



Environmental
Protection
Authority

Turkey Point Access Road and Bridge

Southern Ports Authority

Report 1719
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This assessment report has been prepared by the Environmental Protection Authority (EPA) under s. 44 of the *Environmental Protection Act 1986* (WA). It describes the outcomes of the EPA's assessment of the Turkey Point Access Road and Bridge proposal by Southern Ports Authority.

This assessment report is for the Western Australian Minister for Environment and sets out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment
- the EPA's recommendations as to whether or not the proposal may be implemented and, if the EPA recommends that implementation be allowed, the conditions and procedures, if any, to which implementation should be subject
- other information, advice and recommendations as the Authority thinks fit.



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25 January 2022

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Summary

Proposal

The Turkey Point Access Road and Bridge is a proposal to provide a public access road from Estuary Drive across the Preston River and joining the existing Turkey Point access road, thus bypassing Bunbury Port areas and Bunbury Port related traffic. The proposal is located within the City of Bunbury, in the South West region of Western Australia.

The proponent for the proposal is Southern Ports Authority.

The proposal includes a new bridge with a single lane dual carriage road and dual use path over the Preston River, north of the existing rail bridges. The proposal proposes a disturbance/clearing footprint of up to 6.52 hectares. The proposal serves to minimise interaction between port traffic and public recreational traffic, which has the potential to cause both security and safety issues.

Consultation

The EPA published the proponent's referral information for the proposal on its website for seven days public comment. The EPA requested the proponent undertake targeted consultation as part of its request for additional information, including with groups who provided a submission during the seven day public comment on referral. The EPA considered these comments in its assessment.

Mitigation hierarchy

The mitigation hierarchy is a sequence of proposed actions to reduce adverse environmental impacts. The sequence commences with avoidance, then moves to minimisation, rehabilitation, and offsets are considered as the last step in the sequence.

The proponent considered the mitigation hierarchy in the development and assessment of its proposal, and as a result has modified the development envelope to reduce clearing and avoid fragmenting the Subtropical and Temperate Coastal Saltmarsh Priority Ecological Community.

Assessment of key environmental factors

The EPA has identified the key environmental factors (listed below) in the course of the assessment. For each factor, the EPA has assessed the residual impacts of the proposal on the environmental values and considered whether the environmental outcomes are likely to be consistent with the EPA environmental factor objectives.

Flora and vegetation and terrestrial fauna

Residual impact		Assessment finding
1	Direct impact to 0.67 ha of the subtropical and temperate coastal saltmarsh community and associated terrestrial fauna habitat	<p>The EPA advises that this is a significant residual impact that is likely to be able to be regulated through reasonable conditions (recommended conditions 1 and 2) including a requirement for offsets (recommended condition 4).</p> <p>With the implementation of recommended conditions, including offsets, the likely environmental outcomes are:</p> <ul style="list-style-type: none"> • small incremental loss of subtropical and temperate coastal saltmarsh community and associated fauna habitat relative to the remaining extent • biological diversity and ecological integrity of the remaining extent of the saltmarsh community and associated fauna habitats in Leschenault estuary will be maintained • a tangible improvement to the condition and extent of the community through the management and rehabilitation of subtropical and temperate coastal saltmarsh community in nearby areas. <p>The EPA has concluded that the environmental outcome is likely to be consistent with the EPA's objectives for flora and vegetation and terrestrial fauna.</p>
2.	Indirect impacts to flora and vegetation and terrestrial fauna habitat within 20 metres of the development envelope	<p>The EPA advises that this is a residual impact that is likely to be able to be regulated through reasonable conditions (recommended condition 3).</p> <p>The EPA has concluded that the environmental outcome is consistent with the EPA objectives for flora and vegetation and terrestrial fauna.</p>

Inland waters

Residual impact		Assessment finding
1.	Potential impacts to hydrological regime and water quality of the Preston River	<p>The EPA advises this will be a residual impact that is likely to be able to be regulated through reasonable conditions (recommended condition 3).</p> <p>With the implementation of the recommended condition 3 the likely environmental outcomes following construction of the proposal are that:</p> <ul style="list-style-type: none"> • river and tidal flow regime and water quality will return to preconstruction flow and quality, with only minor and localised scouring effects from bridge piers • continued tidal flow patterns to the river and the subtropical and temperate coastal saltmarsh community.

Residual impact		Assessment finding
		The EPA has concluded that the environmental outcome is consistent with the EPA objective for inland water.
2.	Indirect impacts on the extent of the Preston River delta from changes in sedimentation	<p>The EPA advises that this is a residual impact that is likely to be able to be regulated through reasonable conditions (condition 3).</p> <p>The EPA has concluded that the environmental outcome is likely to be consistent with the EPA objective for inland waters.</p>
3.	Potential indirect impacts to groundwater associated with the construction of the access road bridge and temporary construction bridge, including from disturbance of Acid Sulfate Soils.	<p>The EPA advises that this potential impact is not likely to be a material impact and likely to be consistent with the EPA factor objective.</p> <p>It is noted that potential impacts are subject to further assessment and regulation by the Department of Water and Environmental Regulation under the <i>Rights in Water and Irrigation Act 1914</i> (Bed and Banks, permit to dewater), <i>Waterways Conservation Act 1976</i> (reclamation license) and Department of Water and Regulation guidance on Acid Sulfate Soils.</p>

Holistic assessment

The EPA considered the connections and interactions between relevant environmental factors and values to inform a holistic view of impacts to the whole environment. The EPA formed the view that the holistic impacts would not alter the EPA's conclusions about consistency with the EPA factor objectives.

Conclusion and recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal
- residual impacts, and effects in relation to the key environmental factors, separately and holistically (this has included considering cumulative impacts of previous developments on the subtropical and temperate coastal saltmarsh community)
- likely environmental outcomes (and taking into account the EPA's recommended conditions), consistency of these outcomes with the EPA's objectives for the key environmental factors
- the EPA's confidence in the proponent's proposed mitigation measures
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment
- principles of the *Environmental Protection Act 1986*.

The EPA has recommended that the proposal may be implemented subject to conditions recommended in Appendix A.

1 Proposal

The Turkey Point Access Road and Bridge is a proposal to provide a public access road from Estuary Drive across the Preston River and joining the existing Turkey Point access road, thus bypassing Port areas and Port related traffic. The proposal is located within the City of Bunbury, in the South West region of Western Australia.

The proposal includes a new bridge with a single lane dual carriage road and dual use path over the Preston River, north of the existing rail bridges. The proposal proposes a disturbance/clearing footprint area of up to 6.52 hectares (ha). The proposal serves to minimise interactions between the Port of Bunbury traffic and public recreational traffic, which has the potential to cause both security and safety issues.

The proponent for the proposal is the Southern Ports Authority. The proponent referred the proposal to the Environmental Protection Authority (EPA) on 31 July 2020. The referral information was published on the EPA website for 7 days public comment. On 15 January 2021, the EPA decided to assess the proposal at the level 'Referral Information with additional information'.

The elements of the proposal which have been subject to the EPA's assessment are included in Table 1.

Table 1: Location and proposed extent of proposal elements

Proposal element	Location	Maximum extent or range
Physical elements		
Single lane dual carriage road and bridge and dual use path over the Preston River.	Figure 1	Disturbance/clearing footprint of up to 6.52 ha.

Proposal amendments

The original proposal is set out in section 2 of the proponent's referral supporting report (Southern Ports Authority 2020), which is available on the EPA website.

During the assessment process the EPA encouraged the proponent to identify avoidance and mitigation measures for the proposal, in addition to those included in the original proposal.

The proponent requested changes to the original proposal during assessment. The changes were assessed to be unlikely to significantly increase any impacts of the proposal, and some reduced potential impacts on the environment. The EPA Chair's notice of 20 October 2021, consenting to the change under s. 43A of the *Environmental Protection Act 1986* (EP Act), is available on the EPA website.

The consolidated and updated elements of the proposal which has been subject to the EPA's assessment is included in Table 1.

Proposal alternatives

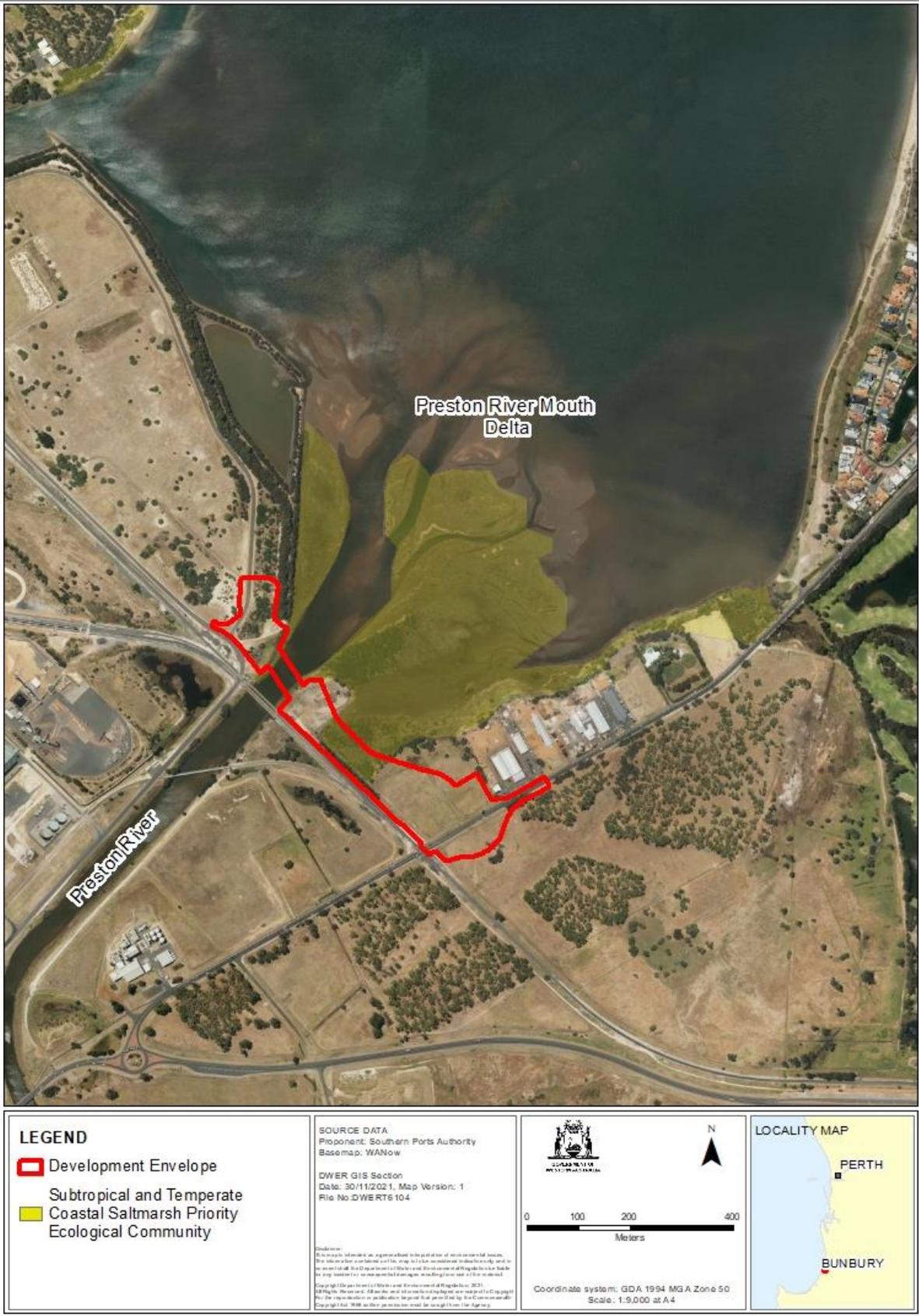
The proponent considered four alternative options, including a do-nothing option, for this proposal. The preferred option (this proposal) has the least environmental impacts of the alternatives considered (apart from the do-nothing option) as, in comparison, this proposal avoids fragmentation of vegetation and reduces indirect impacts to the hydrological regimes required by nearby vegetation communities.

Planning context

The proposal is located on land reserved as Regional Open Space and zoned Port Installations in the Greater Bunbury Region Scheme (GBRS).

The GBRS was referred to the EPA for assessment in 1996, with the EPA releasing Report 1108 in 2003. At the time, this assessment report identified a portion of land that coincides with the development envelope as an area that should be reserved in the GBRS. Condition 1-1(3) of Ministerial Statement 697 required the GBRS to be amended such that small areas of land zoned port installation be reserved for conservation purposes to protect the integrity, function and environmental values of the foreshore area.

As a result of condition 1-1(3), a small portion of land was added to the existing Regional Open Space in 1999. For the purposes of this assessment, the area added as Regional Open Space corresponds to the location of the subtropical and temperate coastal saltmarsh within the development envelope (see Figure 1), with the total area of Regional Open Space within the local area shown in Figure 2. Given this previous assessment, the EPA has assessed the impact of the function and environmental values of the foreshore area of the Regional Open Space affected by this proposal.



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Figure 1: Proposal development envelope and local extent of subtropical and temperate coastal saltmarsh priority ecological community



2 Assessment of key environmental factors

This section includes the EPA's assessment of the key environmental factors. The EPA also evaluated the impacts of the proposal on other environmental factors (terrestrial environmental quality, greenhouse gas emissions and social surroundings) and concluded these were not key factors for the assessment. This evaluation is included in Appendix D.

2.1 Flora and vegetation and terrestrial fauna

2.1.1 Environmental objectives

The EPA environmental objective for flora and vegetation is *to protect flora and vegetation so that biological diversity and ecological integrity are maintained* (EPA 2016a).

The EPA environmental objective for terrestrial fauna is *to protect terrestrial fauna so that biological diversity and ecological integrity are maintained* (EPA 2016b).

2.1.2 Investigations and surveys

The EPA advises the following investigations and surveys were used to inform the assessment of the potential impacts to flora and vegetation and terrestrial fauna:

- Ecological Investigations (Appendix D of the updated Assessment Environmental Referral Supporting Document and Additional Information (ARI document) (Southern Ports Bunbury 2018a)
- Terrestrial Shorebirds and Waterbirds Assessment (Southern Ports Bunbury 2018b)
- Previous biological surveys identified in section 5.3.1 (flora and vegetation) and section 6.3.1 (terrestrial fauna) of the ARI document.

The surveys were consistent with the *Technical Guidance – Flora and vegetation surveys for environmental impact assessment* and the *Technical Guidance – Terrestrial vertebrate surveys for environmental impact assessment* (EPA 2016c and EPA 2020b).

2.1.3 Assessment context: existing environment

The development envelope and clearing footprint is 6.52 ha and is primarily composed of scattered natives, and revegetation with weeds and introduced grasses. The majority (5.85 ha or 90%) of vegetation in the development envelope is in a degraded to completely degraded condition. These areas are considered low value as fauna habitat.

The development envelope contains 0.67 ha of *Casuarina obesa* low open woodland in excellent condition. The *C. obesa* woodland is associated with the conservation significant community, the Subtropical and Temperate Coastal Saltmarsh (referred

afterwards as the coastal saltmarsh). This community is listed as a Priority 3 (P3) community by the Department of Biodiversity, Conservation and Attractions (DBCA). The EPA also note that the P3 community is listed as a vulnerable threatened ecological community under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). While this proposal is not being assessed by the Commonwealth Department of Agriculture, Water and the Environment, the EPA had regard for the conservation advice published for this community under the EPBC Act.

The coastal saltmarsh is considered foraging habitat, primarily for:

- shore and waterbirds, including migratory species
- black cockatoos.

No flora of conservation significance was identified during the surveys. Surveys also did not detect Carter's freshwater mussel (*Westralunio carteri*), likely due to the high salinity which the mussel is intolerant of (Southern Ports Bunbury 2018a).

2.1.4 Consultation

The EPA requested the proponent undertake targeted consultation as part of its request for additional information, including with groups who provided a submission during the 7-day public comment period on the referral. Matters raised during stakeholder consultation and the proponent's responses are provided in section 3 of the ARI document (Southern Ports Authority 2021b).

The key issues raised during the public and targeted consultation on the proposal and how they have been considered in the assessment are described in sections 2.1.5, 2.1.6 and 2.1.8 of this report.

2.1.5 Potential impacts from the proposal

The proposal has the potential to significantly impact on flora and vegetation and terrestrial fauna from:

- direct impacts to 0.67 ha of coastal saltmarsh
- direct impacts to 0.67 ha of fauna habitat for shore and waterbirds
- indirect impacts to adjacent coastal saltmarsh and fauna habitat during construction including from weeds and disease.

The issue raised during the consultation about potential impacts to black cockatoo foraging habitat is considered unlikely to be material because the foraging habitat impacted is small in extent (0.67 ha) and of limited foraging value due to the small extent and species diversity. In addition, the extent of black cockatoo foraging habitat within 12 kilometres of the development envelope is about 6,971 ha, and this proposal represents a very small loss in proportion to the existing extent. Therefore, this issue was not considered further in the assessment.

2.1.6 Minimisation measures (including regulation by other DMAs)

Since referral in July 2020, the proponent has revised the proposal design and infrastructure components. Key comments from the stakeholder consultation process were taken into consideration in the revised design. The proponent has proposed the following measures to minimise impacts to flora and vegetation and terrestrial fauna:

1. realignment of the access road and bridge to avoid fragmentation of the saltmarsh community, which also reduced the extent of vegetation clearing and the loss of fauna habitat
2. implementation of procedures to minimise indirect impacts including dust and weeds and to maintain vehicle/plant hygiene
3. demarcation of clearing areas, with directional clearing towards habitat outside the development envelope where practicable
4. presence of a suitably qualified fauna spotter during clearing activities.

The issue raised during the public and targeted consultation about the potential impacts from fragmenting the coastal saltmarsh have been considered through minimisation measure 1.

2.1.7 Rehabilitation measures

The proponent proposes to revegetate areas disturbed during construction inside the development envelope but not required for the road infrastructure. This will include approximately 0.15 ha of the coastal saltmarsh community that will be temporarily cleared but rehabilitated post construction.

2.1.8 Assessment of impacts to environmental values

The EPA considered that the key environmental values for flora and vegetation and terrestrial fauna likely to be impacted by the proposal is the coastal saltmarsh and its associated value as fauna habitat.

Subtropical and Temperate Coastal Saltmarsh

The coastal saltmarsh community is found in the subtropical and temperate regions of Australia between Shark Bay and south-east Queensland. The coastal saltmarsh community consists of mainly salt tolerant vegetation (such as grasses, herbs, sedges and rushes) as well as non-vascular plants and occurs within a narrow, tidally influenced margin along the coast. Within Western Australia, the community has a high species diversity and often a high degree of endemism (Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) 2013).

The coastal saltmarsh is inhabited by a wide range of infaunal and epifaunal invertebrates such as molluscs and crustaceans, as well as high tide visitors such as prawns and fish. Terrestrial and aquatic insects are also abundant. This fauna assemblage is an important foraging resource for shore and waterbirds (DSEWPC 2013).

Key threats to this community are from clearing and infilling for development, changes to the hydrology that disconnect the community from tidal influences and

weed invasion (DSEWPC 2013). Within the local area of the Leschenault Estuary, the saltmarsh community is estimated to occupy around 350 ha, which is an approximate 50 per cent decline from the approximate 700 ha mapped in 1941.

Shore and waterbird surveys conducted on the adjacent Preston River delta by the proponent showed bird diversity and numbers were variable across both seasons and years (Southern Ports Bunbury 2018b). While these surveys were not conducted within the development envelope, the Preston River delta is located immediately adjacent to the proposal. The EPA considers that due to the similarity of the habitats and vegetation community between the survey area and the development envelope, the shore and waterbirds usage within the development envelope are likely to be similar and therefore suitable for this assessment.

Species diversity recorded ranged from 12 – 23, with total bird numbers ranging from 212 – 497. Species recorded included migratory waders such as plovers, sandpipers and godwits that are also listed under international migratory bird agreements (Southern Ports Bunbury 2018b). Within the context of the southern Leschenault Estuary, the adjacent Preston River delta support some of the highest number and diversity of shore and waterbirds. Point Douro, located at the mouth of the Collie River, supports similar numbers and diversity of shore and waterbirds.

The EPA notes that the coastal saltmarsh habitat is found more broadly along the fringe of the Leschenault Estuary, including in the Leschenault Peninsula Conservation Park. Birdlife Australia data identifies that shore and water birds utilise the available habitats around the estuary fringe, although the EPA notes that this data indicates that migratory waders prefer the tidal mud flats at the mouths of the Collie and Preston Rivers (Birdlife Australia 2021).

Cumulative impacts

Historically, dredging and reclamation to construct the Bunbury Port Inner Harbour in the 1960s resulted in a considerable loss of wetlands and coastal saltmarsh community along the tidal delta connecting what is now the Leschenault Inlet and the Estuary. In the 1990s, additional reclamation activities for the development of port land in Vittoria Bay resulted in further losses of saltmarsh habitats.

In considering the loss of both the saltmarsh community and its value as fauna habitat, the EPA advises that in a local context (defined as the Leschenault Estuary) the proposal will result in a reduction in extent of 0.67 ha (or 0.2 per cent of the mapped extent) of this community and habitat. Therefore, this proposal represents a minor incremental impact (0.2 per cent of the mapped extent) on the remaining extent of the coastal saltmarsh community.

The EPA notes that this area of loss is small, linear and on the fringe of the occurrence, and its loss is therefore unlikely to compromise the intent of the GBR zoning of providing a large buffer to the estuary. The EPA therefore considers the proposal is unlikely to be inconsistent with the intent of Report 1108.

The EPA notes that future plans for the expansion of the Inner Harbour involving the relocation of the Preston River have been withdrawn by the proponent and is no

longer being assessed by the EPA. This plan would have resulted in potential impacts on the saltmarsh community. As this proposal has been withdrawn, the EPA is not aware of any reasonably foreseeable projects that would have additional impacts on coastal saltmarsh habitats in the estuary.

Likely residual impacts

The EPA has assessed the likely residual impacts of the proposal on flora and vegetation, and terrestrial fauna to be:

1. the loss of 0.67 ha of the coastal saltmarsh community and associated fauna habitat
2. indirect impacts during construction and post construction including from weeds and disease.

The EPA considers that the loss of coastal saltmarsh and associated fauna habitat as a result of the proposal is unlikely to result in significant impacts to the biological diversity and ecological integrity of the saltmarsh community, and the water and shore birds in the Leschenault Estuary due to the small extent of impact. This is particularly as the proposal no longer fragments the coastal saltmarsh community, as was proposed when the proposal was referred.

However, due to the historical losses of the coastal saltmarsh community from previous developments and the fact that this extent area of clearing coincides with an area reserved in the GBRs for conservation and recreation, the EPA has assessed the impact to the saltmarsh community to be a significant residual impact.

The offset proposed by the proponent manages existing occurrences of the community as well as rehabilitates areas of the saltmarsh community that currently do not meet the criteria to be considered a threatened ecological community. The EPA considers that the offset proposed by the proponent, as described and assessed in section 4, is likely to adequately counterbalance this significant residual impact.

The EPA advises that the significant residual impact can be regulated through reasonable conditions (conditions 1 and 3) and counter-balanced by offsets so that the saltmarsh community is protected; and the environmental outcome is consistent with the EPA objective for flora and vegetation.

The EPA notes that during construction and post construction, indirect impacts to the saltmarsh community may occur including from weeds and disease. This concern was also raised during the targeted consultation conducted by the proponent. The EPA considers that with the implementation of standard construction procedures, these impacts can be adequately managed, and no project attributable impacts would occur. The EPA has recommended condition 2 which specifies an environmental outcome of no project attributable indirect impacts to flora and vegetation and terrestrial fauna within 20 metres (m) of the development envelope.

The EPA also recognises that indirect impacts to the coastal saltmarsh and associated fauna habitat may occur from changes to hydrological flows during both construction and operation. This is discussed further in section 2.2.

2.1.9 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal on flora and vegetation and terrestrial fauna environmental values. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can ensure consistency with the EPA factor objective. The EPA assessment findings are presented in Table 2.

The EPA has also considered the principles of the EP Act in assessing whether the residual impacts will be consistent with its environmental factor objectives (see Appendix C) and whether reasonable conditions can be imposed.

Table 2: Summary of assessment for flora and vegetation and terrestrial fauna

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1	Direct impact to 0.67 ha of the saltmarsh community and associated fauna habitat	<p>Significant residual impact is likely to be able to be regulated through reasonable conditions so that the environmental outcome is likely to be consistent with the EPA objectives for flora and vegetation and terrestrial fauna.</p> <p>The likely environmental impacts are a small incremental loss of coastal saltmarsh and associated fauna habitat relative to the remaining extent.</p> <p>With the implementation of recommended conditions, including offsets, the likely environmental outcomes are:</p> <ul style="list-style-type: none"> biological diversity and ecological integrity of the remaining extent of the saltmarsh community and associated fauna habitats in Leschenault estuary will be maintained a tangible improvement to the condition and extent of the community through the management and rehabilitation of subtropical and temperate coastal saltmarsh community in nearby areas. 	<p>Regulated through recommended conditions:</p> <ol style="list-style-type: none"> 1 – limit on the extent of the proposal (area) 2 – flora and vegetation 4 – offsets
2.	Indirect impacts during construction and post construction from weeds and disease.	Residual impact from indirect impacts is likely to be able to be regulated through reasonable conditions so the environmental outcome is consistent with the EPA objectives for flora and vegetation and terrestrial fauna.	Regulated through recommended condition 2 – flora and vegetation

2.2 Inland waters

2.2.1 Environmental objective

The EPA environmental objective for inland waters is *to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected* (EPA 2018).

2.2.2 Investigations and surveys

The EPA advises the following investigations and surveys met the EPA's requirements and were used to inform the assessment of the potential impacts to inland waters:

- Ecological Investigations (appendix D of the updated ARI document) (Southern Ports Bunbury 2018a)
- Updated Environmental Referral Supporting Document and Additional Information, EPA Assessment Number 2275, September 2021 (Southern Ports Authority 2021b)
- Turkey Point Access Road Approvals: Tidal inundation monitoring and modelling report. Report prepared for Southern Ports Authority, 14 September 2021 (GHD 2021).

2.2.3 Assessment context: existing environment

The development envelope crosses the Preston River where it flows into the Leschenault Estuary at Vittoria Bay. The Leschenault Estuary is recognised as a significant waterway with high conservation values for shore and migratory birds. It supports five broad types of fringing vegetation of state significance (Semenuik *et. al.* 2000). Diverse habitats in the estuary include the seagrass and macroalgal beds, tidal and sand flats supporting migratory wader species, as well as coastal saltmarshes through to *Melaleuca* woodlands (McComb *et. al.* 2001).

There are three large Geomorphic Wetlands that intersect with the development envelope, the Leschenault Estuary waterbody – a Conservation Category Wetland, and two Multiple Use Wetlands.

The Preston River is a highly modified river and flows through a catchment that has experienced extensive land clearing. Marine water intrusion causes increased salinities in the lower reach of the Preston River. The lower reach experiences deoxygenation due to poor water quality and periodic algal blooms (Hugues-dit-Ciles *et. al.* 2012).

2.2.4 Consultation

The EPA requested the proponent undertake targeted consultation as part of its request for additional information, including with groups who provided a submission during the 7-day public comment on referral. Matters raised during stakeholder consultation and the proponent's responses are provided in section 3 of the ARI document (Southern Ports Authority 2021b).

The key issues raised during the public consultation on the proposal and how they have been considered in the assessment are described in sections 2.2.5, 2.2.6 and 2.2.8 where relevant in this report.

2.2.5 Potential impacts from the proposal

The proposal has the potential to significantly impact on inland waters from:

- increase in flooding from changes to surface hydrology
- short-term and temporary constriction of river flow during construction from the temporary causeway
- short-term and temporary ground disturbance works of the bed and banks of the Preston River during construction, including installation and removal of temporary construction causeway, causing increased turbidity in the Preston River
- indirect impacts on water quality from spill/release of contaminants (hydrocarbons) including leaching of metals from disturbance of acid sulfate soils (ASS) during construction and operations.

2.2.6 Minimisation measures (including regulation by other DMAs)

Since referral in July 2020, the proponent has revised the proposal design and infrastructure components. Key comments from the stakeholder consultation process were taken into consideration in the revised design. The proponent has proposed the following measures to minimise impacts to inland waters:

1. re-alignment of the access road and bridge to avoid fragmentation of the saltmarsh community and a reduction in impact to the tidal regime and connectivity
2. developing procedures in the Construction Environmental Management Plan (CEMP) to manage direct impacts on water quality during the construction phase
3. temporary construction causeway will be in place for 4 to 5 months with the materials used for the temporary causeway to be from a clean source
4. bridge structure in the river is limited to two concrete piers and culverts on the floodplain
5. Water Sensitive Urban Design principles have been integrated into the bridge design with all runoff directed to capture areas either side of the bridge.

An additional scour analysis will be required during the detailed design phase on completion of the geotechnical investigations.

The concerns raised during public and targeted consultation about impact to the coastal saltmarsh have been considered through minimisation measures 1, 3 and 5.

Waterways Conservation Act 1976 and the Rights in Water and Irrigation Act 1914

The proposal lies within the Leschenault Inlet Management Area, a declared Management Area under the *Waterways Conservation Act 1976* (WC Act). The purpose of the WC Act is the preservation and enhancement of the quality of the environment and amenity of declared waters, environmental quality and the control and prevention of pollution. As the Preston River is adjacent to the Leschenault Inlet Management Area, any activities that may affect the water quality of the estuary will require a licence under the WC Act.

The proposal includes activities that would require licences under the *Rights in Water and Irrigation Act 1914* (RiWi Act). One of the primary objects of this legislation is the management of water resources, including regulation of activities which are detrimental to that water resource, protection of the water resource ecosystems and protection of the environment in which the water resource is situated.

Licences under the above acts are required to construct the proposal, including for geotechnical investigations, earthworks, and bridge and road construction. These licences will include conditions to regulate and mitigate the impacts to surface water and groundwater, including from potential ASS and matters relating to flooding and turbidity, to ensure the objectives of the acts are achieved.

The Department of Water and Environmental Regulation (DWER) advised that all potential impacts to surface water and groundwater, including from any potential ASS, can be managed through licence conditions under the WC Act.

2.2.7 Rehabilitation measures

Where possible, the proponent will undertake progressive rehabilitation of disturbed areas. Active areas will be rehabilitated at the end of the construction stage. Rehabilitation of the coastal saltmarsh after construction is addressed in section 2.1.7.

2.2.8 Assessment of impacts to environmental values

The EPA considered that the key environmental values for inland waters likely to be impacted by the proposal is the flow and water quality of the Preston River, which may affect both the Preston River delta and the coastal saltmarsh.

Preston River Flow

There will be temporary interruptions to the flow of the Preston River during the construction of the access road bridge because of the temporary construction causeway having to be in place for up to 5 months, which may increase the risk of flooding. River flow will be redirected through a 15 m opening in the temporary construction causeway. Based on the proponent's analysis and advice from the DWER, the EPA advises that the small and temporary risk of river flooding can be managed during construction and through preventing the construction and use of the temporary construction causeway between 1 May and 30 September.

The lower reaches of the Preston River are tidally flushed, and this process needs to be maintained during the works. As such the temporary causeway needs to be designed and constructed to enable tidal flushing to continue.

In terms of ongoing impacts, the bridge structure has been designed to minimise flow obstruction and scouring. Minor rock protection on the abutments of the bridge and a two-pier structure are included in the design. Advisian (2019) undertook a waterways analysis of the bridge and found that the bridge would have minimal impact on flood risk. The analysis predicted the increase in surface water level for a 100 to 500 average recurrence interval flood event would only be between 0.03 m to 0.06 m (Advisian 2019).

The EPA has assessed that the proponent's minimisation measures are likely to be adequate to ensure the river flow patterns necessary to maintain ecological functions of the Preston River and coastal saltmarsh are maintained. The EPA advises that residual impacts can be regulated through reasonable conditions (conditions 3).

As discussed in section 2.2.6, the EPA notes that the proponent amended the proposal during the assessment to move the proposal closer to the existing rail bridge. As a result, the indirect impacts to the coastal saltmarsh from interruption of the tidal flow connection between the two bridges has been avoided.

Preston River water quality

Construction

During construction of the bridge there will be potential impacts to the water quality of the lower Preston River. Impacts include increased turbidity from the clearing of vegetation and from earthworks. The impacts will be temporary and localised to the heavily disturbed portion of the lower Preston River.

To minimise these impacts, a proposal specific CEMP has been prepared by the proponent. Mitigation measures include the use of clean-sourced fill material, the installation of silt curtains and water quality monitoring during construction. The DWER has advised that these measures for construction will be conditioned under the WC Act.

ASS risk mapping indicates there is a moderate to high risk of ASS in the proposal area. In areas adjacent to estuaries where the watertable is shallow, typical strategies to manage disturbance of potential ASS (where it is unavoidable) include the use of clean fill to cover in situ soils, use of piling and diaphragm walls or the use of neutralising material (DER 2015). The EPA notes DWER's advice that potential impacts to surface water from disturbance of any ASS during construction can be managed through the application of licence conditions under the WC Act and the RiWI Act. The EPA advises that the proponent should adopt the department's ASS management principles (DER 2015) in the final design of the proposal of avoidance wherever possible.

The proponent is still investigating if installation of the bridge footings will require dewatering. It is expected that if required, dewatering will be for a short duration, is a low abstraction rate, and will match the surrounding water quality. The EPA therefore

considers it is unlikely to have a significant impact, and the DWER advised that the final construction details, inclusive of abstraction requirements, will be considered in granting licences under the WC Act and the RiWi Act.

The likely environmental impacts to the water quality of the lower Preston River from construction activities (particularly from turbidity) will be short term, temporary and localised. Given the heavily disturbed condition of the lower Preston River and short-term duration of potential impacts, the EPA considers it is not likely to be a material impact.

Ongoing impacts

The bridge design will incorporate water sensitive urban design principles. During operations surface water runoff from the road will be redirected to a contained area and not enter the Preston River. The EPA has assessed that the minimisation measures for water quality are likely to be adequate to ensure there will be no ongoing significant impacts to the water quality of the Preston River.

Preston River delta

The Preston River delta, formed over the last 50 years by the realignment of the lower Preston River, has been identified as important shorebird habitat. Previous studies have shown the delta to be stable over the last 20 years with only small fluctuations evident. The proposal has the potential to impact on the extent of the delta by the permanent alteration of river flow and sediment deposition due to in-river bridge structures.

The proponent has designed the bridge structure to minimise scouring by maintaining river flow and includes minor rock protection on the banks of the bridge. The preliminary design of the bridge includes 2 piers to support a spanned bridge. At the detailed design stage, the bridge will need to be further evaluated and approved by DWER as part of the Bed and Banks permit process under the RiWi Act.

The EPA advises that it is highly likely that the proposal can continue to maintain river flow and associated sedimentation regimes such that the delta will continue to be stable and function as important shorebird habitat.

Likely residual impacts

The EPA has assessed the likely residual impacts of the proposal on inland waters will be:

1. potential impacts to the hydrological regime and water quality of the Preston River
2. indirect impacts on the Preston River delta (which has been identified as waterbird habitat) from changes in sedimentation
3. potential indirect impacts to groundwater associated with the construction of the access road bridge and temporary construction bridge from disturbance of ASS.

The EPA considers, based on the advice of DWER, that the potential impacts to the Preston River associated with geotechnical investigations, earthworks and bridge and road construction can be adequately managed and regulated under the combination of the WC Act and/or the RiWi Act.

The EPA considers the assessment and approvals process would consider further measures to ensure the water quality of the Preston River is maintained and that the proposal is constructed to enable continuation of tidal flushing so that the EPA objective for inland waters can be met.

DWER will require final construction details prior to issuing approvals under both the WC Act and/or the RiWi Act. At that stage, the EPA advises that more specific measures should be required by DWER to meet the EPA objective for inland waters. The measures may relate to the deployment of silt curtains, the timing of construction at low tide, measures to ensure tidal flushing is maintained during construction, and the stockpiling of excavated materials to address ASS.

The EPA considers that with the implementation of the recommended conditions and regulation by DWER, the potential environmental outcomes from the proposal are likely to be:

- short term and temporary changes to the flow and water quality of the Preston River during proposal construction, including short term increase in turbidity
- maintenance of the hydrological regimes of the Preston River and the coastal saltmarsh, and the Preston River delta.

The EPA advises that the residual impact to inland waters can be subject to conditions to ensure the maintenance of the hydrological regime of the Preston River, the delta, and the coastal saltmarsh. This also includes protection of the surface water quality (condition 3-1(1)) of the Preston River and the receiving environments. The EPA advises that residual impacts can be regulated through reasonable conditions (condition 3). This will ensure the environmental outcome is likely to be consistent with the EPA objective for inland waters.

2.2.9 Summary of key factor assessment and recommended conditions

The EPA has considered the likely residual impacts of the proposal on inland waters environmental values. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can ensure consistency with the EPA factor objective. The EPA assessment findings are presented in Table 3.

The EPA has also considered the principles of the EP Act in assessing whether the residual impacts will be consistent with its environmental factor objective (see Appendix C) and whether reasonable conditions can be imposed.

Table 3: Summary of assessment for inland waters

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Potential impacts to hydrological regime and water quality of the Preston River	<p>Residual impact from direct and indirect impacts can be regulated through reasonable conditions to ensure the environmental outcome is consistent with the EPA objective for inland water.</p> <p>The likely environmental impacts during construction are short term, temporary and localised changes to the water quality (turbidity) and inundation pattern of the lower Preston River at the site and downstream of the access bridge.</p> <p>With the implementation of the recommended condition (condition 3) the likely environmental outcomes following construction are:</p> <ul style="list-style-type: none"> river and tidal flow regime and water quality will return to preconstruction levels, with only minor and localised scouring effects from bridge pylons continued tidal flow patterns to the river and the coastal saltmarsh community. <p>The temporary causeway has the potential to cause flooding from obstruction. Management of flood risk has been identified and advice from the DWER states that it can be managed under a Bed and Banks permit (RiWI Act) and the Rights in Water and Irrigation Regulations 2000.</p>	<p>Regulated through recommended conditions:</p> <p>3 – Inland waters.</p> <p>The EPA notes that DWER can regulate the flood management risks and water quality aspects associated with temporary causeway under a Bed and Banks Permit (RiWI Act) and the Waterways Conservation Act 1976.</p>
2.	Indirect impacts on the Preston River delta (which has been identified as waterbird habitat) from changes in sedimentation	<p>The EPA advises that this is a residual impact that is likely to be able to be regulated through reasonable conditions (condition 3), so the environmental outcome is consistent with the EPA objective for inland waters.</p> <p>With the implementation of the recommended condition 3 the likely</p>	<p>Regulated through recommended condition:</p> <p>3 – Inland waters.</p>

Residual impact		Assessment finding	Recommended conditions and DMA regulation
		environmental outcomes following construction are that the flow and sedimentation regimes that support the Preston River delta (waterbird habitat) will not be interrupted and the delta will be maintained.	
3.	Potential impacts to groundwater associated with the construction of the temporary construction bridge, as a result of disturbance of ASS	<p>Due to the small extent of the proposal and temporary construction activities, this is not likely to be a material impact and is consistent with the EPA factor objective provided that appropriate management measures are implemented in accordance with DWER guidelines.</p> <p>It is noted that potential impacts are subject to regulation by DWER under the RiWI Act (Bed and Banks, permit to dewater) and WC Act (Reclamation License).</p>	Excavation, removal of material and dewatering for temporary construction activities regulated by DWER under the RiWI Act, and WC Act.

3 Holistic assessment

While the EPA assessed the impacts of the proposal against the key environmental factors and environmental values individually in the key factor assessments above, given the link between flora and vegetation, terrestrial fauna and inland waters, the EPA also considered connections and interactions between them to inform a holistic view of impacts to the whole environment.

The EPA's evaluation of other environmental factors (that is, those which were not considered key factors for assessment) is included in Appendix D. Figure 3 summarises the key relationships and links between the key environmental factors to inform the EPA's holistic assessment.

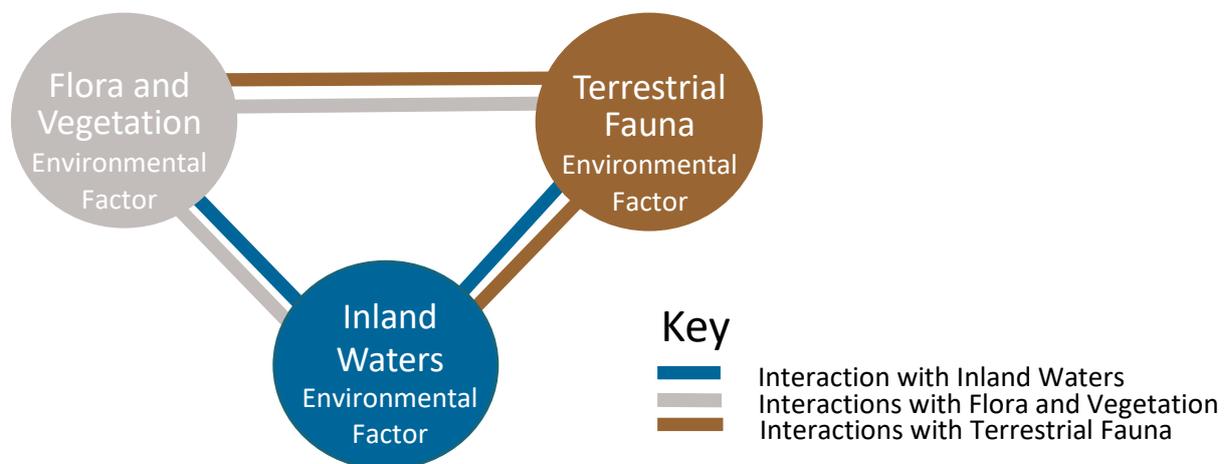


Figure 3: Intrinsic interactions between environmental factors

The conservation significant flora and vegetation provides habitat for shore and waterbirds, particularly migratory waders, and is reliant on tidal connectivity and good water quality. Minimising impacts to flora and vegetation, particularly by modifying the development envelope and avoiding fragmenting the vegetation, will therefore also minimise impacts to fauna habitat and ensure tidal connectivity is maintained.

The EPA considers that the proposed mitigation and management measures, and recommended conditions for impacts and offsetting of significant residual impacts to flora and vegetation will also mean the inter-related impacts to other environmental factors, including the values associated with terrestrial fauna, will be consistent with the EPA environmental factor objectives.

Summary of holistic assessment

When the separate environmental factors and values affected by the proposal were considered together in a holistic assessment, the EPA formed the view that the impacts from the proposal would not alter the EPA's views about consistency with the EPA factor objectives as assessed in section 2.

4 Offsets

Environmental offsets are actions that provide environmental benefits which counterbalance the significant residual impacts of a proposal.

Consistent with the *WA Environmental Offsets Guidelines* (Government of Western Australia 2014), the EPA may consider the application of environmental offsets to a proposal where it determines that the residual impacts of a proposal are significant, after avoidance, minimisation and rehabilitation have been pursued.

In the case of this proposal, likely (and potential) significant impacts are to:

- 0.67 ha of coastal saltmarsh community.

Environmental offsets are not appropriate in all cases. In this case the EPA considers offsets are appropriate given the:

- proponent's additional application of the mitigation hierarchy to further reduce potential impacts caused by fragmentation (principle 1 of the *WA Environmental Offsets Policy*)
- magnitude of the likely significant residual impacts on environmental biodiversity values (principle 2 of the *WA Environmental Offsets Policy*)
- residual impacts can be counterbalanced by the provision of offsets that are likely to have a demonstrated environmental benefit (principle 6 of the *WA Environmental Offsets Policy*).

The proponent has proposed to undertake a series of management and rehabilitation offsets at a series of properties in close proximity to the development envelope (Southern Ports Authority 2021a). The proponent has used the Commonwealth Offsets Guidelines to calculate the amount of offsets required. While the State of Western Australia has released a State Offset Metric (DWER 2021), this occurred after the Offset Strategy was prepared. The EPA is satisfied that the use of the Commonwealth Offset Guidelines is appropriate for this proposal.

The EPA has considered whether the offsets are likely to offset the likely significant residual impacts; this is discussed below.

Management of existing coastal saltmarsh

The proponent has identified two sites totalling 1.23 ha containing coastal saltmarsh. These sites are adjacent to the development envelope and are owned by the Southern Ports Authority. These sites are:

- Lot 1 Estuary Drive, Pelican Point (site 1A)
- Lot 963 Estuary Drive, Vittoria (site 1B).

Vegetation condition on these sites is in very good-excellent condition, and forms part of a larger area of coastal saltmarsh along the fringes of Leschenault Estuary. The proponent proposes to undertake annual inspections and weed management (as needed) along the southern border of this area for a period of 5 years. The

proponent also proposes to protect the area with a conservation covenant within 12 months of the proposal being approved.

The EPA acknowledges that these lots are already in very good or better condition, however notes that *Watsonia* is present along the fringes of the adjacent rail line and along the Preston River. *Watsonia* is highly invasive, and weed invasion is one of the threats listed in the Conservation Advice for the community (DSEWPC 2013). Ongoing management of this area is likely to provide an environmental benefit to prevent and manage any weed populations.

However, the EPA considers that on-ground management for 5 years may be insufficient to achieve a long-term environmental benefit. The EPA has recommended in condition 4-2 that the offset measures be required to achieve environmental outcomes related to:

- the total offset area meeting the criteria to be considered coastal saltmarsh
- the area is considered resilient and self-replicating (good or better vegetation condition, recruitment) when compared to unimpacted reference sites.

While the EPA recognises that these areas are zoned Regional Open Space, the EPA supports the proponent applying a conservation covenant to ensure long-term protection of the area.

Rehabilitation of coastal saltmarsh

The proponent has identified three sites totalling 1.69 ha containing coastal saltmarsh. These sites are less than 1 km east of the development envelope and are owned by the Southern Ports Authority. These sites are all located on Lot 61 Estuary Drive, Pelican Point (sites 2A, 2B and 2C).

Site 2A is considered coastal saltmarsh in a very good condition, however vegetation condition on sites 2B and 2C is in a poor to degraded condition and therefore no longer meet the criteria to be considered coastal saltmarsh. However, both sites 2B and 2C are likely to have historically been coastal saltmarsh and still contain some salt tolerant species such as sedges and grasses. All 3 sites no longer remain tidally connected to the Leschenault Estuary due to a one-way gate and weir and are subject to edge effects from weed invasion. In addition, site 2C on Lot 61 is currently used for grazing.

The proponent has undertaken hydrodynamic modelling to determine the frequency and duration of tidally driven inundation to identify whether removal of the one-way gate will allow the coastal saltmarsh community to re-establish in sites 2A, 2B and 2C (Southern Ports Authority 2021a). The EPA advises that this hydrodynamic modelling indicates that Lot 61 will become inundated under highest astronomical tides, which occurs about once a fortnight.

The rehabilitation work proposed by the proponent involves reestablishment of the tidal connection, weed management and infill planting. The proponent will also establish a 10 m buffer between site 2C and the adjacent golf course to enable nutrient management and biofiltering of surface water. This will assist in preventing

nutrient enrichment of the coastal saltmarsh and support natural regeneration. The EPA advises that, while important for successful rehabilitation, it hasn't been included as part of the proponent's offset requirement in the Commonwealth Offsets Guidelines.

The EPA recognises that rehabilitation of threatened ecological communities can be difficult, as achieving the appropriate species diversity to ensure the resultant rehabilitation meets the listing criteria is often unsuccessful. However, the coastal saltmarsh has been successfully rehabilitated both overseas and within Australia, for example the Millennium Wetlands in Sydney and locally at Point Douro. Successful rehabilitation of this community is due to the key diagnostic feature of this community being tidal connection and inundation, rather than a diversity and complex species composition.

Literature to assist and guide the rehabilitation process is also available, including the *Saltwater Wetlands Rehabilitation Manual* (Department of Environment & Climate Change 2008). The EPA supports rehabilitation-based offsets to aim for no net loss, and given the small proportion of coastal saltmarsh impacted and previous success in rehabilitation elsewhere, considers that this offset may be feasible.

The proponent is proposing an Offsets Plan that will detail the appropriate completion criteria to achieve the outcome that the resultant saltmarsh criteria is ecologically sustainable. The EPA notes that the proponent considers that this may be achievable within 5 years. While the community may successfully re-establish within this time, the EPA is recommending that ongoing management occurs until the outcomes in condition 4-2 are achieved (as described above). This will ensure a long-term conservation benefit and that the reestablishment isn't compromised by factors such as weed invasion.

The proponent also proposes to protect the area with a conservation covenant within 12 months of the proposal being approved. As the lots are currently owned by the Southern Ports Authority, the EPA supports the use of conservation covenant to ensure long-term protection of the area.

The EPA recommends condition 4 be imposed to ensure the offsets are likely to counterbalance the likely significant impacts. The Offset Plan will be required within 6 months of the publication of the Ministerial Statement in recognition of the nature of the offsets proposed and the current tenure of the sites.

5 Recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values likely to be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- EPA's confidence in the proponent's proposed mitigation measures
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA objectives for the key environmental factors
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment and
- principles of the EP Act.

The EPA recommends that the proposal may be implemented subject to the conditions recommended in Appendix A.

Appendix A: Recommended conditions

Section 44(2) of *Environmental Protection Act 1986* specifies that the EPA's report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This appendix contains the EPA's recommended conditions and procedures.

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (*Environmental Protection Act 1986*)

TURKEY POINT ACCESS ROAD AND BRIDGE

Proposal: The proposal is for a single lane dual carriage road, bridge and dual use path over the Preston River, north of the existing rail bridges in the City of Bunbury.

Proponent: Southern Ports Authority
Australian Business Number 30 044 341 250

Proponent Address: 54 Casuarina Drive
Bunbury WA 6230

Assessment Number: 2275

Report of the Environmental Protection Authority: 1719

Pursuant to section 45 of the *Environmental Protection Act 1986* (EP Act), it has been agreed that the proposal described in section 2 of the proponent's Referral Information (Version 1, July 2020), and subsequently amended by the change to the proposal approved under section 43A of the EP Act on 20 October 2021 may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

1 Limitations and extent of proposal

When implementing the proposal, the proponent shall ensure the proposal does not exceed the following extents:

Proposal element	Location	Maximum extent or range
Operational elements		
Construction and operation with a single lane dual carriageway, bridge and dual use path	Located within the development envelope as shown in Figure 1	Clearing and disturbance of no more than 6.52 ha of native vegetation within the development envelope.

2 Flora and Vegetation

2-1 The proponent shall implement the proposal to achieve the following environmental **outcomes**:

- (1) clear no more than 0.67 ha of **Subtropical and Temperate Coastal Saltmarsh**; and
 - (2) ensure there are no project attributable **indirect impacts** to the **Subtropical and Temperate Coastal Saltmarsh** within twenty (20) metres outside the **development envelope** (shown in Figure 1).
- 2-2 Prior to **ground-disturbing activities**, the proponent shall undertake monitoring of the **Subtropical and Temperate Coastal Saltmarsh** listed in condition 2-1(2) and submit a report about the preconstruction baseline conditions to the **CEO**.
- 2-3 The proponent shall continue to undertake monitoring during construction and for at least three (3) years after the completion of construction and until the **CEO** is satisfied that the proponent has demonstrated the **outcome** in condition 2-1(2) has been met.
- 2-4 The proponent shall annually submit a report as part of the Compliance Assessment Report required by condition 7-6, that shall:
- (1) outline the monitoring that was undertaken during the implementation of the proposal;
 - (2) outline the results of the monitoring undertaken to report whether the environmental **outcome** in condition 2-1(2) was achieved;
 - (3) report whether the **outcome** in conditions 2-1(1) was achieved; and
 - (4) outline any management actions, including **contingency actions**, undertaken during the implementation of the proposal to meet the **outcomes** in conditions 2-1(1) and 2-1(2).

3 Inland Waters

- 3-1 The proponent shall implement the proposal to achieve the following environmental **outcomes**:
- (1) ensure there are no project attributable impacts to the hydrological regime and water quality of the Preston River during both construction and post construction, consistent with preconstruction levels of a suitable upstream reference site; and
 - (2) ensure there are no project attributable indirect impacts to sediment deposition or accumulation which adversely affects the extent of waterbird habitat in the **Preston River mouth delta** (shown in Figure 1).
- 3-2 Prior to **ground-disturbing activities**, the proponent shall undertake monitoring of the values listed in conditions 3-1(1) and 3-1(2) and submit a

- report about the preconstruction baseline conditions and where relevant, the location of a suitable reference site to the **CEO**.
- 3-3 The proponent shall continue to undertake monitoring during and post-construction, for at least three (3) years after the completion of construction and until the **CEO** is satisfied that the proponent has demonstrated the outcomes in conditions 3-1(1) and (2) have been met.
- 3-4 The proponent shall not construct or have in place the temporary construction causeway between 1 May and 30 September (inclusive), in any year.
- 3-5 The proponent shall annually submit a report as part of the Compliance Assessment Report required by condition 7-6, that shall:
- (1) outline the monitoring that was undertaken during the implementation of the proposal;
 - (2) outline the results of the monitoring undertaken to report whether the environmental **outcomes** specified in conditions 3-1(1) and 3-1(2) were achieved;
 - (3) report whether that the **outcomes** in conditions 3-1(1) and 3-1(2) were achieved; and
 - (4) outline any management actions, including **contingency actions**, undertaken during the implementation of the proposal to meet the **outcomes** in conditions 3-1(1) and 3-1(2).

4 Offsets

- 4-1 The proponent shall implement offset measures to counterbalance the significant residual impact to the following environmental value:
- (1) 0.67 ha of **Subtropical and Temperate Coastal Saltmarsh**.
- 4-2 To meet the requirements of condition 4-1 the proponent shall achieve the following environmental **objectives**:
- (1) ensure that the areas identified in Table 1 meet the criteria to be considered the **Subtropical and Temperate Coastal Saltmarsh**; and
 - (2) achieve **ecological integrity** through implementation of **on-ground management** at the sites and to the extents specified in Table 1.

Table 1: Location and extent of offset measures required to meet the requirement of condition 4-1.

Offset number	Location	Site (extent)	Action

1.	Lot 1 Drive, Point	Estuary Pelican	Site 1A (at least 0.53 ha)	On-ground management
2.	Lot 963 Drive, Vittoria	Estuary	Site 1B (at least 0.7 ha)	On-ground management
3.	Lot 61 Drive, Point	Estuary Pelican	Site 2A (at least 0.35 ha) Site 2B (at least 0.34 ha)	On-ground management
4.	Lot 61 Drive, Point	Estuary Pelican	Site 2C (at least 1 ha)	On-ground management

Subtropical and Temperate Coastal Saltmarsh Offset Plan

4-3 Within six (6) months of the publication of this Statement, or as agreed by the **CEO**, the proponent shall prepare and submit the Subtropical and Temperate Coastal Saltmarsh Offset Plan (the Plan) to the requirements of the **CEO**.

4-4 The Plan shall:

- (1) demonstrate that the objectives in condition 4-2 will be met;
- (2) describe how and when the offset measures will be implemented consistent with condition 4-2;
- (3) spatially identify the areas (**Proposed Offset Conservation Areas** inclusive of a suitable wetland buffer) to receive **on-ground management** offset measures consistent with condition 4-2. Submit shapefiles for each of the **Proposed Offset Conservation Areas**;
- (4) demonstrate how the environmental values within the **Proposed Offset Conservation Areas** will be maintained and improved in order to counterbalance the significant residual impact to the environmental value in condition 4-1 through application of the principles of the *WA Environmental Offsets Policy* and completion of the *WA Offsets Template*, as described in the *WA Environmental Offsets Guidelines*, and the *Environmental Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy Assessment Guide*, or any subsequent revisions of these documents;
- (5) identify how the **Proposed Offset Conservation Areas** will be protected, being either the sites are ceded to the Crown for the purpose of management for conservation, or the sites are managed under other suitable mechanism for the purpose of conservation as agreed by the CEO by notice in writing;
- (6) state the targets to be achieved, **on-ground management**, including completion criteria for the revegetation, which will result in a **tangible improvement** to the environmental value being offset.

- (7) demonstrate the consistency of the targets with the objectives of any relevant guidance, including but not limited to, conservation advice or area management plans;
- (8) detail the **on-ground management** actions, with associated timeframes for implementation and completion, to achieve the targets identified in condition 4-4(6) and objectives in condition 4-2; and
- (9) detail the monitoring, reporting and evaluation mechanisms for the targets and actions identified under conditions 4-4(6) and 4-4(8)
- (10) detail a mechanism for reporting on the achievement of offset objectives will be made publicly available.

4-5 The proponent:

- (1) may review and revise the Plan; or
- (2) shall review and revise the Plan as and when directed by the CEO by a notice in writing.

4-6 The proponent shall implement the latest revision of the Plan approved by the CEO.

4-7 The proponent shall continue to implement the Plan for a minimum of three (3) years after revegetation has occurred or until the CEO has confirmed by notice in writing that the proponent has demonstrated that the objectives in condition 4-2 are being met.

4-8 If the objective, actions or targets in the Plan are unable to be met, the proponent shall:

- (1) notify the CEO in accordance with condition 7-5; and
- (2) provide a report to the CEO within sixty (60) days including details and timing of the **contingency actions** to be undertaken, to the satisfaction of the CEO.

4-9 The proponent shall report to the CEO on the objectives of the **contingency actions** as required by condition 4-8 within sixty (60) days of completion.

4-10 The proponent shall continue to implement **contingency actions** as required by condition 4-8 until the CEO has confirmed by notice in writing that the proponent has demonstrated that the objectives in condition 4-2 are being met.

5 Contact Details

5-1 The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within

twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

6 Time Limit for Proposal Implementation

6-1 The proponent shall not commence implementation of the proposal after five (5) years from the date of this Statement, and any commencement, prior to this date, must be substantial.

6-2 Any commencement of implementation of the proposal, on or before five (5) years from the date of this Statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of five (5) years from the date of this Statement.

7 Compliance Reporting

7-1 The proponent shall prepare, and maintain a Compliance Assessment Plan which is submitted to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 7-6, or prior to implementation of the proposal, whichever is sooner.

7-2 The Compliance Assessment Plan shall indicate:

- (1) the frequency of compliance reporting;
- (2) the approach and timing of compliance assessments;
- (3) the retention of compliance assessments;
- (4) the method of reporting of potential non-compliances and corrective actions taken;
- (5) the table of contents of Compliance Assessment Reports; and
- (6) public availability of Compliance Assessment Reports.

7-3 After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 7-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 7-1.

7-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 7-1 and shall make those reports available when requested by the CEO.

7-5 The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known.

- 7-6 The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the CEO.

The Compliance Assessment Report shall:

- (1) be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer's behalf;
- (2) include a statement as to whether the proponent has complied with the conditions;
- (3) identify all potential non-compliances and describe corrective and preventative actions taken;
- (4) be made publicly available in accordance with the approved Compliance Assessment Plan; and
- (5) indicate any proposed changes to the Compliance Assessment Plan required by condition 7-1.

8 Public Availability of Data

- 8-1 Subject to condition 8-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal, the proponent shall make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)), management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

- 8-2 If any data referred to in condition 8-1 contains particulars of:

- (1) a secret formula or process; or
- (2) confidential commercially sensitive information,

the proponent may submit a request for approval from the CEO to not make these data publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

Schedule 1

Table 3: Abbreviations and Definitions

Acronym or abbreviation	Definition or term
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or his delegate.
Contingency actions	Actions to be implemented when monitoring determines that a management target, outcome or objective may not be met, and where the actions will bring the impact within the management target, outcome or objective.
Development envelope	The area within the <i>red</i> line marked in Figure 1 of this Statement.
Environmental weeds	Any plant declared under section 22(2) of the <i>Biosecurity and Agriculture Management Act 2007</i> , any plant listed on the Weeds of National Significance List and any weeds listed on the Department of Biodiversity, Conservation and Attractions South West Region Impact and Invasiveness Ratings list, as amended or replaced from time to time.
EP Act	<i>Environmental Protection Act 1986</i>
ha	Hectare
indirect impacts	Any potential impacts outside the development envelope as a result of the clearing and disturbance authorised in this Statement. This includes but is not limited to: hydrological change, spread or introduction of environmental weeds , altered fire regimes, introduction or spread of disease, changes in erosion/deposition/accretion and edge effects.
Ground disturbing activity	Activities that are associated with the substantial implementation of the proposal including but not limited to, earthmoving, vegetation clearing, grading, construction of new or widening of existing roads and tracks. Ground disturbing activities does not include Geotechnical investigations (including potholing for services and the installation of piezometers) and other preconstruction activities where no clearing of vegetation is required.
Objective	An objective is the proposal-specific desired state for an environmental factor/s to be achieved from the implementation of management actions.
On-ground management	This includes revegetation (re-establishment of native vegetation in degraded areas) and rehabilitation (including repair of ecosystem processes and management of weeds, disease or feral animals) with the objective to achieve a tangible improvement to the environmental values in the offset area.
Outcome	A proposal-specific result to be achieved when implementing the proposal.

Acronym or abbreviation	Definition or term
Ecological integrity	For the purposes of condition 4-2(2), the areas have demonstrated evidence of recruitment for key species and presence of a range of age cohorts, considered to be in a good or better condition consistent with Keighery, B.J. (1994). <i>Bushland Plant Survey: a Guide to Plant Community Survey for the Community</i> , and active management of threatening processes is no longer required.
Subtropical and Temperate Coastal Saltmarsh	Vegetation that can be considered to meet the requirements identified in the <i>Conservation Advice for Subtropical and Temperate Coastal Saltmarsh</i> (Department of Sustainability, Environment, Water, Population and Communities, 2013).
Proposed Offset Conservation Area	The area of land, inclusive of a suitable wetland buffer, identified in Table 1.
tangible improvement	a perceptible, measurable and definable improvement that provides additional ecological benefit and/or value.

Figures (attached)

Figure 1 Proposal development envelope and location of the Subtropical and Temperate Coastal Saltmarsh Priority Ecological Community. (This figure is a representation of the co-ordinates shown in Table X of Schedule X)



Figure 1 Proposal development envelope and location of the Subtropical and Temperate Coastal Saltmarsh Priority Ecological Community. (This figure is a representation of the co-ordinates Schedule 1)

All co-ordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50) datum of Geocentric Datum of Australia 1994 (GDA94).

Spatial data depicting the figures are held by the Department of Water and Environmental regulation. Record no. DWERDT511980

Appendix B: Decision-making authorities

Table B1: Identified relevant decision-making authorities

Decision-Making Authority	Legislation (and approval)
1. Minister for Environment	<i>Biodiversity Conservation Act 2016</i> - section 40 authority to take or disturb threatened species
2. Minister for Lands	<i>Land Administration Act 1997</i> - section 91 licence over Crown land
3. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> - permit to interfere with beds and banks - licence to take water - licence to construct well <i>Waterways Conservation Act 1976 and Waterways Conservation Regulations 1981</i> - disposal and reclamation licences
4. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> - part V clearing permit
5. Chair, Western Australian Planning Commission	<i>Planning and Development Act 2005</i> - development application

Note: In this instance, agreement is only required with DMAs 1-3 as these DMAs are Ministers.

Appendix C: Consideration of Environmental Protection Act principles

Table C1: Consideration of the principles of the *Environmental Protection Act 1986*

EP Act principle	Consideration
<p>1. The precautionary principle</p> <p><i>Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</i></p> <p><i>In application of this precautionary principle, decisions should be guided by –</i></p> <p><i>(a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and</i></p> <p><i>(b) an assessment of the risk-weighted consequences of various options.</i></p>	<p>In considering this principle, the EPA notes the proposal could significantly impact flora and vegetation, terrestrial fauna and inland waters. The assessment of these impacts is provided in this report.</p> <p>Investigations into the biological and physical environment undertaken by the proponent have provided sufficient scientific certainty to assess the risk and identify measures to avoid and minimise the impacts.</p> <p>The EPA notes the proponent's modifications and reduction in the development envelope and footprint to minimise environmental impacts. The proponent has aligned the proposal adjacent to existing rail bridge, thereby removing fragmentation of the coastal saltmarsh and reducing the clearing extent and loss of terrestrial fauna habitat. The EPA has considered the potential impacts that the bridge may have on the Preston River quality and flow, and the Preston River delta, and considers that the environmental outcomes are likely to be consistent with the EPA factor objectives.</p> <p>The EPA has recommended conditions to ensure risks are minimised or avoided where possible and that the proponent undertakes relevant measures to manage residual impacts. The EPA has also recommended offsets be imposed to ensure that the significant residual impacts are counterbalanced.</p> <p>From its assessment of this proposal the EPA has concluded that there is no threat of serious or irreversible harm.</p>
<p>2. The principle of intergenerational equity</p> <p><i>The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.</i></p>	<p>In considering this principle, the EPA notes the proposal could significantly impact flora and vegetation, terrestrial fauna and inland waters. The assessment of these impacts is provided in this report.</p> <p>The EPA notes the proponent took actions to avoid and minimise impacts of the proposal, primarily with the re-alignment of the bridge to avoid fragmentation of the coastal saltmarsh, and designed the proposal to ensure impacts to inland waters could meet the EPA factor objective.</p>

EP Act principle	Consideration
	<p>The EPA has also considered to what extent the potential impacts from the proposal can be ameliorated by recommended conditions, including offsets. The EPA has concluded that the proposed offsets are likely to ameliorate impacts to the health, diversity, and productivity of the environment, and that the aim of the proposed offsets is to increase the extent of communities and habitat in secure tenure and managed for conservation, which will provide for future generations.</p>
<p>3. The principles of the conservation of biological diversity and ecological integrity</p> <p><i>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</i></p>	<p>The EPA has considered the principle of conservation of biological diversity and ecological integrity in its assessment and has had particular regard to this principle in its assessment of flora and vegetation, and terrestrial fauna. This principle is also relevant to the EPA consideration of the offset package.</p> <p>The EPA has considered to what extent the potential impacts from the proposal to flora and vegetation and terrestrial fauna can be ameliorated to ensure consistency with the principle of conservation of biological diversity and ecological integrity, including by provision of offsets. The EPA has concluded that given the nature of the impacts (clearing of 0.67 ha of the coastal saltmarsh priority ecological community vegetation of excellent condition and habitat for conservation significant fauna species such as black cockatoos and migratory birds) that the proposed offsets are likely to counter-balance the impacts of the loss of biological diversity and ecological integrity.</p> <p>The EPA notes that the offset for the coastal saltmarsh community is consistent with this principle as it also provides for the on-ground management actions (rehabilitation and weed management) of the saltmarsh within the development envelope that will be an improvement to the environmental values being offset.</p> <p>In considering this principle the EPA has concluded that the environmental outcome of the proposal is likely to be consistent with this principle and the EPA factor objective for flora and vegetation, and terrestrial fauna.</p>
<p>4. Principles relating to improved valuation, pricing and incentive mechanisms</p> <p><i>(3) Environmental factors should be included in the valuation of assets and services.</i></p> <p><i>(4) The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.</i></p>	<p>In considering this principle, the EPA notes that the proponent will bear the cost relating to implementing the proposal to achieve environmental outcomes, and management and monitoring of environmental impacts to flora and vegetation, terrestrial fauna and inland waters during construction, and operation of the proposal. The EPA has had regard to this principle during the assessment of the proposal.</p>

EP Act principle	Consideration
<p>(5) <i>The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes.</i></p> <p>(6) <i>Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.</i></p>	
<p>5. The principle of waste minimisation</p> <p><i>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</i></p>	<p>This principle was considered by the EPA when assessing the impacts of the proposal on the environmental values of the Preston River and the river mouth delta and the coastal saltmarsh.</p> <p>The EPA notes the proponent has integrated the principle of waste minimisation into the proposal. Decision making during the proposal will incorporate the waste hierarchy to manage the potential waste streams. The proponent has committed to implement best practice to minimise waste and avoid discharge to the environment.</p>

Appendix D: Other environmental factors

Table D1: Evaluation of other environmental factors

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
Land			
Terrestrial environmental quality	<ul style="list-style-type: none"> Excavation during construction stage of the proposal and installation of bridge footings potentially exposing acid sulfate soils (ASS) resulting in acidification of soils and leaching of metals to surface and/or groundwater. Soil erosion from clearing of vegetation and earthworks. Accidental release of hazardous material from storage or handling areas, contaminating the receiving environment Contaminated stormwater runoff during construction prior to installation of diversion drains. 	<p><u>Public comments</u> During stakeholder engagement, concerns were raised over the disturbance of ASS and the associated impacts.</p> <p><u>Agency comments</u> Comments from the Department of Water and Environmental Regulation (DWER): All potential impacts to surface water and groundwater can be managed under the <i>Waterways Conservation Act 1976 (WC Act)</i> and <i>Rights in Water and Irrigation Act 1914 (RiWI Act)</i>.</p>	<p>Terrestrial environmental quality was not identified as a preliminary key environmental factor when the EPA set the level of assessment.</p> <p>ASS risk mapping over the development envelope indicated the proposal is within an area of moderate to high risk. An assessment for ASS will be undertaken during the geotechnical investigation and in accordance with DWER ASS guidelines and was discussed under Inland Waters.</p> <p>Review of the DWER Contaminated Sites Database indicates there are two registered contaminated sites within the development envelope.</p> <p>Having regard to:</p> <ul style="list-style-type: none"> management and mitigation measures proposed by the proponent, including the Construction Environmental Management Plan (CEMP) bridge design follows Water Sensitive Urban Design principles, and all stormwater collection can be managed during operation the significance considerations in the <i>Statement of environmental principles, factors, objectives and aims of EIA</i> (EPA 2021) ability to consider impacts under the DWER guidelines for management of ASS advice from the DWER that impacts from ASS can be managed under the RiWI Act and WC Act

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor																							
			<p>the EPA considers it is unlikely that the proposal would have a significant impact on terrestrial environmental quality and that the impacts to this factor are manageable.</p> <p>Accordingly, the EPA did not consider terrestrial environmental quality to be a key environmental factor at the conclusion of its assessment.</p>																							
Air																										
Greenhouse gas (GHG) emissions	<p>The GHG emissions were estimated for the construction and ongoing operation of the access road bridge:</p> <table border="1" data-bbox="430 671 965 991"> <thead> <tr> <th data-bbox="430 671 622 767" rowspan="2">Activity</th> <th colspan="3" data-bbox="622 671 965 719">Scope</th> </tr> <tr> <th data-bbox="622 719 734 767">1</th> <th data-bbox="734 719 846 767">2</th> <th data-bbox="846 719 965 767">3</th> </tr> </thead> <tbody> <tr> <td data-bbox="430 767 622 815">Construction</td> <td data-bbox="622 767 734 815">1,212</td> <td data-bbox="734 767 846 815"></td> <td data-bbox="846 767 965 815">3,992</td> </tr> <tr> <td data-bbox="430 815 622 863">Operational</td> <td data-bbox="622 815 734 863"></td> <td data-bbox="734 815 846 863">793</td> <td data-bbox="846 815 965 863">97</td> </tr> <tr> <td data-bbox="430 863 622 911">Maintenance</td> <td data-bbox="622 863 734 911">514</td> <td data-bbox="734 863 846 911"></td> <td data-bbox="846 863 965 911">600</td> </tr> <tr> <td data-bbox="430 911 622 991">Project total (tCO₂-e)</td> <td data-bbox="622 911 734 991">1,726</td> <td data-bbox="734 911 846 991">793</td> <td data-bbox="846 911 965 991">4,749</td> </tr> </tbody> </table> <p>The total GHG emissions for the proposal is estimated at 7,268 tCO₂-e.</p>	Activity	Scope			1	2	3	Construction	1,212		3,992	Operational		793	97	Maintenance	514		600	Project total (tCO₂-e)	1,726	793	4,749	No agency or public comments were received	<p>GHG emissions was not identified as a preliminary key environmental factor when the EPA decided to assess the proposal. In scoping for the proposal, the EPA requested the proponent provide estimates of scope 1 GHG emissions (annual and total) over the life of the proposal including a breakdown of GHG emissions by source.</p> <p>Having regard to:</p> <ul style="list-style-type: none"> the combined construction and annual maintenance Scope 1 GHG emissions of 1,726 tCO₂-e is below the threshold for the factor guideline of 100,000 tCO₂-e (scope 1) the <i>Environmental Factor Guideline for Greenhouse Gas Emissions</i> (EPA 2020b) which details that GHG from a proposal will be assessed where it exceeds 100,000 tonnes of scope 1 emissions each year measured in carbon dioxide equivalence (CO₂-e) the significance of considerations in the <i>Statement of environmental principles, factors, objectives and aims of EIA</i> (EPA 2021), <p>the EPA considers it is unlikely that the proposal would have a significant impact on GHG emissions and that the impacts to this factor are manageable.</p>
Activity	Scope																									
	1	2	3																							
Construction	1,212		3,992																							
Operational		793	97																							
Maintenance	514		600																							
Project total (tCO₂-e)	1,726	793	4,749																							

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			Accordingly, the EPA did not consider GHG to be a key environmental factor at the conclusion of its assessment.
People			
Social surroundings (Aboriginal heritage)	<p>The proposal has the potential to disturb two registered Aboriginal heritage sites:</p> <ul style="list-style-type: none"> ○ Preston River (ID 19795) ○ Collie River Waugal (ID 16713). 	<p><u>Public comments</u></p> <p>The Aboriginal Land and Sea Council (SWALSC) were consulted and did not have any objections to the proposal. The Council advised Southern Ports to consult with the Gnaala Karla Booja representatives, as the knowledge holders for the area, once the design was fully developed.</p> <p>Comments raised from the SWALSC included if a section 18 (AH) was in place and if archaeological and ethnographic surveys had been done</p>	<p>Social surroundings (Aboriginal heritage) was not identified as a preliminary key factor when the EPA decided to assess the proposal. In scoping for the proposal, the EPA requested the proponent undertake targeted consultation with the SWALSC in relation to the proposal and the potential impacts to Aboriginal heritage sites.</p> <p>Having regard to:</p> <ul style="list-style-type: none"> • archaeological and ethnographic survey undertaken for the area • that Southern Ports will consult with the Gnaala Karla Booja once the project is at the detailed design stage • no objections being raised by the SWALSC, <p>the EPA considers it is unlikely that the proposal will have a significant impact on Aboriginal heritage as there will be minimal impacts to the Preston River and minimal alteration to river flow.</p> <p>Accordingly, the EPA did not consider social surroundings (Aboriginal heritage) to be a key environmental factor at the conclusion of its assessment.</p>
Social surroundings (Amenity)	Change in visual amenity from construction of the access road bridge and associated access to sites such as Point Mornington for birdwatching.	Comments were received from Birdlife Australia and the community.	<p><u>Visual amenity assessment</u></p> <p>The EPA assessed that there will be an impact to the visual amenity during the construction of the access bridge and the associated clearing of vegetation, installation of structures and the temporary construction causeway.</p>

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
	Generation of dust and noise during construction of the access bridge		<p>The proposal will result in a new access road for the public (including a cycleway) which will bypass the Port areas and Port related traffic. As such community access and visual amenity to the birdwatching area at Point Mornington will be maintained, via a new access road to the existing carpark at Point Mornington.</p> <p>Accordingly, the EPA did not consider social surroundings (visual amenity) to be a key environmental factor at the conclusion of its assessment.</p> <p><u>Dust and noise assessment</u></p> <p>Dust and noise will be generated during the construction of the access bridge.</p> <p>Having regard to:</p> <ul style="list-style-type: none"> • management and mitigation measures proposed by the proponent, including the proposal CEMP • construction related impacts are short term, <p>the EPA considers it is unlikely that the proposal would have a significant impact on dust and noise.</p> <p>Accordingly, the EPA did not consider social surroundings to be a key environmental factor at the conclusion of its assessment</p>

Appendix E: Relevant policy, guidance and procedures

The EPA had particular regard to the policies, guidelines and procedures listed below in the assessment of the proposal.

- *Environmental Factor Guideline – Flora and Vegetation* (EPA 2016)
- *Environmental Factor Guideline – Greenhouse Gas Emissions* (EPA 2020)
- *Environmental Factor Guideline – Inland Waters* (EPA 2018)
- *Environmental Factor Guideline – Social Surroundings* (EPA 2016)
- *Environmental Factor Guideline – Terrestrial Fauna* (EPA 2016)
- *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2021)
- *WA Environmental Offsets Policy* (Government of Western Australia 2011)
- *WA Environmental Offsets Guidelines*, Government of Western Australia (2014)
- *Statement of environmental principles, factors, objectives and aims of EIA* (EPA 2021)
- *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures* (State of Western Australia 2021).
- *Technical Guidance – Flora and vegetation surveys for environmental impact assessment* (EPA 2016)
- *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA 2020).

Appendix F: List of submitters

7-day comment on referral

19 submissions were received from individuals and three from organisations

Targeted consultation

The EPA requested the proponent undertake targeted consultation with stakeholders. Refer to table 3-2 in the Southern Ports Authority (September 2021) Updated environmental referral supporting document.

Appendix G: Assessment timeline

Date	Progress stages	Time (weeks)
15 January 2021	EPA decided to assess – level of assessment set	
15 January 2021	EPA requested additional information	0
14 September 2021	EPA received additional information	35
26 November 2021	EPA received final information for assessment	10
16 December 2021	EPA completed its assessment (s. 44(2b))	3
27 January 2021	EPA provided report to the Minister for Environment	6
1 February 2022	EPA report published	3 days
22 February 2022	Appeals period closed	3

Timelines for an assessment may vary according to the complexity of the proposal and are usually agreed with the proponent soon after the Environmental Protection Authority decides to assess the proposal and records the level of assessment.

In this case, the EPA met its timeline objective to complete its assessment and provide a report to the Minister.

References

Advisian 2019. *Bridge No 5403 15% Design Report - Port of Bunbury Turkey Point Public Access Bridge*. Prepared for Southern Ports Authority, May 2019.

Birdlife Australia 2021 *Birddata*, accessed 11 November 2021
<https://birddata.birdlife.org.au/>

DSEWPC 2013, *Conservation Advice for Subtropical and Temperate Coastal Saltmarsh*, Department of Sustainability, Environment, Water, Population and Communities Canberra.

Department of Environment & Climate Change 2008, *Saltwater Wetlands Rehabilitation Manual*, State of NSW and Department of Environment and Climate Change NSW, Sydney.

DER 2015, *Treatment and management of soil and water in acid sulfate soil landscapes*. Department of Environmental Regulation, Perth, WA.

DWER 2021, *Environmental offsets metric: Quantifying environmental offsets in Western Australia*. Department of Water and Environmental Regulation, Perth, WA.

EPA 2016a, *Environmental Factor Guideline – Flora and Vegetation*, Environmental Protection Authority, Perth, WA.

EPA 2016b, *Environmental Factor Guideline – Terrestrial Fauna*, Environmental Protection Authority, Perth, WA.

EPA 2016c, *Technical Guidance – Flora and vegetation surveys for environmental impact assessment*, Environmental Protection Authority, Perth, WA.

EPA 2016d, *Environmental Factor Guideline – Social Surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2018, *Environmental Factor Guideline – Inland Waters*, Environmental Protection Authority, Perth, WA.

EPA 2020a, *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment*, Environmental Protection Authority, Perth, WA.

EPA 2020b, *Environmental Factor Guideline – Greenhouse Gas Emissions*, Environmental Protection Authority, Perth, WA.

EPA 2021, *Statement of environmental principles, factors objectives and aims of EIA*, Environmental Protection Authority, Perth, WA.

GHD 2021, *Turkey Point Access Road Approvals: Tidal Inundation Monitoring and Modelling Report*. Report prepared for Southern Ports Authority, 14 September 2021.

Government of Western Australia 2011, *WA Environmental Offsets Policy*, Government of Western Australia, Perth, WA.

Government of Western Australia 2014, *WA Environmental Offsets Guidelines*, Government of Western Australia, Perth, WA.

Hugues-dit-Ciles, J, Kelsey, P, Marillier, B, Robb, M, Forbes, V & McKenna, M. 2012, Leschenault estuary water quality improvement plan, Department of Water, Western Australia

McComb, AJ, Qiu, S, Paling EI & Hills HA 2001, *Sediments of Leschenault Inlet: a comparison with other estuaries in the South-Western Australia*, Journal of the Royal Society of Western Australia, 275-284, 2001.

Semeniuk, V, Semeniuk, C, Semeniuk, T & Unno, J 2000, *The Leschenault Inlet Estuary: an overview*, Journal of the Royal Society of Western Australia, 83 (4): 2007-228.

Southern Ports Bunbury 2018a, *Ecological Investigations*, GHD Report for Southern Ports Bunbury.

Southern Ports Bunbury 2018b, *Terrestrial Shorebirds and Waterbirds Assessment*, GHD Report for Southern Ports Bunbury.

Southern Ports Authority 2020, *Section 38 Environmental Referral Document*, GHD Report for Southern Ports Authority – Port of Bunbury – Approvals Turkey Points Access Road and Bridge.

Southern Ports Authority 2021a, *Turkey Point Access Road and Bridge, Southern Ports Authority Offsets Strategy*, GHD Report for Southern Ports Authority.

Southern Ports Authority 2021b, *Updated Environmental Referral Supporting Document and Additional Information EPA Assessment Number 2275*, GHD Report for Southern Ports Authority – Port of Bunbury – Approvals Turkey Points Access Road and Bridge.

State of Western Australia 2021, *Western Australia Government Gazette, No. 223, Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures*, 23 October 2021.