activity should be undertaken, given any potential harmful impacts on the local environment.

Name	Title / Position	Service Unit	Signature	Date
Dylan Brake	Project Manager – Civil Projects	Capital Works	*D.Brake*	08/04/2025

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PORT STEPHENS COUNCIL REVIEW

As the Reviewing Officer:

- I am delegated, suitably qualified and experienced to review this EIS; and
- I have reviewed the EIS in accordance with Council's IRMS Environmental Assessment Procedure; and
- Based on this completed EIS and our knowledge of the project/activity, I am satisfied that the assessment is true and valid and has been adequately completed.

The project/activity has [insert description of impacts (such as, minor and predictable)] impacts and the conclusion as to the likely environmental impact of the project is reasonable.

The Authorising Officer can approve this EIS subject to the implementation of the relevant mitigation measures (safeguards) and the conditions in any approvals, licences or permits.

Name	Title / Position	Service Unit	Signature	Date

PORT STEPHENS COUNCIL AUTHORISATION

As the Authorising Officer:

- I am delegated to authorise this EIS; and
- The project/activity has been assessed in accordance with Council's IRMS Environmental Assessment Procedure; and
- I am satisfied that the person who completed this EIS is suitably qualified and competent.

Acting on the advice of the Reviewing Officer and Project Manager, I am of the opinion that project/activity can proceed subject to the implementation of the relevant mitigation measures (safeguards) and the conditions in any approvals, licences or permits. I understand that this EIS does not imply permission to undertake the proposed activity, but provides a collated report suitable for the appropriately Delegated Officer to consider the proposal and determine if the activity should be undertaken, given any potential harmful impacts on the local environment.

Name	Title / Position	Service Unit	Signature	Date

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EXECUTIVE SUMMARY

Port Stephens Council (PSC) is planning to rehabilitate East Seaham Road, East Seaham, New South Wales, referred to as the 'project' herein, to improve road safety. PSC is proposing to widen and seal the existing gravel road, install safety barriers and provide appropriate clear zones. Trees and other vegetation will be removed and drainage will be upgraded as part of the works.

The project is subject to an approval under Division 5.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) as non-state significant infrastructure. An environmental impact statement (EIS) was prepared to describe and assess the project and recommend management measures to address impacts.

The project is a Division 5.1 project as clause 2.109 of the *NSW State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP TI) applies to development for the purpose of a road or road infrastructure facilities and provides that these types of works are development which is permissible without consent. The project is appropriately classified as being for the purpose of a "road" and a "road infrastructure facility" under the SEPP TI. This allows the project to be assessed in accordance with Part 5 of the EP&A Act.

In accordance with Division 5.1; Clauses 5.2 and 5.3 of the EP&A Act, Council is both the proponent and determining authority for the purposes of the assessment. As the proponent and determining authority Council has an obligation under Division 5.1; Clause 5.5 to consider the environmental impact of the project.

Whilst considering the environmental impact of the project, Council determined that an EIS was required in accordance with Division 5.1; Clause 5.5 of the EP&A Act. This was due to the cumulative impact of previous works and the proposed works resulting in a significant impact on local heritage item I5 Road Alignment East Seaham.

The Secretary's Environmental Assessment Requirements (SEARs) were issued in September 2024 (see **Attachment 1**).

The Project

The project length covers Stages 5 and 6 of East Seaham Road and is approximately 3.2 kilometres in length. The project area is located approximately 1.4 kilometres (km) southeast of Clarence Town and approximately 34.3 km north of the Newcastle central business district. The project area, defined by the area of impact of the proposed works, encompasses a 3.2 km stretch of East Seaham Road beginning 1.26 km south from its intersection with Limeburners Creek Road. The project area is bounded to the

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east by Wallaroo National Park and to the west by rural lands and residential properties.

The project will include the following key features:

- offsetting of biodiversity impacts
- removal of 2.13 ha of roadside vegetation and habitat
- upgrading of drainage infrastructure
- reconstruction of East Seaham Road
- installation of road safety barriers
- installation of line marking and signage.

Construction of the project is expected to commence in June 2025 and will take a period of 11 to 13 months to complete, weather dependant.

Project objectives

The project objectives are to:

- improve road safety
- improve travel times
- reduce the potential for vehicular damage
- improve reliability and accessibility for services accessing the road such as buses, emergency services and waste services etc
- improve road resilience and road usability during weather events
- reduce ongoing maintenance needs for regrading and repair of wash outs.

In doing so it is intended that during construction and operation and maintenance phases, impacts on the natural and built environment will be minimised as much as practically possible.

To support the objectives that design has been developed by:

- considering the environmental constraints and where possible, avoiding and minimising environmental impacts
- satisfying the technical requirements for the design
- designing the road to link the works into the existing road network and previously completed works along the road
- carrying out appropriate community and stakeholder consultation
- planning temporary arrangements which minimise disruption to local and through traffic and maintain access to adjacent properties during construction.

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Project need and alternatives considered

East Seaham Road is the main link between the townships of Dungog and East Seaham and provides access for local residents along East Seaham Road and surrounding roads. It provides links to the Pacific Highway for the local communities. During works on the Pacific Highway and/ or surrounding roads, East Seaham Road is often used as a detour route.

Crashes have been recorded from 1 km north of the intersection of East Seaham Road with Italia Road to the Port Stephens and Dungog Local Government Area (LGA) boundary. Stages 5 and 6 are the only remaining unsealed sections of East Seaham Road. Previous sealing works for Stages 1 to 4 have occurred since 2012. The project will complement the previous sealing works.

The road is also used as a school bus route to connect residents to 3 schools within the locality and also links to other adjacent school services as well. Community concern has been raised over the condition of the road and implications for potential vehicular damage and safety of school buses, local residents and visitors to the area. The community concern has garnered political support for the works.

The road is susceptible to weather events, such as wash outs from heavy rainfall, which has contributed to increased operational and maintenance needs for gravel resurfacing of the road and more frequently regrading which is completed approximately 4 to 6 times a year.

There is ongoing resident pressure and political support to complete the project to provide a safe road for all users.

The project would support the project objectives and needs by providing an improved road surface that provides improved connectivity for local regional communities such as Seaham and Dungog and accessibility for local residents. Following construction, the project would enable motorists to travel at the designated speed limit and increase the reliability of timetables for school buses and other services utilising East Seaham Road. There are no public bus routes on East Seaham Road.

The project has been developed through an environment-led design process whereby preliminary environmental investigations, assessment and advice and community and stakeholder consultation has informed the design to avoid, where possible, or otherwise minimise potential impacts to the environment and heritage.

The project development process included the consideration of possible alternative ways of meeting the project objectives. Alternatives considered include:

- Alternative 1 Do nothing

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- Alternative 2 Gravel resurfacing
- Alternative 3 Sealing of existing surface
- Alternative 4 Road reconstruction.

Alternative 4 was selected as the preferred option to progress further due to the improvements in road safety and support for possible future increases in traffic generation and ability to meet community expectation standards for service provision and road safety

During the design process for full road rehabilitation, design considerations included:

- partial minor realignment to avoid impact on the threatened flora species *Pterostylis chaetophora*
- partial minor realignment to avoid impacts to biodiversity, improved road sight lines and reduced impacts on local heritage item (through removal of vegetation)
- Road design in accordance with Austroads standards with the following minor amendments:
    - some crest curves along the alignment do not meet Austroad standards. Appropriate signage has been proposed where this occurs. If crest curves were compliant, further cut would be required and design grades for driveways would not allow egress. Potential additional clearing would also be required, land acquisition and boundary adjustments would be required, which would result in additional impacts due to increase batter widths, and alternatively if we were to avoid these, retaining walls would be required which would have a considerable impact on project costs and duration
    - hazards exist within the clear zone as defined by Austroads standards in the final design including trees and culverts. The clear zone will be substantially improved compared to existing due to tree removal. In order to meet Austroads standards clear zone requirements further substantial tree removal would be required which would produce an unacceptable impact on biodiversity and further significant impact on local heritage. Clearing is set 3m from edge line of travel lane or toe of batter whichever is greater, Austroad standard is approximately 7 m. Travel lane widths and shoulder widths and shoulder are compliant with Austroad standards which is an approach that is consistent with previous stages
    - safety barrier has been introduced on curves and steep batters where required to reduce the extent of clearing and improve safety in these localities.

Overall, these design considerations helped balance the project impacts including impacts on land use, endangered ecological communities and threatened flora and fauna, heritage, utilities, adjacent landholders, community and road users. This

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refinement of the design and consideration of impacts through an assessment and review process helped ensure that the project best addresses the project objectives, and meets the key performance criteria of function, environmental and socio-economic considerations, and provides value for money.

How the community participated

Community consultation and participation has included:

- individual consultation with affected landowners within the proposed works area
- community meeting at Seaham
- social media and website updates on Council's website and socials
- letters and emails to key stakeholders such as emergency service providers, public transport providers, utility and service providers and relevant State government agencies.

Key issues raised by the stakeholders and the community included:

- impact on local residents, including driveway access and general construction impacts
- impact on the bushland corridor and flora and fauna species in particular fauna corridors and vehicle strike
- impact of not providing a full road upgrade.

Community feedback has generally been positive and has helped to inform the assessment and review process to ensure the impacts were acceptable to the community. Community consultation will continue throughout the construction and operational stages of the works.

Main outcomes

The main beneficial outcomes of the project will include the provision an improved road surface along East Seaham Road which will contribute to improved traffic flow, reduced travel times, reduction in potential for vehicular damage due to the rough surface and safer property access.

The main adverse outcomes expected and their management include:

Air quality

Dust impacts from demolition, earthworks, construction activities and transport of materials and spoil which have the potential to impact on amenity, the appearance, aesthetic or values of a property and human and environmental health. During operation dust impacts would be reduced due to sealing of the road surface. Mitigation measures would include erosion and sediment controls, good stockpile management

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to minimise handling and disturbance of materials, keeping excavated areas to the practical minimum, monitoring weather conditions to limit works in windy conditions, utilise the water cart and stabilise areas as soon as practically possible.

Potential odours have the potential to occur from fume release from the handling of potentially odorous chemicals and materials and stockpiling and handling of material and waste generated by the works. The works are likely insufficient in size to result in offensive odours as a result of stockpiling of mulch (odorous decomposing products). During operation potential odours would be similar to that which existed prior to the works occurring from vehicle emissions and odours from surrounding rural residential land uses. During operation and maintenance waste would be managed in accordance with statutory requirements and sufficient waste receptacles and appropriate servicing of portable toilets provided. Plant, equipment and machinery would also be operated, inspected and maintained to ensure they are in good working order and operated appropriately.

Relatively minor emissions would be generated from exhaust emissions from plant, vehicles, equipment and machinery being used during the works including carbon monoxide, oxides of nitrogen, particulate matter and some hydrocarbons. Due to the small scale of the project, these emissions would be unlikely to have a significant impact on local air quality and sensitive receivers. Operationally the works would have emissions from vehicles using East Seaham Road. The main pollutants would include carbon monoxide, oxides of nitrogen, particulate matter and some hydrocarbons. During operation and maintenance, plant, equipment and machinery would be operated, inspected and maintained to ensure good working order and operated in a manner that helps reduce potential emissions release.

Biodiversity

Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)

EPBC Act listed threatened ecological communities and threatened species that occur onsite and/ or have potential habitat onsite include Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions, *Phascolarctos cinereus* (Koala), *Pteropus poliocephalus* (Grey-headed Flying Fox) and *Calyptorhynchus lathami* (South-eastern Glossy Black-Cockatoo).

An assessment was conducted in accordance with Significant impact guidelines 1.1 – Matters of National Environmental Significance 2013 under the EPBC Act to address the significant impact criteria. The assessment found that there is unlikely to be a significant impact on nationally listed threatened biodiversity as a result of the project.

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NSW Biodiversity Conservation Act (BC Act)

A Biodiversity Development Assessment Report (BDAR) has been prepared by a Biodiversity Assessment Method (BAM) Accredited Assessor in accordance with the BAM to assess the biodiversity impact and offsetting obligation of the proposal under the BC Act and associated regulations.

The project will remove 2.13 ha of native vegetation comprising of 1.34 ha of PCT 3433 Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest, 0.36 ha of 3431 Central Hunter Ironbark Grassy Woodland (no hollow bearing trees) and 0.43 ha of 4042 Lower North Riverflat Eucalypt-Paperbark Forest.

Direct and indirect impacts would include loss of BC Act 2016 listed TEC Lower Hunter spotted Gum – Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions and TEC Subtropical Coastal Floodplain Forest of the NSW North Coast bioregion. Through the loss of this vegetation threatened flora and fauna habitat will also be impacted and minor habitat fragmentation caused by road widening and creation of a larger distance of non-vegetated areas within the east-west corridor will occur. The removal of edge affected vegetation will reduce the viability of adjacent habitat due to possible impacts from noise, dust, light spill, edge effects and weed incursion. This may increase the competition and risk of starvation, exposure and loss of shade or shelter for fauna.

The works would impact on waterbodies, water quality and hydrological processes through erosion and sedimentation and potential pollution and have the potential to transport weeds and pathogens from the site to adjacent vegetation and offsite. The works also have the potential to have inadvertent or accidental impacts to biodiversity values and vegetation and habitat to be retained and clearing of fauna habitat may resulting in fauna injury and/or mortality and/ or displacement.

Port Stephens Comprehensive Koala Plan of Management (CKPoM)

Impacts on koala habitat in relation to the Port Stephens Comprehensive Koala Plan of Management (CKPoM) include:

- removal of 2.13 ha of ‘Preferred Koala Habitat’
- the removal of 169 specimens of the koala feed tree E. tereticornis

Key fish habitat (KFH)

The works are occurring in KFH and a permit will be required in accordance with Section 200 and Section 219 of the FM Act. There are two road crossings of areas identified as key fish habitat including Stage 5 at chainage 4046 and Stage 6 chainage 4550.

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These watercourses would be defined as TYPE 3 Minimally sensitive key fish habitat, as the habitat onsite is ephemeral and does not support native aquatic or wetland vegetation and classified as CLASS 4 Unlikely key fish habitat due to the waterway having only intermittent flow, little channel definition, is highly modified, sporadic remnant riparian vegetation and standing water only following rain events in small pools that are heavily degraded and largely absent of native aquatic vegetation.

The site does not contain any critical habitat or habitat suitable for threatened or habitat for protected aquatic species listed under the FM Act or EPBC Act.

During construction there is an increased risk of erosion and sedimentation. On completion of the works East Seaham Road will be transformed from relatively pervious to impervious surface which would result in a minor increase in flows from the roadway, however, due to the size of the road catchment as a portion of the whole catchment the impact is likely to be negligible. Geomorphic impacts could also result from the amplification of the culverts. In smaller events the constriction of flow through the culvert would increase stream velocity immediately downstream resulting in scour, bed and bank erosion and stream instability.

Offsetting

The class and number of ecosystem credits and species credits as detailed in **Chapter 5**, **Section 5.2.3** and the Biodiversity Development Assessment Report (Wildthing 2025) prepared for project, would be retired to offset the residual biodiversity impacts of the development prior to works commencing on site.

Avoidance, minimisation and mitigation of impacts

To minimise impacts the project area has been positioned overtop of and along both sides of a pre-existing gravel portion of East Seaham Road. The project has been designed to largely follow the alignment of the pre-existing road and retain the majority of vegetation within the road reserve which has limited impacts to the native vegetation closest to the road edge. Vegetation closest to the existing road is considered most disturbed of all vegetation in the project area due to edge effects such as dust pollution from traffic, compaction from vehicles pulling over and weed spraying as part of regular weed management by council.

To allow for the safe movement of koalas and other fauna species, the project has retained the majority of native vegetation within the project area.

Measures implemented to minimise impacts on the koala will include, retaining the current speed limit along the road, installation of fauna friendly fencing where fencing

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is being replaced and installation of koala warning signage to reduce the chance of vehicle collision.

Due to the nature of the subject land being a road reserve and due to the adjacent electrical easement there is little scope for the restoration of Koala habitat onsite. PSC has opted into the offset scheme under the BC Act 2016 for the proposed road upgrade.

Geomorphic protection/ scour protection has been provided in the design for all culvert crossings to help improve geomorphic stability. With the majority of the upstream catchment being vegetated the amplification of the culvert would likely have a limited impact further downstream, with the existing channel capacity also being easily being exceeded in larger events. For works in KFH, the works would be replacing an existing culvert with a culvert, a culvert, causeway or ford is the minimum recommended crossing type for Class 4 Unlikely key fish habitat (Fairfull and Witheridge, 2003) cited in NSW Department of Primary Industries, 2013).

Other mitigation measures include:

- demarcating the extent of works to ensure no inadvertent removal of additional vegetation, undertaking clearing activities in accordance with Biodiversity Management Guideline: Protecting and managing biodiversity on Transport for NSW projects EMF-BD-GF-0039 (TfNSW, March 2024)
- installation of exclusion fencing to protect known populations of *Pterostylis chaetophora* onsite and hollow bearing trees to be retained
- erosion and sediment controls and stockpiling and material management plan
- Inspection of all suitable hollows within the project area in trees being removed and retained for suitability for breeding habitat for Powerful Owl prior to works commencing to determined and provision of recommendations for site specific controls during construction for protection
- installation of compensatory fauna nest boxes
- conducting preclearance works in accordance with Biodiversity Management Guideline: Protecting and managing biodiversity on Transport for NSW projects EMF-BD-GF-0039 (TfNSW, March 2024)
- demarcating all trees for be removed, and hollow bearing trees to be retained and removed
- preferential pruning rather than tree removal where possible
- conducting preclearance works, weed and pathogen management and all works within and around waterways in accordance with Biodiversity Management Guideline: Protecting and managing biodiversity on Transport for NSW projects EMF-BD-GF-0039 (TfNSW, March 2024)
- replacement of illegal dumping signage if removed
- installation of koala/ fauna crossing signs at strategic locations identified by local landholders

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- installation of fauna friendly fencing
- monitoring of the site during construction and operation activities for erosion and sedimentation in drainage channels and conducting daily fauna checks
- implementing unexpected finds procedures
- pollution prevention such as storing chemicals, fuels and oils must be stored in suitable bunded areas, keeping an emergency spill kit onsite, avoid refuelling and handling of chemicals and washing down of plant and equipment within 50 m of waterways, safely using hazardous goods and waste in accordance with statutory requirements, stabilising the as soon as practical, driving to conditions and maintaining a clean site and installing, maintaining erosion and sediment controls
- limiting the duration of works within defined watercourses to the minimum possible and where possible deliver the works during low flow / dry weather periods
- ensuring compound and stockpiles are located within cleared areas
- ensuring a clean and well maintained site.

Contamination and chemical/ hazardous substance management

A desktop review and site visits were conducted to characterise the existing environment with respect to soils and contamination and identify areas of potential contamination risk. From this review and site visits:

- there are no contaminated sites recorded or that have been notified to the NSW Environmental Protection Authority (EPA) within or immediately adjacent to the construction footprint
- the site is also not mapped as lands that are or may be contaminated with per- and polyfluoroalkyl substances (PFAS)
- potential contaminants as a result of historical land use may include diffuse pesticide and herbicide use (pesticides/herbicides), isolated waste disposal (hydrocarbons, metals, biological hazards, nitrates, pesticides/ herbicides, asbestos) and chemical/fuel use and storage (hydrocarbons, pesticides, herbicides, phenols).

A preliminary material classification of soils within the project area was conducted to provide the likely classification of spoil generated as part of the redevelopment works. Pavement materials within the road corridor met the ENM Order and Recovered Aggregate Order 2014 assessment criteria. Subgrade materials within the road corridor were deemed acceptable for classification as VENM and are therefore suitable for offsite reuse or disposal under this classification. The material tested was also found to be acceptable within threshold criteria for General Solid Waste as specified in the NSW Waste Classification Guidelines 2014.

Overall it is considered that the site has a low contamination risk potential.

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Mitigation measures would include visually monitoring for potential unexpected finds of contamination and if found, following the unexpected finds procedures, managing construction activities to minimise the potential for pollution including appropriate storage and bunding of chemicals, fuels and oils, keeping and emergency spill kit and response procedures onsite, avoiding refuelling of equipment and chemical handling activities outside the compound and storing and handling of all hazardous and dangerous goods appropriately. Other mitigation measures such as appropriate storage and handling of waste material and material tracking by truck drivers would also occur.

Flooding

Flooding of the Williams River impacts East Seaham Road at a number of locations. The East Seaham Road and drainage upgrades reduce the overall flood risk along the section of the road. The design includes substantial upgrades of existing cross drainage structures (culverts) that will convey local catchment flows beneath the road and reduce the likelihood of surface flow over the road.

Road and drainage upgrades would ultimately have a positive outcome on emergency management and evacuation arrangements for the area. The flood immunity of the road will be increased for the following scenarios:

- when considering flooding of the local catchment, the section of the road will remain safe and trafficable up to a 1% AEP design event
- when considering flooding of the Williams River, the road will now be traversable during all events up to a 5% AEP flood.

Given the significant improvements to both the road design and cross drainage capacity, the design increases the resilience of the road into the future as climate change impacts are realised. The design of the road reduces flood risk and has considered the principles of the NSW Floodplain Risk Management Manual (2023).

Mitigation measures include community notification and ensuring works are delivered in accordance with the design plans.

Hazards and risks

The project area is mapped as bushfire prone and flood prone. The area will also be subject to weather, possibly severe weather and future climate change.

<u>Bushfire</u>

The project has the potential to increase bushfire risk from accidental ignition and cause potential bushfires from activities such as, the use of mobile equipment, fuels

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and chemicals. Construction ancillary facilities and construction infrastructure are temporary in nature and, where required, would be in areas cleared of vegetation. The operational infrastructure of the project would not be largely vulnerable to bushfire due to its incombustible nature (road surface materials, retaining walls, road barriers). Bushfires may occur as a result of car accidents or littering (e.g. cigarette butts)

During construction, there would be reduced speed limits and modified arrangements which has the potential to delay response times and/or access for emergency services. Construction personnel would be made aware of the potential for bushfires prior to working on the project. During operation access for emergency services would be improved.

Bushfire risks would be included in Safe Work Method Statements for construction and operational activities and notification of the construction works to emergency services would be provided prior to works commencing.

Flooding

There is a risk of severe weather and flooding during construction and operation and maintenance of the road that may cause impacts to human health (to construction workers and local residents), local properties and the local receiving environment. Risks may include loss of life or serious harm to people and wildlife, loss of livelihoods or economic impacts, loss or damage to property and/ or construction items, increased spread of water borne diseases and mosquitos and increased risk of physical, biological and chemical hazards.

During construction, there would be reduced speed limits and modified arrangements which has the potential to delay response times and/or access for emergency services. During operation and maintenance access for emergency services and residents would be improved by the operation of the project as the works would have an improvement when compared to the existing flood conditions.

Flooding risks would be included in Safe Work Method Statements for construction and operational activities and notification of the works to emergency services would be provided prior to works commencing.

Climate change and greenhouse gas emissions

During the construction period there is the potential for greenhouse gas emissions due to vehicle, plant and equipment releasing emissions, chemical usage and the generation of carbon dioxide from vehicle emissions associated with driving to and from the site and operation of plant and machinery on the site. The activity is small scale, relatively short in duration and has a limited extent and is unlikely to significantly

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increase to greenhouse gas emissions. During operation and maintenance there is the potential for greenhouse gas emissions similar to the construction period.

It is unlikely that during the construction period, climate change would significantly alter expected weather norms or impact the works. It is likely that operation and maintenance activities over time may be altered in frequency and/ or duration and type to adapt to the potential impacts of climate change.

During operation and maintenance mitigation measures will be implemented, such as operating, inspecting and maintaining equipment to ensure it is in good working order and being operated in accordance with the manufacturer's instructions, to help limit impacts.

Heritage

Aboriginal Heritage

Biosis (2025) identified that the project area is situated within an ideal location for the procurement of resources that would have allowed for long term occupation. Biosis (2025) also identified that past archaeological investigations have demonstrated that occupation zones tend to be within 100 m of watercourses. Whilst there are prescribed watercourse present onsite, Biosis (2025) identified that with such a large water resource located in proximity to the project area, there is a higher likelihood for Aboriginal sites to exist within 100 m of the Williams River than within the project area. Field investigations by Biosis (2025) found that the majority of the East Seaham Road corridor showed evidence of continuous and intensive disturbance and that these disturbances ranged between less than 1 m and up to 4 m laterally and up to 1 m vertically due to the installation of drainage systems, electrical poles, fence lines and road construction and grading (Biosis 2025). During the archaeological survey, no Aboriginal sites or objects were identified (Biosis 2025).

Biosis (2025) concluded that whilst the environmental context of the project area is reflective of an area that may have been intensively occupied, the continuous and extensive disturbance associated with the construction and maintenance of East Seaham Road has likely destroyed any material evidence relating to site use and that the project area is considered to hold low archaeological potential.

Mitigation measures include in the event of an unexpected finds, the unexpected finds procedure would be follows and if the discovery of Aboriginal ancestral remains are found works would cease at that location and the NSW Police and Heritage NSW would be contacted for advice.

Non-indigenous Heritage

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Based on the assessment of impacts, Biosis (2025a) concluded that the project would have a minor but acceptable impact to heritage values to two of the heritage items, including Homestead “Fotheringay” and Marshall & Lowe "Deptford" shipyard site, Fotheringaye. Biosis (2025a) however, identified that the project would have a significantly adverse impact on local heritage item, Road Alignment due to the degree of tree removal required.

PSC in designing the road minimised these impacts by compromising on the recommended Austroad standards clearzone extents as much as practically possible to reduce tree removal and potential impacts to heritage and biodiversity values of the site, whilst ensuring the safety of road users and realigning East Seaham Road at the start of Stage 6 to provide for additional tree retention and minimise impacts to the heritage and biodiversity values of the site.

Whilst Biosis (2025a) assessed the project area as holding low archaeological potential for archaeological resources of heritage significance, there was a small potential for the stone culverts noted in the heritage inventory sheet for the heritage item Road Alignment to be present within the project area.

Maintenance and operation of East Seaham Road would not include any activities likely to impact the local heritage item greater than those impacts during the construction phase.

To minimise impacts Biosis (2025a) recommended that personnel onsite be aware of the heritage values of the project area and implement an unexpected finds protocol in the event of an unexpected find. If stone culverts are discovered after vegetation clearing heritage advice would be sought regarding their condition and assessment of heritage significance.

Noise and vibration

The existing noise environment surrounding the project area is dominated by rural residential land uses and vehicles using East Seaham Road. Overall there are 16 rural residential receivers within 1 km of the project area.

The primary impact would include increased noise levels within standard daylight construction hours during the construction period for sensitive receivers. No receivers would be noise affected outside of standard construction hours. No noise receivers are likely to be highly affected by noise. Noise levels however, would be moderately intrusive for some residential receivers along the roadway, and potentially highly intrusive for 3 residential receivers where works are within 50 to 100 m of the dwelling.

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The project is linear in nature and would be carried out progressively such that the duration of noise impacts experienced at any individual receiver would be substantially smaller than the total construction duration.

Cumulative noise impacts are likely due to increased construction vehicle movements via East Seaham Road from the new Clarence Town Bridge by Dungog Council, which is occurring at the same time as the project. PSC has been liaising with Dungog Council to ensure traffic impacts for both projects are adequately considered in the traffic management plans for the respective projects.

Vibration impacts have been considered for properties along the East Seaham Road alignment within the project area. Human disturbance and structural damage is unlikely.

Individual consultation with each landholder adjacent to the project area has been conducted in the preceding 12 months. A community workshop was also held on 5 February 2025.

Community notification would occur in accordance with the project specific engagement plan prepared for the works. Notification of works would occur to provide advance warning of the works and potential disruptions for local residents.

Operational noise would be dominated by grading machine for shoulder grading or heavy patch plant for heavy patching works. The same noise receivers would be impacted, however, likely to a lesser extent than during construction works. No long term onsite operational facilities would be required as part of the works.

Soil and water

Construction of the project would temporarily expose the natural ground surface and subsurface through the removal of vegetation and excavation and compaction of topsoil. The temporary exposure and stockpiling of soil to water runoff and wind could increase soil erosion potential. There is the potential that exposed soils and other unconsolidated materials (such as spoil, sand and other aggregates) could be transported from the construction footprint into surrounding waterways via stormwater runoff.

It is unlikely that saline or acid sulfate soils would be encountered during construction. Unexpected saline or acid sulfate soils encountered during construction would be managed in accordance with the relevant unexpected finds procedures.

Construction activities may also result in potential soil, surface water or groundwater contamination due to spills of oils, fuels or chemicals from plant and equipment in the

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construction footprint, importing or backfilling of excavations with potentially contaminated spoil or stockpiling of potentially contaminated spoil. In addition, there is a risk of disturbing existing contaminated soils, although this risk is low.

Concreting activities could result in accidental runoff of concrete washout water into waterways through spills of excess or waste concrete being discharged near a watercourse and earthworks and changes to the site would result in concentrated flows that have potential to disrupt existing surface water flow paths, scour the earth and increase sediment loads carried by surface waters.

During the construction phase of the project, there is the potential for the works to intercept groundwater during construction of the culvert at Stage 6 chainage 4550. If dewatering activities are required, the open excavations following periods of rainfall, may contain sediments and other pollutants that would be mobilised by the rainfall.

The Aquifer Interference Assessment Framework (NSW DPI Office of Water, 2013) was used to assess potential impacts. The activity would be defined as a minimal impact aquifer interference activity. All volumes and water quality testing results would be recorded. A dewatering plan would also be developed that includes water monitoring locations to be monitored prior to, during and post completion of dewatering activities.

During operation, there is, the potential for increased sedimentation, increased turbidity, lower dissolved oxygen levels, and increases in toxicant concentrations within watercourse, increase nutrient loads and reduced visual amenity.

MUSIC modelling was completed to assess the change in pollutant load associated with the upgrade of East Seaham Road. The MUSIC modelling demonstrated changes in pollution load when considering the existing unsealed road compared to the ultimate road design. Pollution loads for TSS (Total Suspended Soilds) and TP (Total Phosphorous) were reduced and met NorBE criteria (PSC, 2025a). The pollutant loads for TN (Total Nitrogen) and gross pollutants increased by 44% for TN and 7% for GP.

There are substantial buffer areas between East Seaham Road and the ultimate discharge locations at various points along the Williams River with runoff from all areas. It is likely that the designed rock scour protection at culvert crossings and the grassed overland flow areas to the river would provide additional water quality treatment that has not been included in the current MUSIC model and further reduce both GP and TN loads (PSC, 2025a). It is also likely that the designed rock scour protection at culvert crossings and the grassed overland flow areas to the river would provide geomorphic protection.

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Due to the likely small scope of maintenance and operational activities, the project would not be expected to significantly impact the environmental values and water quality objectives of the receiving environment and any impacts would be minor. Geomorphic protection is also provided as detailed on the designs prepared for the project to help minimise geomorphic changed in local watercourses.

To help minimise potential impacts erosion and sedimentation management measures would be installed, all chemicals, fuels and oils in would be stored in suitable bunded areas, a stockpile management plan would be developed to guide stockpile and material handling activities. Other mitigation measures would include keeping and making available an emergency spill kit, avoiding refuelling and chemical handling activities outside the compound area, wash equipment, machinery and work vehicles offsite and stabilising exposed areas as soon as practically possible. Access to the project area would also be limited and with the implementation of the mitigation measures, potential construction impacts would be appropriately managed and would be negligible.

Traffic and transport

During construction, road traffic would be generated by vehicles associated with the construction of the project, including heavy vehicles transporting spoil and light vehicle movements generated by construction workers. The estimated average daily vehicle movements required for construction would be 60 truck movements per day (45 minute load/ haul and tip time over an 8 hour day with 6 trucks on rotation).

Options considered for traffic management included full road closure and one lane closure allowing for one lane, two way traffic.

Full road closure would include no through traffic and resident access only. This option is expected to provide efficiencies in time and cost in construction as well as providing a safer environment for both workers and road users. The option for one lane closure would permit one lane, two-way traffic to pass through the construction site may be implemented during construction hours only or permanently throughout the project construction period. Wait times would be expected for motorists due to the stop and go nature of the traffic control. The option for one lane closure with one lane, two-way traffic has the potential to increase costs of the project due to increased traffic controls costs and to increase the duration of the project. This option also poses a higher risk to the safety of personnel working onsite and motorists.

Both options are included in the EIS, due to the works by Dungog Council for construction of the new Clarence Town Bridge. Due to load limits on the Brig O-Johnston Bridge heavy vehicles over 15 tonnes associated with the construction of the new Clarence Town Bridge will likely be diverted through East Seaham Road when

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requiring access to and from the northern side of the new Clarence Town Bridge for the period of the 18 month construction period.

During construction, there would be reduced speed limits and modified arrangements which has the potential to delay response times and/or access for emergency services. During operation and maintenance access for emergency services and residents would be improved by the operation of the project as the works would have an improvement when compared to the existing flood conditions

In addition to traffic interruptions and potential delays, temporary closure of driveways, access to the electrical easement and NSW NPWS lands would be required to install table drains and/ or tie in driveways to the new road pavement. Where works are likely to affect driveway entrances/ access; specific notification would be provided to the affected stakeholder. All stakeholders with access have been consulted during the design phase to ensure stakeholder requirements are met.

Individual consultation with each landholder adjacent to the project area has been conducted in the preceding 12 months. A community workshop was also held on 5 February 2025 to help provide the local community with an additional opportunity to voice concerns. Traffic was identified as a minor community concern with the acknowledgement that the works could not occur without some impacts. Community notification would also continue to occur in accordance with the project specific engagement plan prepared for the works.

During operation, due to improvements in the road surface, traffic safety would be increased and overall driver experience enhanced. Bus access would be safer and more accessible due to the improved road surface and road shoulders being created. Emergency services would have improved accessibility and access for utility providers and NPWS would be maintained or improved. The need for road grading activities and associated resources to undertake the activities would be reduced. Speed limits would remain unchanged

Waste management

Potential impacts during construction of the project would relate to construction resource use and waste management, including construction materials, water and fuels and generation and management of wastes including non-spoil and spoil.

The design of the project has considered the construction methodology and ensured that all materials proposed for use are fit for purpose. PSC would minimise resource consumption and promote resource reuse and recycling in accordance with the waste management hierarchy of the *Waste Avoidance and Resource Recovery Act 2001*.

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Small volumes of water would be required for dust suppression, concreting, equipment wash down and onsite amenities. Water carts would be used to transport water to the site. Water use is expected to be minimal. Opportunities for water reuse would be investigated and pursued where feasible and reasonable, and subject to meeting water quality requirements for reuse.

Power requirements for the site would be minimal. Generators would be used as required. Energy efficient equipment would be used where practical.

Wastes generated during construction would include demolition wastes, vegetation wastes (the majority of which would be mulched reused onsite), general construction waste such as timber formwork, scrap metal, packaging materials, waste from operation and maintenance of construction vehicles and equipment including oils, types, batteries etc. and general wastes such as food waste, paper, cardboard plastics, glass etc.

All waste transported offsite would be sent to an appropriately licenced waste facility for recycling or disposal.

Other wastes generated onsite would include aggregates such as crushed rock and concrete and excess material from the site which would be classified as excavated public road material or excavated natural material or virgin excavated natural material. This waste would be temporarily transported and stored for reuse in one of Council's temporary EPRM roadside stockpile sites in accordance with the requirements of the *Excavated Public Road Materials Order 2014* and *Excavated Public Road Materials Exemption 2014* or Greater Newcastle Aerotropolis (GNAPL) in accordance with the signed Memorandum of Understanding (MoU).

Appropriate waste storage facilities, such as bins, would be provided for general waste storage during construction. Waste would be classified in accordance with the *Waste Avoidance and Resource Recovery Act 2001* and associated regulations and segregated appropriately. Waste collection would be carried out by an authorised contractor for off-site recycling or disposal at a licensed waste facility.

Waste transportation off-site for disposal would occur during standard construction hours. There is potential for environmental impacts as a result of the transport of waste including dust, mud-tracking and accidental spills. Mitigation measures would be outlined in the CEMP including adequate covering of truck loads and washing of heavy vehicle tires to minimise tracking mud onto the road network.

During operation and maintenance resource use including operational materials and water would occur and also the generation and management of general waste. Any water use for operation and maintenance would be from a water cart and would be

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preferentially sourced from harvested stormwater and rainwater and where required mains potable water supply. Operation and maintenance activities are also likely to generate minor volumes of EPRM and general waste such as plastic and food waste.

Waste would be classified in accordance with the *Waste Avoidance and Resource Recovery Act 2001* and associated regulations and segregated appropriately. EPRM would be temporarily transported and stored for reuse in one of Council's temporary EPRM roadside stockpile sites in accordance with the requirements of the EPRM Order and Exemption and all other wastes transported offsite for recycling or disposal at appropriately licenced waste facilities.

Cumulative impacts

Cumulative impacts have the potential to occur when benefits or impacts from a project overlap or interact with those of other projects, potentially resulting in a larger overall impact (positive or negative) on the environment or local communities. Cumulative impacts may occur when projects are constructed or operated concurrently or consecutively. Once the project is operational, other projects which interact with the project may enhance the project and create positive cumulative benefits. The potential cumulative impacts of the project and the other projects occurring within the locality include:

- Air quality: Cumulative air quality impacts would be unlikely due to the other works occurring in the locality being of sufficient distance from the project area. There would be a minor cumulative impact for emissions due to all works contributing additional greenhouse gas emissions into the atmosphere.
- Biodiversity: Potential cumulative biodiversity impacts associated with native vegetation removal and the removal of hollow-bearing trees from the project and other projects within the locality and previous works along East Seaham Road. However, the areas of vegetation being removed within each of the works within the locality are separated by large areas of cleared lands. The site has connectivity to Wallaroo National Park and as such cumulative impacts, provided the mitigation measures are implemented, are expected to be minor.
- Contamination and chemical/ hazardous substance management: Minor cumulative impacts associated with increased use of hazardous substances within the Williams River catchment as a result of the multiple works occurring within the locality. Due to permanent use of hazardous substances in industrial uses and agricultural land uses within the locality, and cumulative impact caused by the project would be minor.
- Flooding: Based on the flood modelling no cumulative impacts are expected as a result of the project.
- Hazards and risks: There would be a cumulative impact on response times of emergency services potentially as a result of the multiple works occurring within the locality with traffic controls and diversions. Consultation with emergency

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services would be conducted for all PSC works in accordance with standard PSC notification of works procedures.

- Heritage: There will be a significant impact to Road Alignment which is a local heritage item within the project area. Cumulative impacts due to previous tree removal along the road alignment, has resulted in the tree removal Stages 5 and 6 having a significant impact on the heritage item. This contributes to an overall gradual erosion of heritage within the locality as heritage items are lost or upgraded.
- Noise and vibration: Cumulative noise and vibration impacts would be unlikely due to the other works occurring in the locality being of sufficient distance from the project area.
- Soil and water: Potential cumulative water quality impacts due to the increase in impervious surfaces due to previous works along East Seaham Road. Although this impact in context of the larger Williams River catchment would be minor.
- Transport and traffic: A temporary localised increase in travel times and kilometres (potentially if road closure option is selected) and speed limit reductions which would be intensified due to the concurrent works occurring within the locality.
- Waste management: There would be cumulative impacts of waste generated and transport related impacts for reuse and disposal of waste from the works within the locality including this project. This would increase the environmental footprint of the locality.

Environmental management

A CEMP would be prepared for the project. The CEMP will detail the approach to environmental mitigation, management, monitoring and reporting during construction of the project. The CEMP will provide more detailed sub-plans and other documentation focused on key environmental issues during construction.

Key issues that will be addressed in the CEMP(s), where relevant, will include:

- minimisation and management of air emissions, including dust generation and emissions from plant and equipment
- protection of biodiversity within and around construction sites
- protection of Aboriginal and non-Aboriginal heritage during construction, procedures for managing and salvage of archaeology where relevant, and protocols for the management of unexpected finds
- minimisation and management of noise and vibration, including construction scheduling
- management of water, including surface, groundwater primarily focusing on mitigation and management of erosion and sedimentation risks, management

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of works within areas prone to flooding and dewatering methods and requirements if required
- management of construction traffic, including site access arrangements and minimisation of impacts associated with heavy vehicle movements, including spoil haulage
- management of waste, including transport and disposal requirements, and resource efficiency and sustainability measures.

A community engagement plan has been prepared for the project and would be used to guide community and stakeholder engagement activities during construction of the project. Engagement during construction will include updates on planned construction activities and responding to concerns and enquiries where receiver, in a timely manner, seeking resolution and minimising potential impacts where possible.

Commenting on the Project

Council will place this EIS on public exhibition for a minimum of 28 days in accordance with the *NSW Environmental and Planning Regulation 2000* (EP&A Regulation).

During this period, the EIS will be available for inspection on the NSW Planning Portal.

To make a submission, use the online form if possible. This is available at www.planningportal.nsw.gov.au/major-projects/projects/on-exhibition.

If you cannot lodge online, you can write to the address below:
Attn: Department of Planning, Industry and Environment GPO Box 39 Sydney NSW 2001

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