



**Environmental
Protection
Authority**

**Port Rockingham Marina Cockburn Sound
– inquiry under section 46 of the
Environmental Protection Act 1986
to amend Ministerial Statements 826 and 1041**

Aureus Commercial Pty Ltd

Report 1711
October 2021

Inquiry under section 46 of the *Environmental Protection Act 1986*

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of changing the implementation condition 3 (Time Limit for Proposal Implementation) in Ministerial Statement 826 and 1041 relating to the Port Rockingham Marina Cockburn Sound.

Section 46(6) of the *Environmental Protection Act 1986* requires the EPA to prepare a report that includes:

- (a) a recommendation on whether or not the implementation conditions to which the inquiry relates, or any of them, should be changed
- (b) any other recommendations that it thinks appropriate.

The following is the EPA's report to the Minister pursuant to s. 46(6) of the *Environmental Protection Act 1986*.



Prof. Matthew Tonts
Chair

1 October 2021

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1 Proposal

The Port Rockingham Marina Cockburn Sound (the proposal) is to construct and operate a new marina facility located at the intersection of Wanliss Street and Rockingham Beach Road, Rockingham, within Cockburn Sound. The proponent for the proposal is Aureus Commercial Pty Ltd.

The Environmental Protection Authority (EPA) assessed the proposal at the level of Public Environmental Review and published its report in April 2009 (Report 1339). In this report, the EPA considered the following key environmental factors were relevant to the proposal:

- Marine water quality
- Loss of benthic primary producer habitat
- Coastal processes.

In applying the *Statement of Environmental Principles, Factors and Objectives* (EPA 2020b) these factors are now represented by:

- Marine environmental quality
- Benthic communities and habitat
- Coastal processes.

The EPA concluded in Report 1339 that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation of the recommended conditions. The then Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement (MS) 826 on 18 February 2010.

Previously approved changes to the conditions

In 2016, the then Minister for Environment requested that the EPA inquire into and report on the matter of extending the Time Limit of Authorisation for the implementation of the proposal. Following the inquiry, the EPA concluded in Report 1583 that the existing implementation conditions would continue to address the relevant environmental factors for the proposal and recommended that condition 3 be amended to extend the time within which the proposal can be substantially commenced until 18 February 2020.

The EPA also recommended condition 6 be amended to reference the updated *State Environmental (Cockburn Sound) Policy 2015* (SEP).

MS 1041 was published on 1 Nov 2016 and included changes to:

- condition 3-1 (Time Limit for Proposal Implementation) – extended to 18 February 2020
- condition 6-1 (Long Term Protection of the Environmental Values for Cockburn Sound) – amended to reflect the updated SEP and its updates.

2 Requested changes to the conditions

Condition 3-1 of MS 1041 (as it relates to MS 826) states that the proponent shall not commence implementation of the proposal after 18 February 2020, and any commencement prior to this date must be substantial.

The proponent has not yet substantially commenced implementation of the proposal. In September 2019, the proponent requested a change to condition 3-1 of MS 1041 to extend the authorised timeframe for substantial commencement of the proposal. The proponent did not propose any changes to the proposal or changes to any other conditions of MS 826 or MS 1041.

In response to the proponent's request, in December 2019, the Minister for Environment requested that the EPA inquire into and report on the matter of changing the implementation conditions of MS 826 and MS 1041 for the proposal in order to extend the Time Limit for Proposal Implementation. This report satisfies the requirements of the EPA's inquiry.

3 Inquiry into changing conditions

The EPA typically recommends the Minister for Environment sets conditions on significant proposals that require them to be substantially commenced within a specified timeframe. Extending this timeframe requires the Minister to change the relevant conditions under s. 46 of the *Environmental Protection Act 1986* (EP Act) and provides for the EPA to review and consider the appropriateness of the implementation conditions relating to the proposal.

The EPA has discretion as to how it conducts this inquiry. In determining the extent and nature of this inquiry, the EPA had regard to information such as:

- the currency of its original assessment of the proposal (Report 1339)
- previous s. 46 inquiry (Report 1583)
- MS 826 and MS 1041
- information provided by the proponent (dated 30 June 2021)
- advice from relevant decision-making authorities.

In conducting this inquiry, the EPA reviewed the information provided by the proponent and considered the original assessment of the proposal as detailed in Report 1339 and in its s. 46 assessment Report 1583. In considering whether it was appropriate to recommend an extension of the authorised timeframe for substantial commencement of the proposal, the EPA considered whether there was any change to, or new information relating to, the key environmental factors relevant to the proposal. The EPA also considered whether any new key environmental factors had arisen since its original assessment of the proposal.

In conducting the s. 46 inquiry the EPA also had the opportunity to consider:

- any changes in environmental, scientific or technological knowledge that may have arisen since the initial assessment.
- whether the proposal is being implemented using best practice and contemporary methods so that the EPA objectives for the key environmental factors are met.

EPA procedures

In conducting this inquiry, the EPA has considered and given due regard to relevant current and former policy documents. The EPA followed the procedures in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* (State of Western Australia 2016) and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2020a).

4 Inquiry findings

The EPA considers that the following are the key environmental factors relevant to the change to the conditions:

- Marine environmental quality
- Benthic communities and habitats
- Coastal processes.

Since the 2009 report and as part of this inquiry, the EPA has also considered the following environmental factors:

- Marine fauna
- Social surroundings
- Greenhouse gas emissions.

4.1 Marine environmental quality

The EPA's environmental objective for marine environmental quality is *to maintain the quality of water, sediment and biota so that environmental values are protected.*

Conclusions from EPA Report 1339

In the initial assessment of this proposal, the EPA found that the Port Rockingham Marina proposal is likely to have some direct, localised and temporary impacts to marine water quality during construction within the spatially defined 'zone of effect' (Figure 2 in MS 826). The following potential impacts were identified:

- Construction impacts relating to poor water quality within the marina. This is due to the temporary earthen bund required for construction potentially reducing the flushing capability of the marina.
- Construction impacts from increased turbidity resulting from rock dumping for the earthen bund and breakwater construction (plume up to 500 metres from the rock dumping point).
- Operational impacts related to increased potential for fuel, sillage and other pollution spills/events within the marina.

To manage these impacts, the EPA recommended the following conditions:

- That the proponent manages construction of the proposal through implementation of the Construction Environmental Management Plan to achieve the Environmental Quality Objectives (EQO) and the associated Levels of Ecological Protection (LEP), as outlined in the SEP¹, outside of the 'zone of effect' (as shown in Figure 2 in MS 826).

¹ Note that since the EPA's section 46 inquiry (EPA Report 1583) into changing the conditions of MS 826, and the subsequent issue of MS 1041 modernised the condition to refer to the updated *State Environmental (Cockburn Sound) Policy 2015* without changing the intent of the findings of the original assessment (EPA Report 1339).

- That the proponent demonstrates when the EQOs and associated LEPs have reestablished within the ‘zone of effect’ following completion of construction, thus meeting the criteria for a High Level of Ecological Protection.
- That the proponent implements a Marina Waterways Monitoring and Management Plan to achieve the EQOs and the associated LEP, as outlined in the SEP, to ensure the long-term protection of the environmental values of Cockburn Sound.

Assessment of the requested change to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Marine Environmental Quality* (EPA 2016c)
- *Technical Guidance: Protecting the Quality of Western Australia’s Marine Environment* (EPA 2016f)
- *State Environmental (Cockburn Sound) Policy 2015*
- *State of Cockburn Sound Marine Area Report 2018* (CSMC 2018).

The requested change relates only to the timeframe for substantial commencement of the proposal and does not include any other changes to either the operational elements or methods for construction.

Marine environmental quality in the Cockburn Sound has been historically impacted by nutrient pollution, resulting in the loss of over 75 per cent of seagrass between the early 1960s and 2004 (Government of Western Australia 2015). Since then, water quality in Cockburn Sound has improved significantly in response to actions by government, industry and the community, but it remains a priority to ensure water quality is maintained and where possible improved.

The proposal is located in the protection area of the SEP. The SEP was first introduced by the Government of Western Australia in 2005 (updated in 2015) as a mechanism to ensure that the environmental values of Cockburn Sound are protected and fully considered in decision-making about ongoing and future uses of the Sound (Government of Western Australia 2015). The SEP defines the Environmental Values² of the Cockburn Sound and sets the EQOs³ to protect those values. The SEP also spatially defines three levels of ecological protection (LEPs) within the Cockburn Sound i.e: high protection, moderate protection and low protection, and the proposal is within the high protection area towards the southern end (High Protection Area – South).

² Under the SEP, Environmental Value means a particular value or use of the marine environment that is important for a healthy ecosystem or for public benefit, welfare, safety or health and which requires protection from the effects of pollution, environmental harm, waste discharges and deposits. The Environmental Values that apply to the Cockburn Sound policy area are listed in Clause 4 of the SEP.

³ Environmental Quality Objectives (EQOs) have been established by the SEP for each Environmental Value. EQOs are specific management goals for a part of the environment and are either ecologically based by describing the desired level of health of the ecosystem or socially based by describing the environmental quality required to maintain specific human uses.

In general, water quality in the High Protection Area – South has improved since monitoring began in the early 1970s (CSMC 2018). In 2009 when the proposal was initially assessed, the CSMC reported that the monitoring guidelines for the EQO of ‘Maintenance of Ecosystem Integrity’ were met at all but two of the monitoring sites within the High Protection Area – South. The water quality decreased since 2009 from ‘B’ status to a ‘C’ status in 2017 (CSMC 2018). The ‘B’ and ‘C’ status signifies that some of the water quality indicators were below desired levels. The CSMC determined that this was likely due to the wet summer of 2016–17, but the overall water quality trend in the High Protection Area – South was considered stable and unchanging (CSMC 2018).

Construction impacts

The EPA noted in its initial assessment in 2009 that the construction of the earthen bund and breakwaters could impact marine water quality in two spatially defined areas i.e. inside the ‘zone of effect’ and outside the ‘zone of effect’ (as defined in Figure 2 of MS 826).

The EPA recommended that any potential water quality impacts outside ‘zone of effect’ should be managed to meet the environmental objective in condition 7-2 i.e. to ensure that the EQOs and associated LEP identified in the SEP outside ‘zone of effect’ are maintained. To ensure the objective of condition 7-2 would be met, the EPA recommended conditions 7-3 and 7-4, requiring the proponent to prepare and implement a Construction Environmental Monitoring Programme.

The temporary impacts to water quality inside the ‘zone of effect’ from the turbidity plume are required to be monitored and managed through the implementation of condition 7-5, on a continual basis post-construction until the proponent can demonstrate that the High LEP values have re-established inside the ‘zone of effect’.

Given the current ‘unchanging’ trend in the in High Protection Area – South, and the requirements on the proponent to manage the temporary construction impacts to water quality, the EPA does not consider that there are any new significant changes in the status of water quality within the High Protection Area – South that would require the reassessment of this factor for this proposal.

The EPA further notes that there have been no changes to the EQOs or the spatially defined High LEP required by the SEP that apply to the proposal. Given this, and that there are no changes to the construction methods, the EPA considers that relevant conditions of 7-2 to 7-5 remain adequate to ensure that the environmental outcome of this proposal would not be inconsistent with the EPA’s objective for marine environmental quality.

Operational impacts

The operation of a 500-pen marina is likely to increase recreational boat activity in Cockburn Sound, and potentially increase boat-sullage based water quality impacts in the Cockburn Sound. Due to the multiple and compounding industrial, commercial and recreational-uses in Cockburn Sound, the marina’s potential contribution to cumulative impacts should therefore be managed. As such, the EPA supports the

proponent's ongoing commitment to require large recreational vessels (over 10 meters length) using the marina to be fitted with a sillage holding tank.

The EPA notes that other ongoing operations of the proposed marina is unlikely to exacerbate poor water quality during operations due to its open pier structure that extends from Wanliss St Carpark for 200 metres to meet the breakwater. As defined in Table 1 of MS 826, this open structure has been designed as best practice to maximise natural flushing and minimise the potential of water quality issues, such as algal blooms or deoxygenation, developing.

To ensure operational impacts are managed and the long-term environmental values are protected, condition 6 of MS 1041 requires the proponent to implement a Marina Waterways Monitoring and Management Plan to achieve the EQOs and LEPs identified in the SEP so that Environmental Values prescribed in the policy are protected.

As there has been no significant change to the status of water quality within the proposal area (High Protection Area – South) and no change to the proposed design, there is no requirement to change the conditions in MS 826 or MS 1041. The EPA advises that the operational impacts can be adequately managed through condition 6 so that the outcome of the proposal is not likely to be inconsistent with the EPA's objective for this factor.

Consideration of cumulative impacts

Cockburn Sound is one of the most intensively used marine areas in Western Australia, with many ecological, industrial, commercial and recreational values. The EPA recognises the ecological importance of Cockburn Sound and the competing nature of human activities that contribute to ongoing environmental pressures and the potential for cumulative impacts.

Since the initial assessment of this proposal in 2009 there have been a number of plans to advance industry in the Cockburn Sound area, demonstrating the continued and emerging pressures and the potential for cumulative impacts.

The EPA notes the following proposals have been approved:

- CBH Kwinana Fertiliser Project (Assessment 2277, Ministerial Statement 1171)
- Industrial Infrastructure and Harbour Development, Jervoise Bay (Assessment 1091, s. 45C change to Ministerial Statement 490 approved 24 May 2021)
- Maintenance Dredging of Garden Island Wharves (proposal determined not to be assessed 15 June 2016)
- Mangles Bay Marina Based Tourist Precinct (approved 19 June 2014 Ministerial Statement 974 – Proposal later withdrawn March 2018).

Given the relatively small footprint and the open-pier design of the proposed Rockingham Marina, the EPA considers that it is unlikely to cause or interact with the known and approved proposals, and/or significantly increase potential cumulative impacts in the Cockburn Sound to a level that would be inconsistent with the EPA's objective for marine environmental quality.

The EPA notes that future proposals include the Perth Seawater Desalination Plant 2 and Westport. The expansion of the Perth Seawater Desalination Plant has been referred to the EPA, but is in the early stages of assessment. The State Government's Westport Taskforce plans for a land-backed port to be built within the Kwinana Industrial Area to meet WA's growing freight demands (Government of Western Australia 2020)⁴. Investigations into the potential environmental impacts of the future port are underway, and a timeframe for the referral of the proposal to the EPA has not been identified.

Cumulatively, this highlights the need for all future proposals and associated environmental assessments in the Cockburn Sound and Kwinana Industrial Area to consider the combined pressures and the potential for cumulative impacts to the environmental values of Cockburn Sound.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the reassessment of marine environmental quality factor for this proposal.

The EPA is therefore satisfied that the following existing conditions and the revised condition for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would not be inconsistent with the EPA's objective for marine environmental quality:

- condition 6, MS 1041: Long Term Protection of the Environmental Values for Cockburn Sound
- condition 7, MS 826: Construction of Marina.

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https://www.transport.wa.gov.au/mediaFiles/marine/PROJ_P_Westport_Future_Port_Recommendations_Stage_2_Report_May_2020.pdf

4.2 Benthic communities and habitats

The EPA's environmental objective for benthic communities and habitats is *to maintain the structure, function, diversity, distribution and viability of benthic communities and habitats at local and regional scales.*

Conclusions from EPA Report 1339

The EPA concluded that the implementation of the proposal would result in:

- Direct and permanent loss of 3.8 hectares (ha) of bare sand habitat and turbidity plumes from the installation of the breakwater and pier piles.
- Permanent shading of 5.3 ha of potential benthic habitat associated with the pier component of the marina.
- Temporary smothering of an additional 1.2 ha of potential bare sand habitat from the installation of an earthen bund during construction (noting that the bund is to be removed after the completion of the breakwater construction and the seabed returned to prior condition of bare sand).
- Temporary turbidity plume from construction causing decreased light attenuation, noting that the closest light-sensitive benthic habitats are 1.5 to 2 km away from the proposal area.

Due to the issues discussed in section 4.1 for the 'Marine environmental quality' factor, the EPA considered in its Report 1339 that the impacts to the 'Benthic communities and habitats' factor could be managed. Therefore, the EPA recommended condition 6-1 (subsequently replaced by condition 6-1 of MS 1041) requiring the proponent to manage any potential impacts to benthic communities and habitat through the implementation of a Marine Waterways Monitoring and Management Plan to achieve the EQOs and LEPs in the SEP.

Assessment of the requested change to conditions

The EPA considers that the current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Benthic Communities and Habitat* (EPA 2016a)
- *Technical Guidance: Protecting the Quality of Western Australia's Marine Environment* (EPA, 2016f)
- SEP
- *2018 State of Cockburn Sound Marine Area Report* (CSMC 2018).

The EPA notes that this proposal is located in an area devoid of seagrass on the southern / mainland shoreline of the Cockburn Sound and this has not changed since the original assessment in 2009 (Fraser and Hovey 2018). In its initial assessment of the proposal, the EPA concluded that the unavoidable loss of bare substrate benthic habitat was environmentally acceptable because it would not impact any important benthic communities such as seagrass. The EPA notes that no indirect impacts are likely as the closest light-sensitive benthic communities within

the Cockburn Sound were greater than 500 metres away, and not within the ‘zone of effect’ of the turbidity plume from construction.

The EPA notes that the construction and operation of the marina would not result in significant impacts to benthic communities and habitats as the bare sand substrate habitat in the ‘zone of effect’ remains unchanged since the initial assessment. Therefore, the EPA is satisfied with the existing condition 6 (Long Term Protection of the Environmental Values for Cockburn Sound) to ensure any potential impacts to benthic communities and habitat are managed.

As part of this inquiry and for future compliance and assessment, the EPA requested the proponent submit a digitised shapefile of the ‘zone of effect’ represented in Figure 2 of MS 826 for the purposes of compliance.

The EPA considers that no further assessment is required other than the original assessment for this factor, and that with the implementation of the existing conditions the proposal can be managed to ensure that outcome is likely to be consistent with the EPA’s objective for benthic communities and habitats.

4.3 Coastal processes

The EPA's environmental objective for coastal processes is *to maintain the geophysical processes that shape coastal morphology so that the environmental values of the coast are protected.*

Conclusions from EPA Report 1339

The EPA concluded that the implementation of the proposal would result in:

- interruption of longshore transport of sediment for the duration of the construction period of up to twelve months
- increased accretion on the sheltered shoreline behind the marina breakwater.

To manage these impacts, the EPA recommended implementation of an adaptive management strategy to ensure that the proposal does not cause changes to shoreline movements, width of beach or beach profiles in Cockburn Sound (condition 8).

Assessment of the requested change to conditions

The EPA considers that the current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Coastal Processes* (EPA 2016b).

The EPA noted in its original assessment that construction of the Port Rockingham Marina would likely cause changes to the sand accretion on the northern side of the construction site and potential erosion impacts on the southern side. While the EPA recognises that the Cockburn Sound is one of the most altered shoreline environments in Western Australia (WA) with numerous coastal structures found on the eastern shoreline (CSMC 2018), the Rockingham Marina's modest footprint and open-pier design would ensure that impacts to coastal processes are predominately avoided and otherwise minimised.

In 2018 the proponent mapped the coastline in the vicinity of the proposal and determined that minimal changes had occurred between 2009 and 2018 (PVG Environmental 2021). A coastal vulnerability assessment was also undertaken by the proponent and identified the proposal area as low risk, but that it will have an effect on the local shoreline requiring management by the proponent (PVG Environmental 2021). The also EPA notes the marina has been designed to allow for sediment transport dynamics and to minimise impacts on coastal processes.

The EPA concludes that any potential impacts to coastal processes are expected to be relatively minor and can be managed through the implementation of adaptive management required by condition 8 (Coastal Processes, Adaptive Management Strategy). Condition 8 would ensure that construction and operation of the proposal does not cause changes to shoreline movements or the width of beach and beach profiles in excess of the modelled predictions presented in the original assessment and outlined in Figure 3 in MS 826.

As there have been no significant changes relevant to this environmental factor, the EPA is satisfied that the existing condition 8 is appropriate to manage and mitigate the potential impacts. The EPA considers that no further assessment is required, and that the proposal can be managed to ensure that the outcome is consistent with the EPA's objective for coastal processes.

It should be noted that as part of the s. 46 inquiry, the EPA requested the proponent submit digitised shapefiles of the modelled predictions represented in Figure 3 of MS 826 for the purposes of future compliance.

4.4 Marine fauna

The EPA's environmental objective for marine fauna is *to protect marine fauna so that biological diversity and ecological integrity are maintained*.

Conclusions from EPA Report 1339

The EPA did not assess marine fauna as a key factor or recommend any conditions in its EPA Report 1339. However, as a result of consultation on the EPA's Report 1339, the then Minister for Environment recommended that an additional condition (condition 7) be placed on the proposal to manage potential impacts to marine fauna (cetaceans) from underwater noise from pile driving during construction.

The EPA notes that since the initial assessment of the proposal there have been no changes to the conservation status of protected marine fauna species in the proposal area that need to be further considered for this s. 46 inquiry. However the EPA acknowledges that other marine fauna could be potentially impacted if risks are not managed.

Assessment of the requested change to conditions

Cetaceans

It is acknowledged that there is a risk to cetaceans from construction, and this would be managed through the implementation of condition 7 of MS 826. Condition 7 requires the proponent to implement standard pile-driving protocols to reduce impacts to cetaceans such as soft-start up procedures, a one-kilometre observation zone for cetacean and 500 metre shutdown zone in the event a cetacean(s) is observed. Installation of piles is also restricted to the daylight hours only.

The EPA considers this condition is still relevant to ensure potential noise impacts from pile-driving to cetaceans are avoided where possible and otherwise minimised. Implementation of condition 7 would ensure that the outcome is likely to be consistent with the EPA's objective for marine fauna.

Little penguins

During its inquiry, the EPA requested additional information from the proponent about potential risks to little penguins (*Eudyptula minor*) as a potential new issue for the proposal that was not considered in the original assessment.

While little penguin is not a listed threatened species, the colonies on Penguin, Garden and Carnac islands are the most western occurrence of the species globally and the most northern in occurrence WA. These colonies are also genetically distinct from other colonies in the state, are geographically restricted and locally important (Cannell *et al* 2019).

The Garden Island colony is the closest to the proposal area, approximately 6 km west of the proposed marina. Little penguins of Garden Island forage almost exclusively in the Cockburn Sound area, and foraging behaviour is reduced to the southern Sound area when raising chicks (Cannell 2015). This makes parent

penguins seasonally more vulnerable to disruptions or restrictions of foraging areas during chick rearing, which occurs from June to August (Cannell 2015).

As the Cockburn Sound is one of the busiest embayments in WA, with commercial fishing vessels, defence activity, industry and recreational watercraft, the little penguin is prone to injury and mortality from interactions with watercraft (Cannell 2015).

In summary the potential impacts to little penguins from the proposal may include:

- construction noise impacts to individuals if they occur within the impact hearing range during pile driving activity
- avoidance behaviour induced by construction noise, potentially reducing the available foraging area
- potential increased risk of boat strike from increased recreational boat traffic from the operation of the new marina.

The EPA notes that the proponent intends to install the breakwater first prior to installing piles resulting in much of the underwater noise from piling being attenuated by the breakwater. This would therefore reduce the potential of injurious or fatal noise levels propagating outwards from the pile installation (RPS 2009).

As penguins are highly mobile, they are likely to avoid the proposal area once construction commences. This avoidance behaviour would further reduce the likelihood of direct noise impacts to the hearing of penguins (RPS 2009) but may result in a reduction of available foraging area during construction.

The EPA notes that the installation of piles is estimated to occur 3–4 hours per day, 6 days per week for up to 6 months (RPS 2009). The EPA considers the piling noise for construction of the marina is not likely to significantly impact little penguins due to the limited extent and duration of work and the lack of seagrass and supporting habitat for the penguin's food sources (mostly bait-fish) within the construction footprint. However, the EPA recommends that potential impacts should be further minimised.

In response, the proponent has proposed to include the following additional mitigation measures in its Construction Environmental Management Plan to:

- expand the scope of the Marina Fauna Observation to include little penguin
- include an observation zone to 300 metre radius (in addition to existing 1000 meters for cetaceans)
- increase the Marine Fauna Observation pre-start time from 15 minutes to 30 minutes
- include a 300-meter shutdown zone in the event little penguin is observed
- time construction activities to avoid, where possible, little penguin chick rearing season (June to August)
- provide educational material to boat owners in the marina to raise awareness of the risks to little penguins from watercraft strike.

The EPA notes that condition 7-1 only relates to cetaceans and the EPA has therefore recommended that this condition is expanded to include observation and shut down zones for little penguins. The EPA advises that with the implementation of the minimisation measures proposed and the expanded condition, the outcome of the proposal is likely to be consistent with maintaining the population of little penguins and therefore with the EPA's factor objective for marine fauna.

The EPA also notes the proponent has proposed to include the above measures in its Construction Environmental Management Plan. As required by condition 7-3, the plan would need approval from the Department of Water and Environmental Regulation prior to construction.

4.5 Other factors

Given the time since the original assessment and the previous s. 46 inquiry, the proponent is required to consider the relevancy of any new or additional environmental factors to its request for a change to conditions. The assessment of other factors is outlined below.

Social surroundings

The EPA's environmental objective for social surroundings is *to protect social surroundings from significant harm*.

This factor was not considered by the EPA in Report 1339.

Assessment of the requested change to conditions

Aboriginal cultural and spiritual values are recognised as a key environmental value of the Cockburn Sound in the SEP. The environmental quality objective for cultural and spiritual values is *Maintenance of indigenous cultural and spiritual values, such that the cultural and spiritual values of the local indigenous community are protected*.

During this inquiry, the EPA requested further information from the proponent about any potential risks to Aboriginal heritage and culture, and if required, associated mitigation and management. The proponent undertook a review of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry System which did not identify any registered or lodged sites within the land-based and marine-based proposal footprints or within the marine-based 'zone of effect'.

The EPA notes that the Cockburn Sound (*Derbal Nara*) is important to Noongar People – the traditional owners of the south-west of WA⁵ and listed as 'Other Heritage Place ID 3776' - 'Indian Ocean' on the Aboriginal Heritage Inquiry System. The EPA also notes that the southern boundary of 'Place - ID 3776' is located just north of the proposal and its status is 'stored data / not a site' as it does not meet the definition of an Aboriginal site under s. 5 of the *Aboriginal Heritage Act 1972* (Brad Goode and Associates 2018). The EPA advises that the marine-based component of the proposal is therefore unlikely to significantly impact Aboriginal heritage or be inconsistent with the EPA's objective for this factor.

The EPA notes there could be a small risk, albeit relatively low, that the land-based construction activities of the proposal involving excavation could uncover Aboriginal heritage material. The EPA notes that the proponent will implement standard operating practices for excavation of a dunal area including, but not limited to, immediate stop-work procedures if Aboriginal heritage material is observed and reporting obligations under the *Aboriginal Heritage Act 1972*. The EPA therefore considers that the land-based construction of the proposal it is not likely to significantly impact Aboriginal heritage. With the implementation of the proposed minimisation measures the EPA concludes that the outcome is unlikely to be inconsistent with the EPA's objective for social surroundings.

⁵ <https://www.derbalnara.org.au/origin-of-derbal-nara-1>

Greenhouse gas emissions

In April 2020, greenhouse gas emissions was added as an environmental factor for consideration by the EPA in the environmental impact assessment process. The EPA's environmental objective for greenhouse gas emissions is *to reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change.*

The EPA's *Environmental Factor Guideline – Greenhouse Gas Emissions* (EPA 2020c) sets out that, generally emissions from a proposal will be assessed where they exceed 100,000 tonnes of Scope 1 emissions⁶ each year measured in CO₂ equivalent. The EPA will have regard to this guideline when assessing new proposals and changes to proposals (s. 46 inquiries) resulting in an increase in greenhouse gas emissions, which may involve the EPA reconsidering greenhouse gas conditions or recommending inclusion of additional conditions.

Assessment of the requested change to conditions

The proponent recently engaged a consultant to estimate the greenhouse gas emissions for the proposal's construction and operations.

During construction, Scope 1 and Scope 2⁶ greenhouse gas emissions would be produced by diesel and petrol-powered fleet (earthmoving vehicles, pile-driving barge, boats etc) and grid electricity use, and are estimated by the proponent to be 2,393 tonnes of CO₂ equivalent (Black Apple 2021).

Grid-electricity would also be required for the operation of the marina and is estimated to be 504 tonnes of CO₂ equivalent annually (Black Apple 2021).

The EPA also notes that Scope 3⁶ emissions would likely arise from the community's use of the marina facility (boats, consumption of retail etc) however are not of a scale that would be relevant to the EPA's consideration of this factor.

The EPA notes the estimates of Scope 1 emissions provided by the proponent are well below the threshold of 100,000 CO₂ equivalent, and therefore advises that greenhouse gas emissions is not a relevant consideration for this assessment. The EPA concludes that the likely outcome of this proposal is consistent with EPA's the objective for greenhouse gas emissions.

4.6 Other conditions

It is noted that in the EPA's s. 46 inquiry in 2016 (Report 1583) condition 6-1 of MS 826 was replaced by condition 6-1 of MS 1041 to reference the updated SEP and any future versions of the policy.

⁶ Scope 1 greenhouse gas emissions are the emissions released to the atmosphere as a direct result of an activity, or a series of activities at a facility level. Scope 2 greenhouse gas emissions are the emissions from the consumption of an energy product. Scope 3 emissions are indirect greenhouse gas emissions other than scope 2 emissions that are generated in the wider community. Scope 3 emissions occur as a consequence of the activities of a facility, but from sources not owned or controlled by that facility's business (EPA 2020c)

It is recommended that condition 6-1 is included in the recommended conditions to allow MS 1041 to be superseded by a new statement. This will facilitate ease of future compliance and assessment of this proposal by consolidating the implementation conditions into two statements, rather than three.

5 Conclusions and recommendations

Change to condition 3

The proponent has requested a change to condition 3 of MS 1041 to extend the Time Limit for Proposal Implementation. The EPA considers it is appropriate to amend condition 3 and extend the time limit for proposal implementation by five years from the completion of this report to 11 October 2026.

Conclusions

In relation to the environmental factors, and considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA concludes that:

- there are no changes to the proposal associated with the request to change the conditions
- there is no significant new or additional information that changes the conclusions reached by the EPA under any of the relevant environmental factors since the proposal was assessed by the EPA in Report 1339 (September 2009) and the subsequent s. 46 inquiry in 2016 (Report 1583)
- Marine Fauna is a new key environmental factor that has arisen since the EPA's original assessment of the proposal
- impacts to the key environmental factors are considered manageable, based on the requirements of the original conditions retained in MS 826
- potential impacts to marine fauna can be adequately managed through an amendment to condition 7-1 to provide additional measures to protect little penguins during construction
- the authorised timeframe for substantial commencement of the proposal may be extended for a further five years.

Recommendations

Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment under s. 46 of the EP Act:

1. While retaining the environmental requirements of the original conditions of MS 826, it is appropriate to supersede MS 1041 with a new statement. This new statement is to include an implementation condition which extends the authorised timeframe for substantial commencement of the proposal by five years, replaces condition 7-1 of MS 826 with a new condition, and changes condition 6-1 of MS 1041 in the manner provided for in the attached recommended statement (Appendix A).
2. A new Ministerial Statement should supersede MS 1041 in the manner provided for in the attached recommended statement.
3. After complying with s. 46(8) of the EP Act, the Minister may issue a statement of decision to change conditions 3 and 6-1 of MS 1041 and condition 7 -1 of MS 826 in the manner provided for in the attached recommended statement (Appendix A).

Appendix A: Recommended conditions

STATEMENT TO CHANGE THE IMPLEMENTATION CONDITIONS APPLYING TO A PROPOSAL (Section 46 of the *Environmental Protection Act 1986*)

PORT ROCKINGHAM MARINA COCKBURN SOUND

Proposal: The proposal is to construct and operate a new marina facility located at the intersection of Wanliss Street and Rockingham Beach Road, within Cockburn Sound. The proposal is further documented in Ministerial Statement 826.

Proponent: Aureus Commercial Pty Ltd
Australian Company Number 146 479 218

Proponent Address: 15 Crompton Road
Rockingham WA 6168

Report of the Environmental Protection Authority: 1711

Preceding Statement/s Relating to this Proposal: 826 and 1041

Pursuant to section 45 of the *Environmental Protection Act 1986*, as applied by section 46(8), it has been agreed that the implementation conditions set out in Ministerial Statement No. 826, be changed as specified in this Statement and that this Statement supersedes Ministerial Statement No. 1041.

Condition 3 of Ministerial Statement 1041 is deleted and replaced with:

3 Time Limit for Proposal Implementation

- 3-1 The proponent shall not commence implementation of the proposal after 11 October 2026, and any commencement, prior to this date, must be substantial.
- 3-2 Any commencement of implementation of the proposal, on or before 11 October 2026, must be demonstrated as substantial by providing the CEO with written evidence, on or before 11 October 2026.

Condition 6 of Ministerial Statement 1041 is deleted and replaced with:

6 Long Term Protection of the Environmental Values for Cockburn Sound

- 6-1 Through a Marina Waterways Monitoring and Management Plan, the proponent shall implement the proposal to achieve the Environmental Quality Objectives (EQOs) and associated Levels of Ecological Protection (LEP), including their spatial allocation as specified in Schedule 2 of the *State Environmental*

(*Cockburn Sound*) Policy 2015 (SEP, Version issued 2015) and its updates, such that the Environmental Values prescribed in Section 4 of the SEP are protected.

Condition 7-1 of Ministerial Statement 826 is deleted and replaced with:

7 Construction of Marina

7-1 The proponent is required to their best endeavours to apply the following pile driving management protocol for minimising impacts on cetaceans and little penguins:

- (1) soft start-up procedures for a period of 30 minutes at the commencement of each pile driving event;
- (2) Pile driving activities to take place during daylight hours only.

Cetaceans

- (3) a cetacean observation zone consisting of a one kilometre radius from the noise emitting source whereby an observer must undertake cetacean observation for a minimum of 30 minutes prior to the commencement of pile driving and during pile driving activities;
- (4) a shutdown zone consisting of a 500 metre radius from the noise emitting source whereby (1) pile driving cannot commence should a cetacean be within the 500 metre exclusion zone; and (2) pile driving activities to cease should a cetacean enter the 500 metre exclusion zone during pile driving and are not to recommence until the animal(s) have moved outside the 500 metre exclusion zone.

Little penguins

- (5) a little penguin observation zone consisting of a 300 metre radius from the noise emitting source whereby an observer must undertake cetacean observation for a minimum of 30 minutes prior to the commencement of pile driving and during pile driving activities;
- (6) a shutdown zone consisting of a 300 metre radius from the noise emitting source whereby (1) pile driving cannot commence should a little penguin be within the 300 metre exclusion zone; and (2) pile driving activities to cease should a little penguin enter the 300 metre exclusion zone during pile driving and are not to recommence until the animal(s) have moved outside the 300 metre exclusion zone.

“CEO” means the Chief Executive Officer of the Department of the Public Service which is responsible for the administration of section 48 of the *Environmental Protection Act 1986*, or his delegate.

Appendix B: Identified decision-making authorities

The decision-making authorities in the table below have been identified for the purposes of s. 45 as applied by s. 46(8) of the *Environmental Protection Act 1986*.

Decision-making authority	Legislation (and approval)
1. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> (Dewatering licence)
2. Minister for Transport	<i>Marine and Harbours Act 1981</i> (Seabed Lease)
3. Chief Executive Officer, Department of Transport	<i>Jetties Act 1926</i> (Licence to construct)
4. Chief Executive Officer, City of Rockingham	<i>Planning and Development Act 2005</i> (Development application)
5. Chairman, Western Australian Planning Commission	<i>Planning and Development Act 2005</i> (Scheme amendment)

Note: In this instance, agreement is only required with DMA 1-2 since these DMAs are a Ministers.

References

Black Apple 2021. *Port Rockingham Marina GHG Calculations Documentation*. Prepared for Aureus Commercial Pty Ltd. Perth, WA.

Brad Goode & Associates 2018. *Report of an Aboriginal Heritage Survey of The Perth Seawater Desalination Plant IWSS Stage 2 Expansion: Kwinana, Western Australia*. Report prepared for the Water Corporation. Perth, WA.

Cannell, B. 2015. *Ecology of Little Penguins in the Perth metropolitan region, with particular reference to the colony on Garden Island. Final Report prepared for Aurecon Australasia Pty Ltd and Department of Defence*. Penguin Consulting, Perth, WA.

Cannell B, Ropert-Coudert Y, Radford B, and Kato A. 2019. *The diving behaviour of little penguins in Western Australia predisposes them to risk of injury by watercraft*. Aquatic Conservation: Marine and Freshwater Ecosystems 2020; pp 461–474.

Cockburn Sound Management Council (CSMC) 2018, *State of Cockburn Sound Marine Area Report 2018*. Report to the Minister for Environment. Perth, WA.

EPA 2016a, *Environmental Factor Guideline – Benthic Communities and Habitats*, Environmental Protection Authority, Perth, WA.

EPA 2016b, *Environmental Factor Guideline – Coastal Processes*, Environmental Protection Authority, Perth, WA.

EPA 2016c, *Environmental Factor Guideline – Marine Environmental Quality*, Environmental Protection Authority, Perth, WA.

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

EPA 2016e, *Technical Guidance – Protection of Benthic Communities and Habitats*, Environmental Protection Authority, Perth, WA.

EPA 2016f, *Technical Guidance – Protecting the Quality of Western Australia’s Marine Environment*, Environmental Protection Authority, Perth, WA.

EPA 2020a, *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual*, Environmental Protection Authority, Perth, WA.

EPA 2020b, *Statement of Environmental Principles, Factors and Objectives*, Environmental Protection Authority, Perth, WA.

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

Fraser, M.W. and Renae K. Hovey, 2018. *Benthic Habitat Mapping of Cockburn Sound, Prepared for the Cockburn Sound Management Council*. Oceans Institute and School of Biological Sciences, University of Western Australia, Perth WA

Government of Western Australia 2015. *State Environmental (Cockburn Sound) Policy 2015*, Perth, WA.

Government of Western Australia 2020. *Westport Future Port Recommendations Stage 2 Report*. Prepared for the Western Australian State Government by the Westport Taskforce Steering Committee. Perth, WA.

PVG Environmental 2021. *Port Rockingham Marina Section 46 Report*. Prepared for Aureus Commercial Pty Ltd. Perth, WA.

RPS 2009. *Port Rockingham Marina Public Environmental Review*. Prepared for Rosewood Grove Pty Ltd. Rockingham, WA.

State of Western Australia 2016, *Western Australia Government Gazette, No. 223*, 13 December 2016.