GOVERNMENT OF WESTERN AUSTRALIA

Environmental Protection Authority

Geraldton Port Maximisation Project

Mid West Ports Authority

Report 1792

September 2025

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 Geraldton Port Maximisation Project proposal by Mid West Ports Authority.

The Geraldton Port Maximisation Project was determined under the Commonwealth *Environment Protection and Biodiversity Act 1999* to not be a controlled action.

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 it recommends that implementation be allowed, the conditions and procedures, if any, to which implementation should be subject
- other information, advice and recommendations as the EPA thinks fit.

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Summary

Proposal

The Geraldton Port Maximisation Project is a significant amendment to the existing 'Geraldton Port Enhancement Project and Preparatory Works for the Town Beach Foreshore Redevelopment' (the approved proposal), authorised under Ministerial Stetatement (MS) 600, to upgrade marine infrastructure at the Geraldton Port (the port). The proposal is located 424 kilometres (km) north of Perth, in the City of Greater Geraldton, Western Australia.

The proponent for the proposal is Mid West Ports Authority (the proponent).

The proposal involves dredging of approximately 258,000 cubic metres (m^3), land reclamation, piling, and installation of the following marine infrastructure:

- new wharf decks related to berth 1 (relocated) and berth 8/9
- extension of the existing berth 6
- new tug harbour, including the construction of a new breakwater extending north into Champion Bay.

The proposal will enable the port to support emerging industries and future renewable energy projects, provide dedicated berths for passenger and cargo vessels, and minimise disruption to port operations through improved surge mitigation.

Context

The proposal is located at the existing port in the City of Greater Geraldton, on the north side of Point Moore peninsula and faces north into Champion Bay. The main harbour of the port is sited between the Fishing Boat Harbour and Pages Beach to the west, and Town Beach to the east. Town Beach, which was developed and stabilised as part of the approved proposal, is separated from the port by the eastern breakwater.

The Batavia Coast Marina is the next significant permanent marine structure along the coastline of Champion Bay and is located approximately 2 km from the port. Beaches extending north from the Batavia Coast Marina to Chapman River, are collectively referred to as the 'northern beaches'. The proposal is surrounded by residential development to the south and east.

Environmental values

Marine environmental quality, benthic communities and habitats, marine fauna and coastal processes are the key environmental factors impacted by the proposal.

Consultation

The EPA published the proponent's referral information for the proposal on its website for seven days public comment. The proponent's Environmental Impact

Assessment, herein referred to as the Environmental Review Document (ERD), was not made available for public review. However, the EPA required the proponent to undertake targeted consultation with relevant stakeholders and groups. The EPA considered the comments received during the seven-day public comment period, and the outcomes of the proponent's social surroundings study (SLR Consulting 2025d) 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:

- avoided offshore disposal of dredge material
- minimised the extent of dredging and construction footprints
- considered the methodology and timing of dredging activities to:
    - minimise the risk of causing excessive suspended sediments in the marine environment
    - minimise impacts on seagrass during peak growing periods
- staged construction to minimise impacts on Australian sea lion (*Neophoca cinera*)
- specified management measures to minimise impacts of construction activities on significant marine fauna
- committed to continuing sediment management, including mechanical sand bypassing, to minimise impacts on coastal processes.

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.

As the proposal is a significant amendment to an approved proposal, the EPA's assessment has been undertaken in the context of the approved proposal, having regard to the combined and cumulative effects on the environment. The EPA has also considered whether to inquire into the implementation conditions for the approved proposal.

Benthic communities and habitats

Residual impact or risk to environmental value		Assessment finding
1.	Irreversible loss of up to 18.63 ha of benthic communities and	The permanent loss of 18.63 ha of benthic communities, of which approximately 7.66

	habitats within the zone of high impact (ZoHI) from direct disturbance or indirect impacts due to turbidity and sedimentation caused by dredging.	ha is seagrass, represents 0.77% of the current extent in the Local Assessment Unit (LAU). The seagrass that will be permanently impacted are well represented in the LAU and surrounding area within Champion Bay. There are no areas of marine conservation significance within the proposal area. The permanent loss is unlikely to impact the biological diversity and ecological integrity of benthic communities and habitats in Champion Bay or result in a significant residual impact. Temporary (recoverable) impacts on seagrass and macroalgae communities will be localised and constrained to a relatively small ZoMI. Temporary impacts are predicted to recover within five years. Timing of dredging will avoid the peak seagrass growing periods during the summer months. The expected environmental outcome is likely to be consistent with the EPA's objective for this factor.
2.	Recoverable impacts to 10.41 ha of seagrass and macroalgae communities within the zone of moderate impact (ZoMI) from indirect impacts due to turbidity and sedimentation caused by dredging.	

Marine Environmental Quality

Residual impact or risk to environmental value		Assessment finding
1.	Temporary reduction in marine environmental quality during dredging and construction.	Dredging, breakwater construction and land reclamation activities will result in temporary elevated levels of turbidity. It is expected that turbidity will return to pre-construction levels within four weeks from the completion of dredging activities. Sediment investigations have demonstrated that metal and metalloid toxicants were not bioavailable at concentrations exceeding the relevant default sediment guideline value. A low level of ecological protection will need to be maintained around tailwater discharge points adjacent to land reclamation areas during construction, to ensure there is no bioaccumulation of contaminants in the adjacent area. Significant residual impacts to marine environmental quality from temporary increases in turbidity and release of sediment bound toxicants are considered unlikely and the environmental outcome is likely to be consistent with the EPA objective for marine environmental quality.
2.	Potential reduction in marine environmental quality during land reclamation.	

Marine fauna

Residual impact or risk to environmental value		Assessment finding
1.	Potential impacts to marine fauna from underwater noise, vessel strike, entrapment, entanglement and entrainment	Construction activities including piling, dredging and impact rock breaking (hydro-hammer) will generate underwater noise emissions that may cause behavioural disturbances, temporary and permanent hearing injury, or mortality to conservation significant fauna including the Australian sea lion, humpback whale and Indo-Pacific bottlenose dolphin. There is a risk of injury or mortality to marine fauna from vessel strike, entanglement or entrainment associated with vessel movements and dredging activities, and entrapment/crushing of Australian sea lions during rock placement. Residual risks and measures should be subject to conditions to ensure that the environmental outcome is consistent with the EPA's objective for this factor.
2.	Permanent and temporary loss of haul-out sites for Australian sea lion.	The proposal would result in the loss of haul-out sites for Australian sea lion and temporary exclusion of individuals from some remaining haul-out sites during construction activities. The main and preferred haul-out site at the port, 'Seal Rocks', will not be directly impacted or modified and remain accessible by Australian sea lion throughout the construction period. However, construction activity proposed nearby could temporarily disturb individuals resting on 'Seal Rocks'. The proposed construction staging is likely to ensure that not all haul-out sites are concurrently unavailable. Further, additional haul-out sites will be incorporated into new port marine structures. Residual risks and measures should be subject to conditions to ensure that the environmental outcome is consistent with the EPA's objective for this factor.

Coastal processes

Residual impact or risk to environmental value		Assessment finding
1.	Interruption of longshore currents causing sediment accretion at Pages Beach and against port structures and sediment deficit of the beaches north of the port.	The existing port structures constructed under the approved proposal have significantly altered natural coastal processes. The existing shipping channel acts as a sediment sink, interrupting sediment transport and causing a deficit in sediment reaching the northern beaches, increasing erosion risk. As required by conditions of the approved proposal (MS 600), the proponent undertakes beach and sediment monitoring and management, including a mechanical sand bypassing program, as required. The significant amendment is unlikely to cause additional significant impacts to coastal processes beyond those of the originally approved proposal. Subject to reasonable conditions requiring the continued implementation of sediment monitoring and management measures, the outcome of the proposal is likely to meet the EPA's objective for coastal processes.

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
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- 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* (EP Act).

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

Other advice

The EPA has provided other advice regarding the ongoing management of marine environmental quality following construction of the proposal.

The EPA notes that the proponent undertakes land reclamation from time to time at a site north of berth 7. This site is licensed under Part V of the EP Act and is used to dispose of suitable port-derived materials. Although operational reclamation activities are not part of this proposal, the EPA acknowledges that construction of the proposal will facilitate this activity by creating two new dedicated land reclamation sites. Further, some dredge material generated by the proposed dredging activities is likely to be placed within the existing berth 7 reclamation site. Land reclamation has the potential to release metals through tailwater discharge, which must be carefully managed to protect the marine environment. As such, the EPA has recommended conditions associated with the new dedicated reclamation sites that:

- define small low ecological protection zones around tailwater discharge points
- ensure that terrestrial, port-derived materials used in reclamation meet soil acceptance criteria developed in consultation with the Department of Water and Environmental Regulation.

The EPA emphasises the importance of managing the marine environment effectively during operations. The EPA has recommended that the proponent work closely with the Department of Water and Environmental Regulation to refine existing monitoring and management practices, incorporating the new marine structures proposed for the port.

1 Proposal

The Geraldton Port Maximisation Project (the proposal) is a significant amendment to the existing 'Geraldton Port Enhancement Project and Preparatory Works for the Town Beach Foreshore Redevelopment' (the approved proposal) authorised under MS 600, to upgrade marine infrastructure at the Geraldton Port (the port). The proposal is located 424 kilometres (km) north of Perth, in the City of Greater Geraldton, Western Australia.

The proponent for the proposal is Mid West Ports Authority (the proponent).

The proposal involves dredging of approximately 258,000 cubic metres (m^3), land reclamation, piling, and installation of the following marine infrastructure:

- new wharf decks related to berth 1 (relocated) and berth 8/9
- extension of the existing berth 6
- new tug harbour, including the construction of a new breakwater extending north into Champion Bay.

The proposal will enable the port to support emerging industries and future renewable energy projects, provide dedicated berths for passenger and cargo vessels, and minimise disruption to port operations through improved surge mitigation.

The proponent referred the proposal to the Environmental Protection Authority (EPA) on 29 August 2024. The referral information was published on the EPA website for seven days public comment. On 18 September 2024, the EPA decided to assess the proposal at the level 'Referral Information with addition information with no public review'. The EPA required the proponent to undertake targeted consultation with key stakeholders and groups.

The proposal was determined under the *Environment Protection and Biodiversity Conservation Act 1999* to not be a controlled action.

A detailed description of the proposal is set out in section 2 of the proponent's environmental review document (ERD) (SLR Consulting 2025c), which is available on the EPA website. The elements of the proposal which have been subject to the EPA's assessment are included in Table 1.

The EPA has assessed the residual impacts of the significant amendment by considering the expansions and changes which are now proposed in the context of the approved proposal. The EPA has also considered the combined impacts of the approved proposal and the significant amendment, and the cumulative impacts with other proposals in the region. The EPA has not reassessed the approved proposal.

Table 1: Proposal content document (Mid West Ports Authority 2025a)

Proposal element	Location / description	Maximum extent, capacity or range		
		Approved proposal	Significant amendment	Combined proposal
Physical elements				
Development envelope and footprint	Figure 2 and 3	No development envelope was defined for the approved proposal. The indicative development envelope is estimated to be 207 ha	Disturbance footprint of up to 38 ha within a development envelope of 75 ha	222 ha
Construction elements				
Dredging	Figure 2 and 3	No dredge volume defined for the approved proposal. Estimated capital dredging of up to 5,000,000 m^3 from: deepening of the harbour basin from 9.3 m to 12.1 m widening and extension of existing shipping channel	Up to 258,000 m^3 from the following areas: Berth 1 Berth 6 Berth 8/9 New tug harbour	Up to 5,258,000 m^3
Operational elements				
Not applicable				

Units and abbreviations
ha – hectare
m^3 – cubic metres

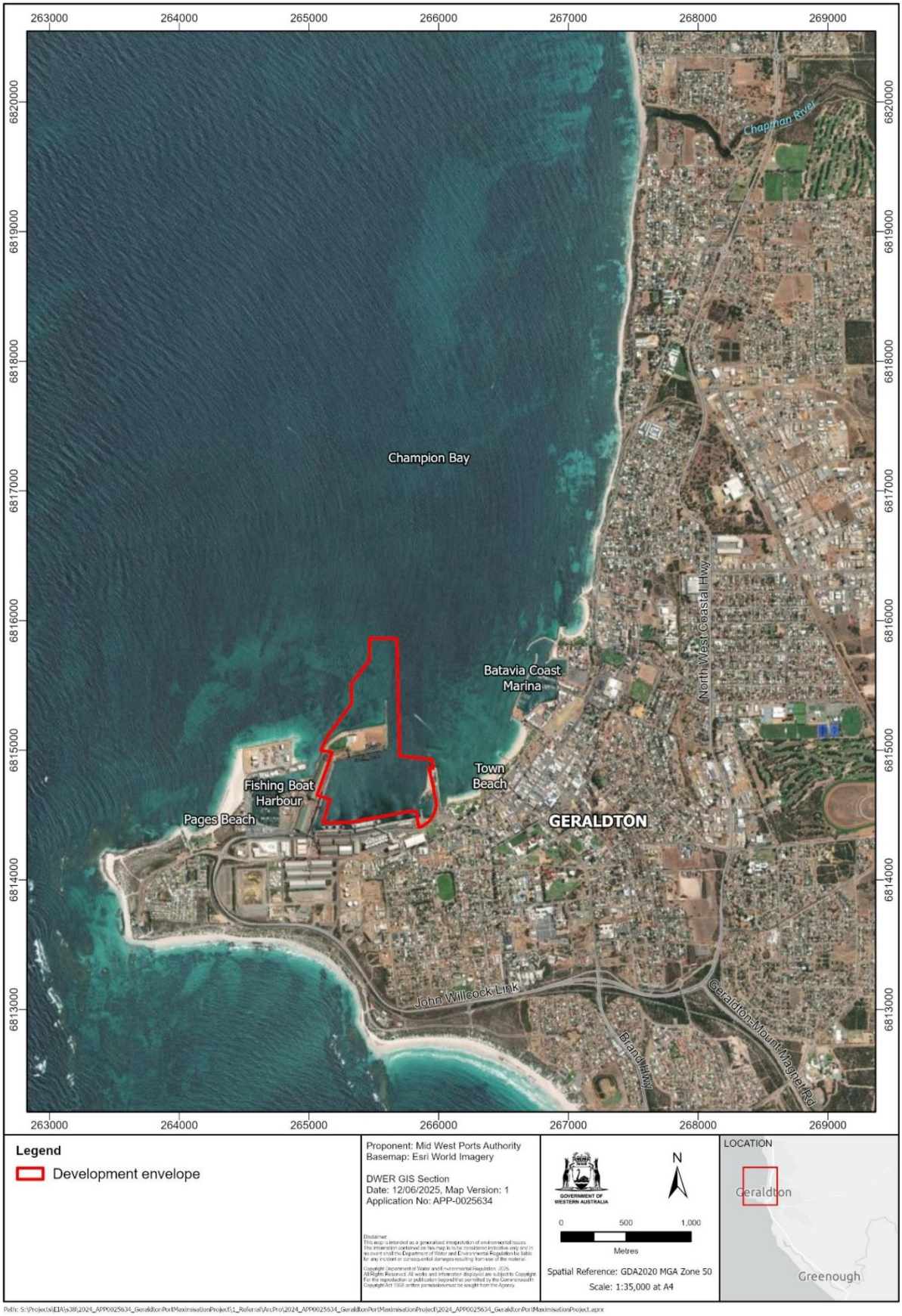

Figure 1: Proposal location

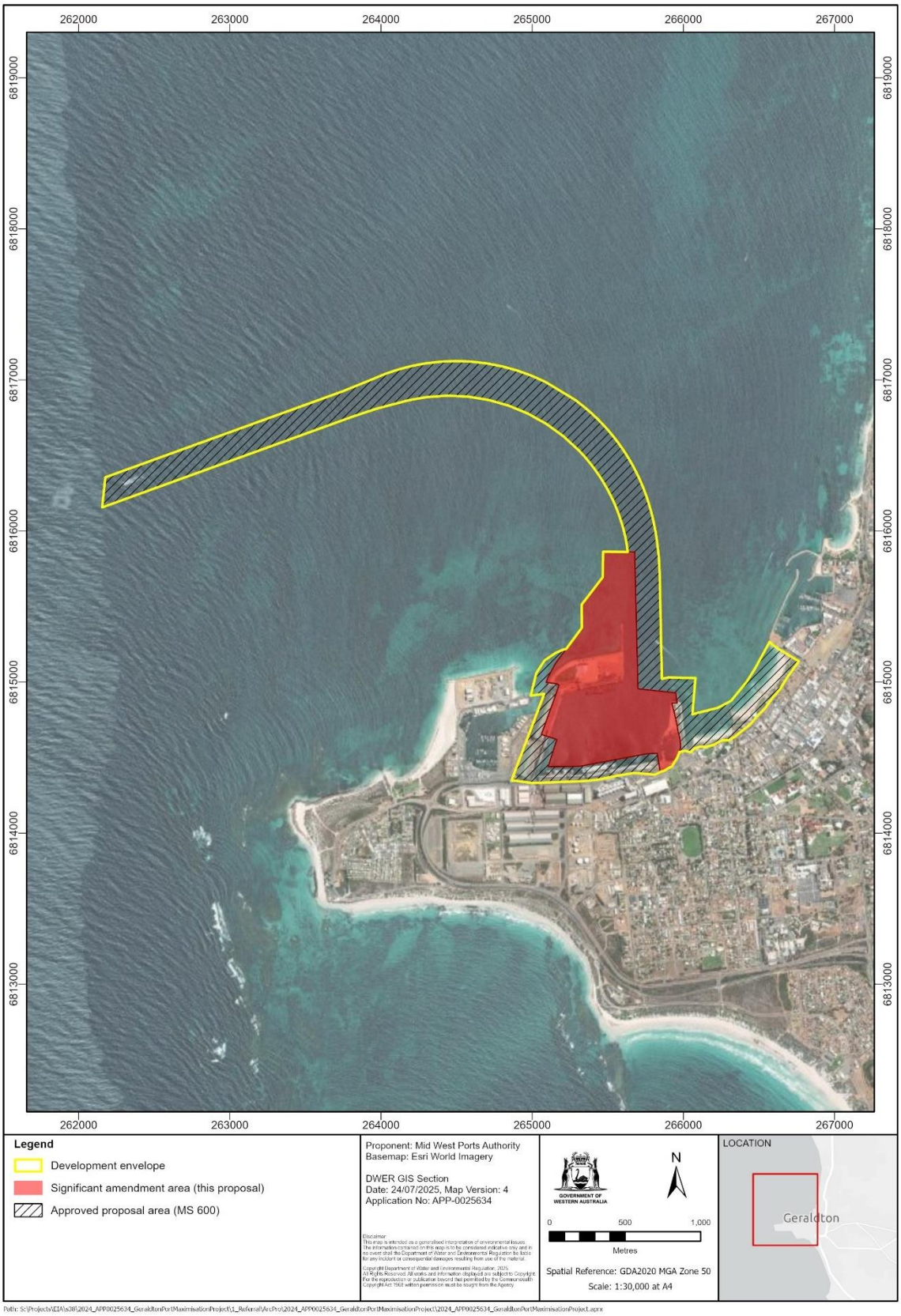

Figure 2: Approved proposal and significant amendment development envelope

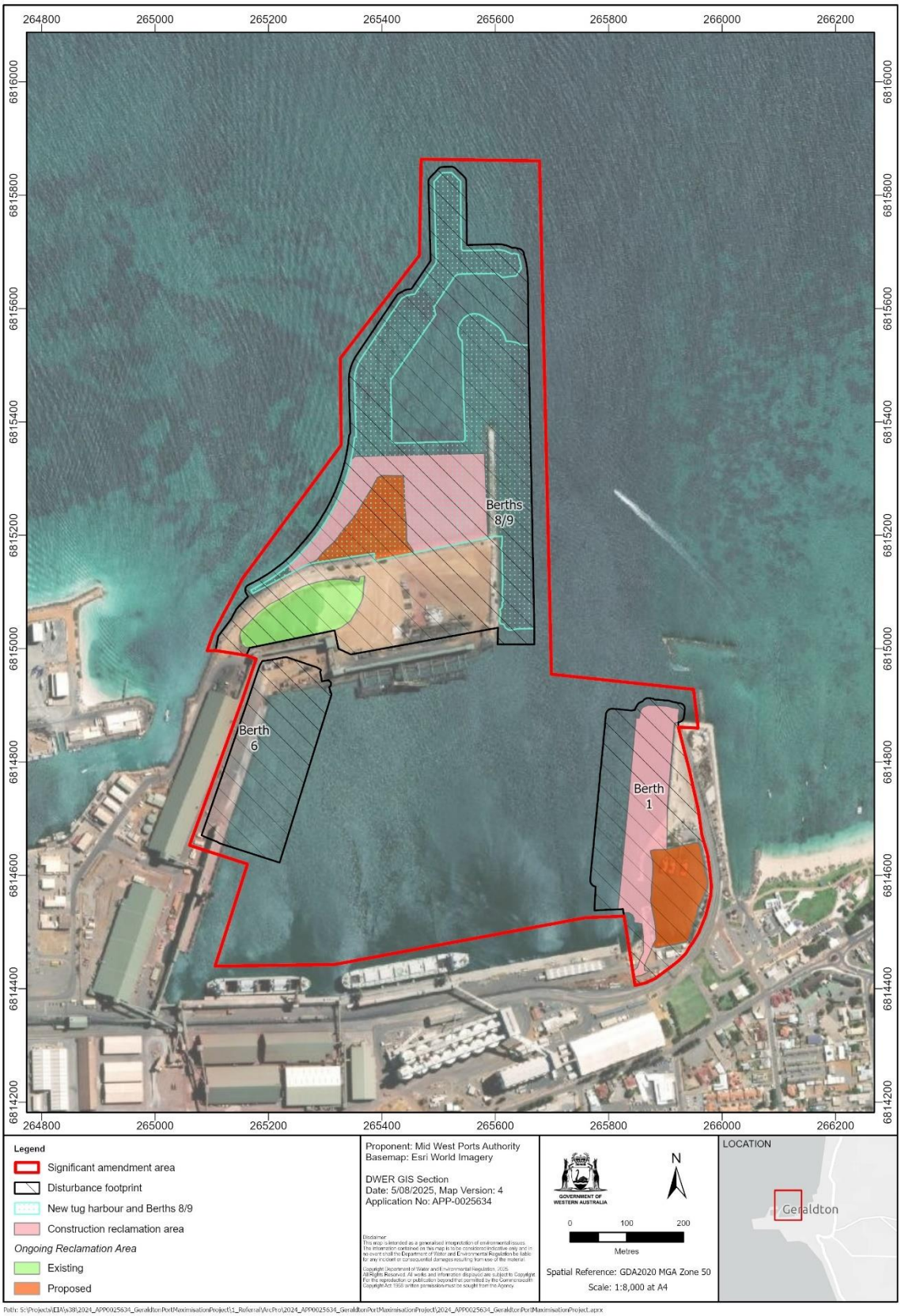

Figure 3: Significant amendment disturbance footprint and proposed structures

Proposal alternatives

The proponent did not consider alternative locations for the proposal as the proposal is an extension to the current port facility. Siting of infrastructure was constrained by the location of the shipping channel.

Proposal context

The proposal is located at the existing port in the City of Greater Geraldton, on the north side of Point Moore peninsula and faces north into Champion Bay. The main harbour of the port is sited between the Fishing Boat Harbour and Pages Beach to the west, and Town Beach to the east (Figure 1).

The port currently has five operational berths (berths 3, 4, 5, 6 and 7), with existing berths 1 and 2 deemed unsuitable for operations due to the aged wharf infrastructure. The port also has an active reclamation area north of berth 7, approved for disposal of suitable port-derived materials (Figure 3). The berth 7 reclamation area was approved in 2001 under Part V of the EP Act.

The Geraldton foreshore is distinguished by community and coastal values including Town Beach, the Esplanade (eastern breakwater of the port), and the Batavia Coast Marina, which is located approximately 2 km north of the port. The coastline north of Geraldton foreshore, between the Batavia Coast Marina and Chapman River, is defined as the ‘northern beaches’, an area where the proponent, in partnership with the City of Greater Geraldton, is implementing the Northern Beaches Stabilisation Program to mitigate port-related impacts on coastal processes, as required under MS 600.

The existing port and shipping channel has significantly modified the natural marine environment and is largely devoid of benthic communities. Beyond the port, Champion Bay includes bare soft sediment, seagrass meadows, macroalgae low relief reefs and mixed benthic communities.

Approved proposal implementation

The approved proposal was authorised through Ministerial Statement (MS) 600, issued on 31 July 2002. The approved proposal included:

- deepening and widening the shipping channel and harbour basin
- reclamation of land
- offshore disposal of dredge spoil
- reconfiguration and construction of breakwaters
- construction of a railway line on the eastern breakwater
- construction of beach stabilisation groynes in Town Beach
- reclamation of Town Beach by sand nourishment.

The proposal commenced in 2002, and all approved works were completed in 2004. Annual compliance assessment reports have been submitted since commencement of the proposal as required by MS 600.

The initial loss of benthic communities and habitats resulting from the approved proposal was significantly greater than anticipated due to the unexpected release of excessive fine sediments into the marine environment from the dredge plume. While the exact extent of the impact from the approved proposal is unknown, monitoring indicated that benthic communities had recovered by 2006. Further studies conducted in 2021 confirmed this recovery, suggesting that the seagrass within Champion Bay is resilient and that ecosystem function was not compromised by the approved proposal (SLR Consulting 2025c; BMT 2021).

Other than annual compliance reporting, the only remaining active requirement of MS 600 is the implementation of the Northern Beaches Stabilisation Program.

2 Assessment of key environmental factors

This section includes the EPA's assessment of the key environmental factors. The EPA also evaluated the impacts on other relevant environmental factors, namely social surroundings, and concluded it was not a key factor for the assessment. This evaluation is included in Appendix D.

The EPA has assessed the proposal in the context of the approved proposal (MS 600) while having regard to the combined and cumulative effect that the implementation of the approved proposal may have on the following environmental factors.

2.1 Benthic communities and habitats

2.1.1 Environmental objective

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

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 benthic communities and habitats:

- Benthic habitat survey report (Appendix E of the ERD) (SLR Consulting 2024a)
- Dredge Plume Modelling Assessment (Appendix D of the ERD) (Royal HaskoningDHV 2025)
- Cumulative loss assessment (Appendix F of the ERD) (SLR Consulting 2025b)

2.1.3 Assessment context – existing environment

Champion Bay is underlaid by limestone substrate which is a prominent feature that shapes its epibenthic communities.

Benthic communities and habitats was considered a relevant environmental factor in the assessment of the approved proposal.

While the seagrass meadows are widely distributed throughout the region, they are locally important. Within the local assessment unit (LAU), seagrass meadows are highly productive and support various transient and resident marine fauna. Beyond habitat provision, seagrass meadows improve water quality, oxygenate sediment, and contribute significantly to carbon sequestration.

Local Assessment Unit

The proponent has used an existing LAU defined for a previous proposal in the area in accordance with *Technical Guidance – Protection of benthic communities and habitats* (EPA 2016e). The LAU is approximately 4,832.52 ha and extends north of the proposal, within which there are no areas of marine conservation significance.

2.1.4 Consultation

A public submission received during the 7-day public comment period raised concerns about the potential impacts of dredging activities within the port on the environment. How these concerns have been considered in the assessment are described in section 2.1.9.

Matters raised during targeted stakeholder consultation and the proponent's responses are provided in Appendix K of the ERD (SLR Consulting 2025d).

2.1.5 Potential impacts from the proposal

The proposal has the potential to significantly impact on benthic communities and habitats from:

- direct physical disturbance during dredging activities, breakwater construction and land reclamation
- indirect impacts through the effects of turbidity, sediment deposition and mobilisation of contaminants associated with dredging and construction activities.

2.1.6 Avoidance measures

No avoidance measures in relation to this factor were proposed by the proponent.

2.1.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts to benthic communities and habitats:

- the new tug harbour has been designed and sited to minimise direct impact to areas of high-density seagrass and macroalgae communities
- staging construction so that the new breakwater construction commences first, which is likely to assist with containment of the dredge plume in subsequent construction stages
- no offshore disposal of dredge spoil
- capital dredging by hydro-hammer (rock-breaker) and long arm excavator to minimise potentially excessive suspended sediments
- capital dredging to occur outside of summer months, to avoid the peak seagrass growing period
- implementation of a Dredging Environmental Monitoring and Management Plan (DEMMP) incorporating:
    - monitoring thresholds of benthic communities and habitats during dredging activities, and threshold contingency measures such as silt curtains and ceasing dredging to ensure irreversible impacts are not greater than predicted
    - monitoring of environmental outcomes for benthic communities and habitat, including seagrass health post-construction.

2.1.8 Rehabilitation measures

No rehabilitation measures in relation to this factor were proposed by the proponent.

2.1.9 Assessment of impacts to environmental values

The EPA has assessed the likely residual impacts of the proposal on benthic communities and habitats to be:

- the permanent loss of up to 18.63 ha of benthic communities due to construction of the proposal, of which 7.66 ha is seagrass of varying densities
- the temporary loss of up to 74.42 ha of benthic communities from increased turbidity and sedimentation resulting from dredging and construction, of which 10.41 ha is comprised predominantly of seagrass. This residual impact is likely to recover within five years post-disturbance.

Permanent (irreversible) loss

The EPA notes that the zone of high impact (ZoHI), where permanent loss of benthic communities is expected, is relatively constrained. Permanent loss of benthic communities will primarily occur within the disturbance footprint of the new tug harbour and berth 8/9 (Figure 3). In addition, two small areas outside of the disturbance footprint, one to the east of berth 8/9 and another small area adjacent to berth 1, are expected to experience permanent secondary losses. The small ZoHI is likely attributable to the proponent's efforts at reducing the project footprint, and staging construction to install the new northern breakwater prior to commencing dredging activities, which would partially contain the dredge plume and reduce the potential for irreversible impacts to benthic communities and habitats to the west of the port.

The risk of permanent loss of seagrass can be further mitigated by reducing pressure on seagrass during their peak growth period. Seagrass experience peak growth during the summer period, which facilitates the storage of carbohydrates to survive the winter. The EPA has recommended a condition to limit the timing of dredging activities to avoid the summer period, consistent with the proponent's proposed dredging schedule.

The EPA further notes that the benthic communities expected to be permanently lost are well-represented in the surrounding area, and the loss represents approximately 0.77% of their current extent within the LAU. The EPA advises that this relatively small and localised loss is unlikely to result in a residual impact to the ecological function of seagrass and macroalgae habitats within the LAU.

Temporary (recoverable) loss

The zone of moderate impact (ZoMI) defines the area where losses of benthic communities are expected to recover. In this zone, the temporary loss or modification of seagrass communities is expected as a result of increased turbidity and sedimentation associated with dredging activities. However, seagrass is expected to recover within five years following the completion of dredging activities. The ZoMI consists mainly of bare soft sediment that lacks epibenthic macrobiota, except for an

area east of the dredging activities at the new berth 1, which contains up to 10.41 ha of predominately seagrass and macroalgae communities.

The EPA notes that monitoring of seagrass impact thresholds during dredging activities, along with management and contingency actions where necessary, will be implemented through the DEMMP. The DEMMP will also include monitoring to substantiate whether environmental outcomes are achieved, that irreversible impacts do not extend beyond the ZoHI, and that recovery within five years has been achieved within the ZoMI.

The EPA advises that the residual impact to benthic communities and habitats should be subject to implementation conditions to ensure the maintenance of biological diversity and ecological integrity in Champion Bay is consistent with the EPA objective for benthic communities and habitats.

Cumulative impacts

An assessment of cumulative impacts on benthic communities and habitats was undertaken by the proponent using combined historical and contemporary survey mapping (SLR Consulting 2025b). Based on the proponent's estimates, the combined permanent loss of benthic communities and habitats from the approved proposal and the significant amendment is 87 ha, approximately 1.8% of the pre-European extent (4832.52 ha).

When combined with the proposed direct impact of the proposal, other historical losses of benthic communities and habitats within the LAU are estimated to be approximately 318 ha or 6.6% of the pre-European extent in the LAU, of which approximately 278.64 ha represents loss of seagrass (SLR Consulting 2025b).

Further, the EPA notes that the approved proposal included offshore dredge disposal outside the LAU in deep water limestone habitat types. Offshore disposal of dredge spoil is not proposed as part of the significant amendment and no impacts to this habitat type are proposed (SLR Consulting 2025c). As such, cumulative impacts to deep water limestone habitat types are not expected.

It is noted that temporary losses of benthic communities and habitats associated with the approved proposal were extensive due to the unexpected scale of excessive fines released into the marine environment within the dredge plume. Studies commissioned by the proponent confirmed that seagrass communities have fully recovered, suggesting that the seagrass within Champion Bay is resilient and ecosystem function was not compromised by the approved proposal (SLR Consulting 2025b; BMT 2021).

In the context of cumulative and historical losses, the EPA advises that the losses associated with the combined proposal represents a small proportion of the extent in the LAU. Further, noting that:

- the remaining seagrass communities in Champion Bay are in good condition
- there is evidence that the seagrass communities within Champion Bay are resilient and able to fully recover following disturbance (BMT 2021)

- benthic habitats proposed to be impacted by the significant amendment are well represented locally and regionally.

The EPA advises that the additional and incremental losses associated with the combined proposal are unlikely to significantly impact the biological diversity or ecological integrity of benthic communities and habitats at the local or regional scale. With the recommended conditions limiting the extent of irreversible losses, the EPA advises that the outcome is likely to be consistent with the objective for this factor.

2.1.10 Summary of key factor assessment and recommended regulation

Table 2: Summary of assessment for benthic communities and habitats

Residual emissions		Assessment finding	Recommended conditions and DMA regulation
1.	Irreversible loss of up to 18.63 ha of benthic communities and habitats within the ZoHI from direct disturbance or indirect impacts due to turbidity and sedimentation caused by dredging.	The permanent loss of 18.63 ha represents the proposal ZoHI within which impacts are likely to be irreversible. The seagrass that will be permanently lost is well represented in the surrounding Champion Bay and LAU. Recoverable impacts on seagrass and macroalgae communities will be confined to a relatively small ZoMI and recover within a maximum of five years. Impacts to seagrass will be minimised by timing dredging to avoid the peak seagrass growing periods during the summer months. The expected environmental outcome is likely to be consistent with the EPA factor objective for benthic communities and habitats subject to the implementation of recommended conditions and associated monitoring and reporting.	**Condition A1 (Limitations and extent of the proposal)** Limit on the extent of the physical and construction elements of the proposal. **Condition B1-1 (Benthic communities and habitats)** Environmental outcomes (area and time) related to direct and indirect impacts to benthic communities and habitats from dredging activities. **Condition B1-2 (Environmental management plan)** Implement the Dredging Environmental Monitoring and Management Plan (DEMMP) to ensure outcomes for benthic communities and habitats are achieved and substantiated. **Condition B1-3** No capital dredging to occur during summer.
2.	Recoverable impacts to 10.41 ha of seagrass and macroalgae communities within the ZoMI from indirect impacts due to turbidity and sedimentation caused by dredging.		

2.2 Marine environmental quality

2.2.1 Environmental objective

The EPA environmental objective for marine environmental quality is to *maintain the quality of water, sediment and biota so that environmental values are protected* (EPA 2016c).

2.2.2 Investigations and surveys

The EPA advises the following investigations were used to inform the assessment of the potential impacts to marine environmental quality:

- Geraldton Port sediment assessment (Appendix B of the ERD) (SLR Consulting 2024b)
- Berth 6 material characterisation (Appendix C of the ERD (SLR Consulting 2025a)
- Dredge plume modelling assessment (Appendix D of the ERD) (Royal HaskoningDHV 2025)
- Geraldton PMaxP sediment transport assessment (Appendix I of the ERD) (Royal HaskoningDHV 2024).

2.2.3 Assessment context – existing environment

Marine environmental quality was considered a relevant environmental factor in the assessment of the approved proposal. As the proposal is located in an existing port the EPA acknowledges that ongoing operations preclude a high level of ecological protection from being achieved within the harbour. This is in line with the expectations outlined in the *Technical Guidance – Protecting the quality of Western Australia's marine environment* (EPA 2016e).

Ongoing water quality monitoring within the port and adjacent waters indicate that background concentrations of copper and zinc exceed the 99% species protection level adopted for high ecological protection, but all other analytes were either reported at low levels or below the limit of reporting (SLR Consulting 2025c).

Baseline sediment quality results from the port identified copper and zinc at concentrations exceeding default guideline values (DGV) (ANZG 2018), but not in a form that is bioavailable to organisms. Tributyltin was detected exceeding the DVG, however assessment of bioavailability concluded that concentrations were compliant with the 95% species protection level for slightly to moderately disturbed ecosystems (ANZG 2018), such as an operational port. Further analysis of sediment and water quality is provided in section 7 of the ERD (SLR Consulting 2025c).

2.2.4 Consultation

A public submission received during the 7-day public comment period raised concerns about the potential impacts of land reclamation and dredging activities within the port on the environment. How the concerns relating to dredging activities have been considered in the assessment are described in section 2.2.9. The EPA has provided other advice (section 5) in relation to land reclamation activities.

Matters raised during targeted stakeholder consultation and the proponent's responses are provided in Appendix K of the ERD (SLR Consulting 2025d).

2.2.5 Potential impacts from the proposal

The proposal has the potential to significantly impact marine environmental quality from:

- temporary localised increase in turbidity during dredging and construction activities
- temporary mobilisation of sediment bound contaminants including metals and metalloids during dredging
- hydrocarbon contamination from leaks and spills during construction.

2.2.6 Avoidance measures

No avoidance measures in relation to this factor were proposed by the proponent.

2.2.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed measures to minimise impacts to marine environmental quality including:

- undertaking dredging activities in stages to minimise cumulative impact from increased turbidity
- no offshore disposal of dredge spoil
- capital dredging by hydro-hammer (rock-breaker) and long arm excavator to minimise potentially excessive suspended sediments
- using clean, hard rock for breakwater construction and lining the breakwaters with geofabric liners to retain fine sediments
- implementing a Dredging Environmental Monitoring and Management Plan (DEMMP) incorporating:
    - water quality monitoring for toxicants at the tailwater discharge points to ensure water quality meets assigned criteria at the low ecological protection area boundary adjacent to land reclamation sites
    - contingency actions such as modifying dredge or disposal activities, installing silt curtains and activating spill response actions.

2.2.8 Rehabilitation measures

Rehabilitation measures are not a relevant mitigation for this environmental factor.

2.2.9 Assessment of impacts to environmental values

The EPA considered the environmental values and corresponding environmental quality objectives in Table 3, as recognised in the EPA's *Technical Guidance - Protecting the quality of Western Australia's marine environment* (EPA 2016e), are the values likely to be impacted by the proposal.

Table 3: Environmental Values and Environmental Quality Objectives for the proposal

Environmental value	Environmental quality objectives
Ecosystem Health	Maintenance of ecosystem integrity.
Recreation and Aesthetics	Water quality is safe for primary contact recreation (e.g. swimming and diving). Water quality is safe for secondary contact recreation (e.g. fishing and boating). Aesthetic values of the marine environment are protected.
Cultural and Spiritual	Cultural and spiritual values of the marine environment are protected.
Fishing and Aquaculture	Seafood (caught or grown) is of a quality safe for eating. Water quality is suitable for aquaculture purposes.
Industrial Water Supply	Water quality is suitable for industrial use.

The EPA has assessed the likely residual impact from the proposal on marine environmental quality to be:

- increased turbidity due to dredging activities
- reduction in marine environmental quality during land reclamation activities.

Marine environmental quality – dredging activities

The EPA notes that dredging is planned to occur in stages, beginning with berth 1 (up to 2.5 weeks), followed sequentially by berth 6 (approximately 12 weeks) and the new tug harbour (approximately 2 weeks). The dredging proposed at berth 8/9 is identified as future works. The proponent has also proposed to install the new northern breakwater prior to commencing dredging activities to partially contain and minimise the extent of the dredge plume.

The proponent has not modelled the proposed staging scenario. However, has modelled a scenario in which capital dredging at berths 1, 6, and 8 is completed over a 32-week period (Royal HaskoningDHV 2025). According to the modelling, water quality is expected to return to pre-construction levels within four weeks from the completion of dredging activities. The EPA notes that under the proposed staging, dredging will not occur continuously over the 32 weeks, and therefore water quality may recover sooner. Temporary turbid plumes are expected to be visible in the proponent's predicted ZoMI and may affect aesthetic and recreation values of the Geraldton foreshore, namely Town Beach. However, impacts are not likely to be significant given that water quality is expected to return to pre-construction levels within a relatively short period.

Turbid plumes are likely to cause indirect impacts on benthic communities surrounding the proposal. The outcomes of this assessment are further discussed in section 2.1.

Marine environmental quality – land reclamation

In relation to the significant amendment, land reclamation is limited to the construction of the southern boundary of the new tug harbour and berth 1 using dredge spoil from the proposed dredging activities. The proponent's sediment investigations indicate that dredging and land reclamation activities are unlikely to result in contamination of water or sediment to levels where toxicants become bioavailable (SLR Consulting 2024b).

The EPA notes that routine land reclamation undertaken by the proponent at the port is not included in the proposal. However, the EPA acknowledges that construction of the proposal will facilitate this activity by creating two new dedicated land reclamation sites. Further, the EPA notes that some dredge spoil generated by the proposed dredging activities is likely to be placed within the existing berth 7 reclamation site. The EPA notes that tailwater discharged from reclamation areas can impact the receiving marine environment from toxicants that may leach from the disposed material.

In line with *Technical Guidance – Protecting the quality of Western Australia's marine environment* (EPA 2016e), the proponent has proposed two small low ecological protection areas (LEPAs) for the proposal at the tailwater discharge points associated with the reclamation sites during construction. The primary objective for the LEPAs is to establish discrete 30 m zones for dilution and ensure that the proposal will not result in the release of toxicants that can bioaccumulate or cause harm to the marine environment. The LEPA will be required to meet the 80% species protection level (SPL), with concentrations at the boundary of the LEPA required to meet the 90% SPL (ANZG 2018), and 95% SPL for bioaccumulating toxicants such as perfluorooctanesulfonate (PFOS). The proposed DEMMP includes provisions to monitor and maintain the LEPAs during construction.

The EPA considers that key marine environmental quality values can be protected by requiring the proponent to achieve these LEPAs, and therefore, has recommended this outcome to be subject to implementation conditions. With the implementation of recommended conditions, the EPA considers the environmental values and environmental quality objectives relevant to the proposal (Table 3) are likely to be protected and the outcome of the proposal consistent with the EPA's objective for this factor.

The EPA has provided other advice (section 5) in relation to ongoing management of marine environmental quality following construction.

2.2.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal on marine environmental quality. In doing so, the EPA has considered whether reasonable conditions could be imposed. The EPA assessment findings are presented in Table 4.

The EPA has also considered the principles of the EP Act (see Appendix C) in assessing whether the residual impacts will be consistent with its environmental

factor objective and whether reasonable conditions can be imposed (see Appendix A).

Table 4: Summary of assessment for marine environmental quality

Residual impact or risk to environmental value		Assessment finding or Environmental outcome	Recommended conditions and DMA regulation
1.	Temporary reduction in marine environmental quality during dredging activities.	Dredging, breakwater construction and land reclamation activities will result in temporary elevated levels of turbidity. Turbidity will return to background levels once dredging activities are completed. Sediment investigations demonstrated that metal and metalloid toxicants were not bioavailable at concentrations exceeding the relevant default sediment guideline value criteria. The small LEPA will need to be maintained during construction to ensure there is no bioaccumulation of contaminants in the adjacent area. Significant residual impacts to marine environmental quality from temporary increases in turbidity and release of sediment bound toxicants are considered unlikely and the environmental outcome is likely to be consistent with the EPA objective for marine environmental quality.	**Condition A1 (Limitations and extent of proposal)** Limits on volume of sediments to be dredged. **Condition B2-1 (Marine environmental quality)** Establishes the environmental outcomes that must be met including no adverse impacts to marine environmental quality values and that a low level of ecological protection will be met. **Condition B2-2 (Environmental management plan)** Implement the dredging environmental monitoring and management plan (DEMMP) to ensure outcomes for marine environmental quality are achieved and substantiated.
2.	Potential reduction in marine environmental quality during land reclamation.		

2.3 Marine fauna

2.3.1 Environmental objective

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

2.3.2 Investigations and surveys

The EPA advises the following investigations were used to inform the assessment of the potential impacts to marine fauna:

- Underwater noise modelling study (Appendix G of ERD) (SLR Consulting 2024c)
- Environmental noise impact assessment (Appendix H of ERD) (Acoustic Engineering Solutions 2025)
- Australian sea-lion in-air noise exposure (Appendix H of ERD) (Curtin University 2024).

2.3.3 Assessment context – existing environment

Marine fauna was considered a relevant environmental factor in the assessment of the approved proposal. The proponent identified that seven state listed marine fauna species have the potential to occur in the vicinity of the proposal area. While all the species listed in Table 5 may occur, the EPA has assessed the species that are most likely at risk of residual impacts (section 2.3.9).

Australian sea lion

Australian sea lions utilise areas within and around the port for an essential component of their resting behaviour, known as hauling out. An outer breakwater that was originally constructed in the 1920s, and modified under the approved proposal, has since become an important haul-out site for the species, commonly referred to as 'Seal Rocks'. The port's existing northern breakwater and underneath the wharf deck of Berth 6 are also well-utilised haul-out sites. The nearest consistent alternative haul-out site is at the Abrolhos Island, approximately 60 km away.

Table 5: Species habitat and seasonal key ecological windows

Species – *Biodiversity Conservation Act 2016* conservation listing	Habitat and/or biological important areas[1] (BIA) in proposal area	Key ecological windows/months											
		J	F	M	A	M	J	J	A	S	O	N	D
Australian sea lion (*Neophoca cinerea*) – endangered	BIA for foraging and haul-out sites												
Humpback whale (*Megaptera novaeangliae*) – conservation dependent	BIA for migration						*	*	*				
Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) – migratory	Potential foraging												
Caspian tern (*Hydroprogne caspia*) – migratory	BIA for foraging												
Osprey (*Pandion haliaetus*) – migratory	Breeding^ and foraging												
Roseate tern (*Sterna dougallii*) – migratory	Potential foraging												
Crested tern (*Thalasseus bergii*) – migratory	Potential foraging												

Adapted from SLR Consulting 2025c

1 Biologically important areas are specific regions within the Australian marine environment where protected marine species engage in critical life functions such as breeding, feeding, migration, and resting (DCCEEW www.dcceew.gov.au/environment/marine/bias accessed March 2025).

* peak activity

^ breeding habitat present in proximity to the development envelope; however, no direct impact is proposed.

2.3.4 Consultation

A public submission received during the 7-day public comment period raised concerns about the potential cumulative impacts of the approved proposal and proposed significant amendment on marine fauna. How these concerns have been considered in the assessment are described in section 2.3.9.

Matters raised during targeted stakeholder consultation and the proponent's responses are provided in Appendix K of the ERD (SLR Consulting 2025d).

2.3.5 Potential impacts from the proposal

The proposal has the potential to significantly impact on marine fauna from:

- permanent loss of Australian sea lion haul-out sites
- temporary exclusion of Australian sea lion individuals from haul-out sites during construction
- underwater noise generated during construction activities resulting in avoidance behaviours, permanent or temporary hearing injury or mortality, to conservation significant marine fauna
- vessel strike, entanglement or entrainment during construction resulting in injury or mortality.

2.3.6 Avoidance measures

Modelling indicates that construction noise would be at levels where potential impacts from in-air (above water) noise to hauled-out Australian sea lion is avoided.

2.3.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts to marine fauna:

- implementation of a Marine Fauna Management Plan (MFMP) incorporating:
    - marine fauna observation and exclusions zones for construction activities
    - pre-start, soft start, and shutdown protocols during dredging and piling activities
    - a minimum of two dedicated marine fauna observers present during dredging and piling activities
    - construction staging to ensure that not all Australian sea lion haul-out habitat would be concurrently unavailable
- the rock revetment related to the new breakwater will be designed and constructed to provide new artificial haul-out sites (flat rock surfaces) for Australian sea lions
- no modification or direct impact to Seal Rocks.

2.3.8 Rehabilitation measures

Rehabilitation measures are not a relevant mitigation for this environmental factor.

2.3.9 Assessment of impacts to environmental values

The EPA has assessed the likely residual impacts of the proposal on marine fauna to be:

- The potential for underwater noise emissions from piling, rock breaking and dredging activities to result in behavioural disturbances, temporary and permanent hearing injury or mortality, to conservation significant fauna including the Australian sea lion, humpback whale and Indo-Pacific bottlenose dolphin. The EPA advises the greatest risk posed to marine fauna from underwater noise is from impact piling and rock breaking (hydro-hammer).
- The loss of Australian sea lion haul-out sites resulting in temporary exclusion of individuals from haul-out sites during construction. The EPA notes construction would be staged to ensure that not all haul-out sites are concurrently unavailable, and a net-gain in haul out sites would be reinstated at the new breakwater.
- Risk of injury or mortality from vessel strike, entrapment, entanglement or entrainment associated with vessel movements, dredging and rock-placement activities.

Underwater noise emissions

The EPA notes that the proponent has prioritised the timing of construction activities to minimise impacts to seagrass during its peak growing period (see section 2.1). Consequently, noise-generating activities during key ecological windows for significant marine fauna cannot be entirely avoided (Table 5). While construction may occur during the humpback whale migration the EPA notes that individuals are known to follow the 38 m isobath that is located approximately 10 km offshore (LeProvost et al 2007). Further, Australian sea lions are present throughout the year with a non-annual breeding cycle, and therefore construction would coincide with Australian sea lion activity year-round.

The EPA advises that with the implementation of best-practice underwater noise management measures, significant noise impacts are likely to be avoidable. The proponent has proposed to implement noise management measures (listed in section 2.3.7) through a Marine Fauna Management Plan (MFMP). The EPA notes that the proposed marine fauna observation and exclusion zones for sensitive marine fauna relevant to the proposal, including Australian sea lions, humpback whales, and Indo-Pacific bottlenose dolphins, have been refined in consultation with the Department of Biodiversity, Conservation and Attractions.

The EPA has recommended conditions to require the MFMP and advises that with successful implementation of measures within the plan, the likely outcome of the proposal that significant impacts to marine fauna from underwater noise would be avoided, is likely to be consistent with the EPA objective for marine fauna.

Australian sea lions - temporary exclusion from, and permanent loss of haul-out sites

The EPA highlights the importance of Australian sea lion haul-out sites within the port, given that they facilitate biologically important behaviour (resting) and are the only known locally consistent haul-out location.

The proposal will also result in the permanent loss of haul-out sites along the existing northern breakwater, and temporary exclusion of individuals from haul-out sites during construction activities including dredging, piling and land reclamation works. The EPA notes that Seal Rocks would not be directly impacted, but construction activity nearby at berth 1 and berth 8/9 could temporarily disturb individuals at Seal Rocks.

The EPA notes that construction staging is important to prevent all haul-out sites from being disturbed concurrently during construction, and to ensure sufficient areas are available for Australian sea lions to carry out their natural resting behaviours.

The EPA notes the key strategies proposed by construction staging:

- Construction of the rock revetment for the new tug harbour and northern breakwater, maintenance dredging at berth 1, and causeway construction (including piling) will occur first. The construction of these areas would exclude individuals from haul-out sites along the existing northern breakwater and may disrupt in-water passage of individuals to the haul-out site underneath Berth 6. However, Seal Rocks will remain accessible.
- The rock revetment for the new tug harbour and northern breakwater will be designed to include sufficient flat rock surfaces to create new haul-out sites, which would be accessible to Australian sea lion before commencing capital dredging at berth 1. During this time, Australian sea lion will have unrestricted access to the newly created haul-out sites at the new northern breakwater and tug harbour.
- The construction of berth 8/9 and capital dredging at the new tug harbour are scheduled to occur in later stages, where Australian sea lion will have unrestricted access to Seal Rocks, berth 6 and rock revetment related to the new tug harbour and northern breakwater.

The EPA notes that barriers would be installed to exclude Australian sea lions from hauling-out at construction sites prior to commencing works to prevent collision. Barriers would be removed to reopen haul-out sites following each construction stage and before the subsequent construction stage commences. At no point will Australian sea lions be excluded from all haul-out sites during any respective construction stage.

The EPA has recommended that the MFMP which outlines the proposed mitigation strategies, including construction staging, be subject to implementation conditions. With the successful implementation of the MFMP, it is not likely that the proposal will have significant impact on the availability of Australian sea lion haul-out sites within the port and therefore is likely to be consistent with the EPA's objective for marine fauna.

Vessel strike, entrapment, entanglement or entrainment

Given the necessary low speeds of construction vessels, the EPA considers that the risk of injury or mortality to marine fauna from vessel strike to be relatively low. The risk of entrapment, entanglement or entrainment during rock-placement and dredging activities, particularly of Australian sea lion, is also likely to be relatively low given the minimisation measures proposed as part of the MFMP, such as establishing marine fauna observation and exclusion zones, vessel speed restrictions (maximum speed limit of 8 knots), vessel approach separation distances, and dedicated fauna observer during rock-placement activities.

The EPA advises that with the implementation of the MFMP required by conditions, the environmental outcome of the proposal regarding these risks is that impacts are likely to be avoided, and therefore likely to be consistent with the EPA's objective for this factor.

2.3.10 Summary of key factor assessment and recommended regulation

Table 6: Summary of assessment for marine fauna

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Potential impacts to marine fauna from underwater noise, vessel strike, entrapment, entanglement and entrainment.	Significant impacts to marine fauna from underwater noise, vessel strike, entrapment, entanglement and entrainment are likely avoidable, if managed appropriately. Residual risks and management measures should be subject to conditions to ensure that the environmental outcome is consistent with the EPA's objective for this factor.	**Condition B3-1 (Marine fauna)** Establish an environmental objective to undertake construction activities to avoid or otherwise minimise the risk of physical injury or mortality to significant marine fauna. **Condition B3-2 (Environmental management plan)** Implement the MFMP, which includes provisions for: • pre-start, soft-start, and shut down procedures, exclusion/observation zones, to minimise impact to marine fauna during noise emitting activities • construction speed limits and installation of exclusion barriers, to minimise impact to marine fauna from vessel strike entanglement and entrainment

Residual impact		Assessment finding	Recommended conditions and DMA regulation
			• dedicated fauna observer during rock-placement activities to minimise the risk of marine fauna entrapment
2.	Permanent and temporary loss of haul-out sites for Australian sea lion.	There is residual risk that Australian sea lions may be displaced from haul-out sites at the port. Subject to proposed mitigation measures, including staging construction, ensuring continued access to haul-out sites, and considering suitable haul-out habitat in rock revetment design, the environmental outcome is likely to be consistent with the EPA's objective.	**Condition B3-1 (Marine fauna)** Establish an environmental objective to undertake construction activities to minimise disruption to haul-out behaviour of Australian sea lions. **Condition B3-2 (Environmental management plan)** Implement the MFMP, which includes provisions for staging construction, and detailed design of new rock revetments to incorporate suitable haul-out habitat.

2.4 Coastal processes

2.4.1 Environmental objective

The EPA 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* (EPA 2016b).

2.4.2 Investigations and surveys

The EPA advises that the following investigations were used to inform the assessment of potential impacts:

- Geraldton PMaxP sediment transport assessment (Appendix I of the ERD) (Royal HaskoningDHV 2024).

2.4.3 Assessment context – existing environment

Coastal processes were considered a relevant environmental factor in the assessment of the approved proposal. The key sediment transport pathway along this coastline is longshore transport with sediment moving from south to north. This natural coastal process has been significantly interrupted by the existing port and shipping channel constructed as part of the approved proposal. It is estimated that the annual sand supply to the northern beaches (defined as the coastline between Batavia Coast Marina and Chapman River) has reduced by approximately 10,000 m^3

to 15,000 m^3. Consequently, sand is now accreting at Pages Beach located immediately west of the port (SLR Consulting 2025c).

The proponent mitigates interruption to coastal processes through the implementation of the Northern Beaches Stabilisation Program (NBSP) required under MS 600. Measures under the NBSP include routine monitoring of the condition of the Champion Bay foreshore and mechanical sand bypassing from Pages Beach to the northern beaches, as required.

2.4.4 Consultation

There were no matters raised in the 7-day public comment period on the proposal for coastal processes.

Matters raised during targeted stakeholder consultation and the proponent's responses are provided in Appendix K of the ERD (SLR Consulting 2025d).

2.4.5 Potential impacts from the proposal

The proposal has the potential to significantly impact coastal processes by:

- interruption of longshore sediment transport, contributing to erosion at the northern beaches, particularly in the vicinity of Chapman River
- changes in sediment transport patterns due to the extended port marine structures, causing trapping and accretion of sediments against the western side of the proposed new tug harbour and northern breakwater that may indirectly impact benthic communities if sediment accretion is not managed appropriately in the long-term
- reducing the wave dynamic and energy in the lee of the proposed new marine structures, which may result in changes to water quality and beach profile of Town Beach
- reversal in the direction of longshore transport in the lee of the proposed new marine structures at Town Beach, causing a minor rotation of the beach.

2.4.6 Avoidance measures

No avoidance measures in relation to this factor were proposed by the proponent.

2.4.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts associated with changes to coastal processes:

- implementation of a Coastal Processes Management Plan (CPMP) incorporating:
    - routine monitoring of beach profile, volume and condition, and sediment accretion against port marine structures, to inform required management actions
    - sediment management measures to remove accreted sediments at Pages Beach or against port marine structures through land-based excavation or marine maintenance dredging

- measures to renourish northern beaches via mechanical sand bypassing to mimic natural sediment transport processes.

2.4.8 Rehabilitation measures

Rehabilitation measures are not a relevant mitigation for this environmental factor.

2.4.9 Assessment of impacts to environmental values

The EPA has assessed the likely residual impacts of the proposal on coastal processes to be:

- Interruption of longshore sediment transport from port marine structures and the existing shipping channel.

The EPA notes that natural coastal processes along the Geraldton foreshore have been significantly disrupted by the approved proposal, and the proposed extension of port marine structures will continue to have a similar effect on coastal processes. The total sediment arriving at Pages Beach is estimated to be approximately 19,000 m^3 per annum (Mid West Ports Authority 2025b), and when it reaches maximum sediment holding capacity, sediment migrates to the mouth of the Fisherman Boat Harbour. The proponent's modelling predicts that the proposed extension to the new breakwater may also cause sediment to accrete against the western side of the proposed new breakwater (Royal HaskoningDHV 2024).

The EPA notes that the proponent currently implements a sand bypassing program under the NBSP to manage sediment accretion at Pages Beach and within the port, while also supporting sand nourishment of the northern beaches. The proponent has proposed to replace the NBSP with a contemporised coastal processes management plan (CPMP), which retains the key management actions of the NBSP, as well as including provisions for beneficial use of clean maintenance dredge spoil for nourishment activities.

The EPA considers that the proposed measures outlined in the CPMP are appropriate and with successful implementation, the proposal is unlikely to result in significant impacts to the amenity and recreational values of Pages Beach, the Geraldton foreshore and the northern beaches. As such, the EPA has recommended that the CPMP which outlines the proposed monitoring and mitigation measures, including the sand bypassing program, be subject to implementation conditions.

The EPA advises that while impacts are unlikely to result in significant impacts, there is a degree of uncertainty in modelling sediment transport movement due to seasonal variation within an already altered environment. With the implementation of the recommended conditions, the EPA advises that the outcome of the proposal on coastal processes and associated amenity and recreational use values of Pages Beach, the Geraldton foreshore and the northern beaches, is likely to be consistent with the EPA's objective for this factor.

2.4.10 Summary of key factor assessment and recommended regulation

Table 7: Summary of assessment for coastal processes

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Interruption of longshore currents causing sediment accretion at Pages Beach and against port structures and sediment deficit of the beaches north of the port.	The existing port structures constructed under the approved proposal have significantly altered natural coastal processes. The significant amendment is unlikely to cause significant additional impacts to coastal processes beyond those of the originally approved proposal. Potential impacts from sediment accretion against permanent port structures, at Pages Beach, and consequently causing sediment deficit of the beaches north of the port are residual and can be regulated through reasonable conditions. The EPA advises that subject to the recommended conditions, the outcome of the proposal is likely to be consistent with the EPA's objective for coastal processes.	**Condition B4-1 (Coastal processes)** Establish an environmental objective to minimise changes in sediment accumulation and deficit within the coastal processes management zone (area as defined in conditions) that is attributable to the proposal. **Condition B4-2 (Environmental management plan)** Implement the CPMP, which incorporates provisions for beach and sediment monitoring and management, including the sand bypassing program.

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 marine environmental quality, benthic communities and habitats, marine fauna and coastal processes, the EPA also considered connections and interactions between them to inform a holistic view of impacts to the whole environment.

Benthic communities and habitats, marine environmental quality and marine fauna

There is a well-established scientific correlation between marine environmental quality, the health of benthic communities and habitats and marine fauna. Changes in turbidity and nutrient levels can significantly impact benthic habitats, including seagrass. Maintaining the health of benthic habitats is pivotal in supporting marine fauna that rely on such habitats for foraging purposes, such as the Australian sea lion.

To protect ecosystem health, it is essential to minimise turbidity associated with dredging activities and marine infrastructure construction. The EPA considers that by limiting the extent of construction activities and by limiting dredging to outside of peak times of seagrass growth, the proponent has avoided significant environmental impacts to marine fauna and benthic communities and habitats.

The EPA considers that through implementation of the proposed mitigation and management measures and recommended conditions for marine environmental quality the inter-related impacts to environment values associated with benthic communities and habitats and marine fauna are likely to be consistent with the EPA environmental factor objectives.

Coastal processes and benthic communities and habitat

The existing port and shipping channel has disrupted natural coastal processes, namely longshore sediment transport, causing sand to accrete at Pages Beach while increasing the risk of erosion at the northern beaches. The EPA considers that through implementation of the proposed mitigation and management measures and recommended conditions for coastal processes the interrelated impacts to benthic communities and habitats will likely 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's factor objectives as assessed in section 2.

4 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
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- 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 EP Act.

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

5 Other advice

The EPA may, if it sees fit, include other information, advice or recommendations relevant to the environment in its assessment reports, even if that information has not been taken into account by the EPA in its assessment of a proposal.

The EPA provides the following information for consideration by the Minister.

Maintenance of marine environmental quality post-construction

The EPA notes that the existing reclamation area north of berth 7 is licensed under Part V of the EP Act to accept suitable port-derived material for disposal. Through the significant amendment, two additional land reclamation areas will be established. One located north of the existing reclamation area, between berth 7 and the new tug harbour, and a second located immediately adjacent to the new berth 1, at the site of the old tug harbour (Figure 3). The new reclamation area north of berth 7 will be hydraulically connected to the existing reclamation area and discharge into the inner harbour of the port at the same tailwater discharge point. The second new reclamation area will also discharge into the inner harbour at a second, new tailwater discharge point.

As assessed in section 2.2.9, the proponent has applied low ecological protection areas (LEPA) around each of the tailwater discharge points during construction. The EPA acknowledges that the proponent manages the port to ensure consistency with the EPA's *Technical guidance – Protecting the quality of Western Australia's marine environment* (EPA 2016e). However, the potential release of toxicants through tailwater discharge and leachate from reclamation areas is a risk that must be carefully managed to protect the marine environment. As such, the EPA has recommended conditions requiring the proponent to undertake monitoring to substantiate that the LEPAs applied during construction are also applied for ongoing port activities. Additionally, the EPA has recommended condition B2-3 to ensure that any terrestrially derived material disposed of in the reclamation areas must come from port lands and meet soil acceptance criteria developed through appropriate risk assessments specifically for Geraldton Port. Developed criteria must also be appropriate for the intended end use.

The EPA acknowledges that the proponent has previously sought advice from the Department of Water and Environmental Regulation on the above matter, as well as on matters related to the monitoring and management of the marine environment during operations. The EPA recommends that the proponent continues to engage DWER to refine the port's monitoring and management measures, to ensure protection of the marine environment for ongoing and routine port activities post-construction.

Appendix A: Recommended conditions

Recommended Environmental Conditions

STATEMENT THAT A SIGNIFICANT AMENDMENT TO AN APPROVED PROPOSAL MAY BE IMPLEMENTED
***(Environmental Protection Act 1986*)**

GERALDTON PORT MAXIMISATION PROJECT (SIGNIFICANT AMENDMENT)

Proposal:	The proposal is a significant amendment to the existing 'Geraldton Port Enhancement Project and Preparatory Works for the Town Beach Foreshore Redevelopment' approved proposal to upgrade the marine infrastructure at the Port of Geraldton. The proposal includes dredging, land reclamation using dredge spoil, piling, and installation of a breakwater extending north from the existing port footprint.
Proponent:	Mid West Ports Authority Australian Business Number 73 384 989 178
Proponent address:	298 Marine Terrace Geraldton WA
Assessment number:	2488

Report of the Environmental Protection Authority: 1792

Introduction: The proposal is a significant amendment to the existing 'Geraldton Port Enhancement Project and Preparatory Works for the Town Beach Foreshore Redevelopment' approved proposal which was agreed to be implemented under Ministerial Statement 600.

Pursuant to section 45 of the *Environmental Protection Act 1986,* it is now agreed that:

1. the significant amendment proposal described and documented in the proponent's Proposal Content Document (August 2025), may be implemented;

2. Ministerial Statement 600 for the existing 'Geraldton Port Enhancement Project and Preparatory Works for the Town Beach Foreshore Redevelopment' approved proposal is superseded under section 40AA(6)(b) of the *Environmental Protection Act 1986;* and

3. the implementation of the significantly amended proposal (being the existing approved proposal as amended by the significant amendment proposal) is subject to the following implementation conditions and procedures.

Conditions and procedures

Part A: Proposal extent

Part B: Environmental outcomes, prescriptions and objectives

Part C: Environmental management plans and monitoring

Part D: Compliance and other conditions

PART A: PROPOSAL EXTENT

A1 Limitations and Extent of Proposal

A1-1 The proponent must ensure that the proposal is implemented in such a manner that the following limitations or maximum extents are not exceeded:

Proposal element	Location	Maximum extent
Physical elements		
Significant amendment area	Figure 1	No more than 75 **ha** within the **development envelope**.
Disturbance footprint	Figure 2	No more than 38 **ha** within the **significant amendment area**.
Construction elements		
Dredging activities	Within the disturbance footprint shown in Figure 2	No more than 258,000 **m^3**.

PART B – ENVIRONMENTAL OUTCOMES, PRESCRIPTIONS AND OBJECTIVES

B1 Benthic communities and habitats

B1-1 During construction of the **port maximisation project** the proponent must ensure implementation of the proposal achieves the following environmental outcomes:

(1) no **irreversible loss** of **benthic communities and habitats** outside of the **Zone of High Impact**; and

(2) no **detectable** change from the baseline state of **benthic communities and habitats** outside of the **Zone of Moderate Impact**.

B1-2 During construction of the **port maximisation project** the proponent must implement the Dredging Environmental Monitoring and Management Plan (July 2025) (environmental management plan), with the purpose of ensuring the **benthic communities and habitats** environmental outcomes in condition B1-1 are achieved, monitored and substantiated.

B1-3 In order to avoid the peak seagrass growth and reproductive period, the proponent shall not conduct capital dredging during the period 1 December to 28 February (inclusive), unless otherwise agreed in writing by the **CEO**.

B2 Marine environmental quality

B2-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes:

(1) no **adverse impacts** on the **marine environmental values** of Ecosystem Health, Fishing and Aquaculture, Industrial Water Supply, Recreation and Aesthetics, Cultural and Spiritual; and

(2) the level of ecological protection inside of the **Low Ecological Protection Area**, as shown in Figure 4, is consistent with the corresponding level of ecological protection described in Appendix 1, Table 1 of the **Marine Water Quality Technical Guidance**, including the method used to derive **Environmental Quality Guidelines**.

B2-2 During construction of the **port maximisation project** the proponent must implement the Dredging Environmental Monitoring and Management Plan (July 2025) (environmental management plan) with the purpose of ensuring the marine environmental quality environmental outcomes in condition B2-1 are achieved, monitored and substantiated.

B2-3 The proponent must ensure that **terrestrially derived re-use material**, used for land reclamation, does not exceed the **soil acceptance criteria**.

B3 Marine fauna

B3-1 The proponent must construct the **port maximisation project** to meet the following environmental objectives:

(1) avoid, and where unavoidable, minimise the risk of physical injury or mortality to **significant marine fauna** from vessel strike, underwater noise, entrapment, entanglement or entrainment; and

(2) minimise disruption to haul-out behaviour of Australian sea lion (*Neophoca cinerea*).

B3-2 During construction of the **port maximisation project** the proponent must implement the Marine Fauna Management Plan (August 2025) (environmental management plan), with the purpose of ensuring the marine fauna environmental objectives in condition B3-1 are achieved.

B4 Coastal processes

B4-1 The proponent must implement the proposal to meet the following environmental objective:

(1) minimise changes in sediment accumulation and deficit within the **coastal processes management zone** that is attributable to the proposal.

B4-2 The proponent must implement the Port of Geraldton Coastal Processes Management Plan (July 2025) (environmental management plan) with the purpose of ensuring the coastal processes environmental objective in condition B4-1 is achieved.

PART C – ENVIRONMENTAL MANAGEMENT PLANS AND MONITORING

C1 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication

C1-1 Upon being required to implement an environmental management plan under Part B, the proponent must:

(1) implement the most recent version of the **confirmed** environmental management plan; and

(2) continue to implement the **confirmed** environmental management plan referred to in condition C1-1(1), other than for any period which the **CEO** confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-making process, in which case the implementation of the environmental management plan is no longer required for that period.

C1-2 The proponent:

(1) may review and revise a **confirmed** environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan;

(2) must review and revise a **confirmed** environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan, as and when directed by the **CEO**; and

(3) must revise and submit to the **CEO** the **confirmed** Environmental Management Plan if there is a material risk that the outcomes or objectives it is required to achieve will not be complied with, including but not limited to as a result of a change to the proposal.

C1-3 Despite condition C1-1, but subject to conditions C1-4 and C1-5, the proponent may implement minor revisions to an environmental management plan if the revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.

C1-4 If the proponent is to implement minor revisions to an environmental management plan under condition C1-3, the proponent must provide the **CEO** with the following at least twenty (20) business days before it implements the revisions:

(1) the revised environmental management plan clearly showing the minor revisions;

(2) an explanation of and justification for the minor revisions; and

(3) an explanation of why the minor revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.

C1-5 The proponent must cease to implement any revisions which the **CEO** notifies the proponent (at any time) in writing may not be implemented.

C1-6 **Confirmed** environmental management plans, and any revised environmental management plans under condition C1-4(1), must be published on the proponent's website and provided to the **CEO** in electronic form suitable for on-line publication by the Department of Water and Environmental Regulation within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).

C2 Conditions Related to Monitoring

C2-1 The proponent must undertake monitoring capable of:

(1) substantiating whether the proposal limitations and extents in Part A are exceeded; and

(2) detecting and substantiating whether the environmental outcomes identified in B2-1 are achieved **post-construction** of the **port maximisation project**.

C2-2 The proponent must submit as part of the Compliance Assessment Report required by condition D2, a compliance monitoring report that:

(1) outlines the monitoring that was undertaken during the implementation of the proposal;

(2) identifies why the monitoring was capable of substantiating whether the proposal limitation and extents in Part A are exceeded;

(3) for any environmental outcomes to which condition C2-1(2) applies, identifies why the monitoring was scientifically robust and capable of detecting whether the environmental outcomes in Part B are met;

(4) outlines the results of the monitoring;

(5) reports whether the proposal limitations and extents in Part A were exceeded and (for any environmental outcomes to which condition C2-

1(2) applies) whether the environmental outcomes in Part B were achieved, based on analysis of the results of the monitoring; and

(6) reports any actions taken by the proponent to remediate any potential non-compliance.

C3 Environmental Management Plans: Conditions Relating to Monitoring and Adaptive Management for Outcomes Based Conditions

C3-1 The environmental management plans required under condition B1-2 and condition B2-2 must contain provisions which enable the substantiation of whether the relevant outcomes of those conditions are met, and must include:

(1) **threshold criteria** that provide a limit beyond which the environmental outcomes are not achieved;

(2) **trigger criteria** that will provide an early warning that the environmental outcomes are not likely to be met;

(3) relevant to condition B2-2 the **Environmental Quality Guidelines** to protect the **marine environmental values** and levels of ecological protection, including the methodology used to derive site-specific **Environmental Quality Guidelines**;

(4) monitoring parameters, sites, control/reference sites, methodology, timing and frequencies which will be used to measure **threshold criteria** and **trigger criteria**. Include methodology for determining alternate monitoring sites as a contingency if proposed sites are not suitable in the future;

(5) baseline data;

(6) data collection and analysis methodologies;

(7) adaptive management methodology;

(8) **contingency measures** which will be implemented if **threshold criteria**, and **Environmental Quality Guidelines** or **trigger criteria** are not met; and

(9) reporting requirements.

C3-2 Without limiting condition C2-1, failure to achieve an environmental outcome, or the exceedance of a **threshold criteria**, regardless of whether threshold **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

C4 Environmental Management Plans: Conditions Related to Management Actions and Targets for Objective Based Conditions

C4-1 The environmental management plans required under condition B3-2 and condition B4-2 must contain provisions which enable the achievement of the relevant objectives of those conditions and substantiation of whether the objectives are reasonably likely to be met, and must include:

(1) **management actions**;

(2) **management targets**;

(3) **contingency measures** if **management targets** are not met; and

(4) reporting requirements.

C4-2 Without limiting condition C2-1, the failure to achieve an environmental objective, or implement a **management action**, regardless of whether **contingency measures** have been or are being implemented, represents a non-compliance with these conditions.

PART D – COMPLIANCE, TIME LIMITS, AUDITS AND OTHER CONDITIONS

D1 Non-compliance Reporting

D1-1 If the proponent becomes aware of a potential non-compliance, the proponent must:

(1) report this to the **CEO** within seven (7) days;

(2) implement **contingency measures**;

(3) investigate the cause;

(4) investigate environmental impacts;

(5) advise rectification measures to be implemented;

(6) advise any other measures to be implemented to ensure no further impact;

(7) advise timeframe in which contingency, rectification and other measures have and/or will be implemented; and

(8) provide a report to the **CEO** within twenty-one (21) days of being aware of the potential non-compliance, detailing the measures required in conditions D1-1(1) to D1-1(7) above.

D1-2 Failure to comply with the requirements of a condition, or with the content of an environmental management plan required under a condition, constitutes a non-compliance with these conditions, regardless of whether the **contingency measures**, rectification or other measures in condition D1-1 above have been or are being implemented.

D2 Compliance Reporting

D2-1 The proponent must provide an annual Compliance Assessment Report to the **CEO** for the purpose of determining whether the implementation conditions are being complied with.

D2-2 Unless a different date or frequency is approved by the **CEO**, the first annual Compliance Assessment Report must be submitted within fifteen (15) months of the date of this Statement, and subsequent reports must be submitted annually from that date.

D2-3 Each annual Compliance Assessment Report must be endorsed by the proponent's Chief Executive Officer, or a person approved by proponent's Chief Executive Officer to be delegated to sign on the Chief Executive Officer's behalf.

D2-4 Each annual Compliance Assessment Report must:

(1) state whether each condition of this Statement has been complied with, including:

(a) exceedance of any proposal limits and extents;

(b) achievement of environmental outcomes;

(c) achievement of environmental objectives;

(d) requirements to implement the content of environmental management plans;

(e) monitoring requirements;

(f) implement **contingency measures**;

(g) requirements to implement adaptive management; and

(h) reporting requirements;

(2) include the results of any monitoring (inclusive of any raw data) that has been required under Part C in order to demonstrate that the limits in Part A, and any outcomes or any objectives are being met;

(3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance;

(4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance;

(5) be provided in a form suitable for publication on the proponent's website and online by the Department of Water and Environmental Regulation; and

(6) be prepared and published consistent with the latest version of the Compliance Assessment Plan required by condition D2-5 which the **CEO** has confirmed by notice in writing satisfies the relevant requirements of Part C and Part D.

D2-5 The proponent must prepare 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 D2-2, or prior to implementation of the proposal, whichever is sooner.

D2-6 The Compliance Assessment Plan must include:

(1) what, when and how information will be collected and recorded to assess compliance;

(2) the methods which will be used to assess compliance;

(3) the methods which will be used to validate the adequacy of the compliance assessment to determine whether the implementation conditions are being complied with;

(4) the retention of compliance assessments;

(5) the table of contents of Compliance Assessment Reports, including audit tables; and

(6) how and when Compliance Assessment Reports will be made publicly available, including usually being published on the proponent's website within sixty (60) days of being provided to the **CEO**.

D3 Contact Details

D3-1 The proponent must 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.

D4 Time Limit for Proposal Implementation

D4-1 The **port maximisation project** must be substantially commenced within five (5) years from the date of this Statement.

D4-2 The proponent must provide to the **CEO** documentary evidence demonstrating that they have complied with condition D4-1 no later than thirty (30) days after substantial commencement.

D4-3 If the **port maximisation project** has not been substantially commenced within the period specified in condition D4-1, implementation of the **port maximisation project** must not be commenced or continued after the expiration of that period.

D5 Public Availability of Data

D5-1 Subject to condition D5-2, within a reasonable time period approved by the **CEO** upon the issue of this Statement and for the remainder of the life of the proposal, the proponent must make publicly available, in a manner approved by the **CEO**, all validated environmental data collected before and after the date of this Statement relevant to the proposal (including sampling design, sampling methodologies, monitoring and other empirical data and derived information products - e.g. maps), environmental management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

D5-2 If:

(1) any data referred to in condition D5-1 contains trade secrets; or

(2) any data referred to in condition D5-1 contains particulars of confidential information (other than trade secrets) that has commercial value to a person that would be, or could reasonably be expected to be, destroyed or diminished if the confidential information were published,

the proponent may submit a request for approval from the **CEO** to not make this data publicly available and the **CEO** may agree to such a request if the **CEO** is satisfied that the data meets the above criteria.

D5-3 In making such a request the proponent must provide the **CEO** with an explanation and reasons why the data should not be made publicly available.

D6 Independent Audit

D6-1 The proponent must arrange for an independent audit of compliance with the conditions of this statement, including achievement of the environmental outcomes and/or the environmental objectives and/ or environmental performance with the conditions of this statement, as and when directed by the **CEO**.

D6-2 The independent audit must be carried out by a person with appropriate qualifications who is nominated or approved by the **CEO** to undertake the audit under condition D6-1.

D6-3 The proponent must submit the independent audit report with the Compliance Assessment Report required by condition D2, or at any time as and when directed in writing by the **CEO**. The audit report is to be supported by credible evidence to substantiate its findings.

D6-4 The independent audit report required by condition D6-1 is to be made publicly available in the same timeframe, manner and form as a Compliance Assessment Report, or as otherwise directed by the **CEO**.

Table 1: Abbreviations and definitions

Acronym or abbreviation	Definition or term
Adverse impact / adversely impacted	Negative change that is neither trivial nor negligible that could result in a reduction in health, diversity or abundance of the receptor/s being impacted, or a reduction in environmental value. Adverse impacts can arise from direct or indirect impacts, or other impacts from the proposal. In relation to the EPA's environmental values in B2-1(1) this means achieving the relevant **Environmental Quality Objectives** in Appendix 1, Table 1 of the **Marine Water Quality Technical Guidance**. In relation to marine environmental quality in the **Low Ecological Protection Area** this means that: • there can be substantial change in the quality of water, sediments and/or biota, provided there is no bioaccumulation/bioconcentration of contaminants in the adjacent areas. The assigned area should be as small as reasonably practicable. In relation to **benthic communities and habitat**, this includes but is not limited to declining measures of the extent, health and/or condition of mixed seagrass communities within Champion Bay. In relation to coastal processes, this includes erosion of **northern beaches** and Town Beach, and accumulation of sediment at Pages Beach resulting in a reduction in **amenity**.
Benthic communities and habitats	Mixed communities of sand, pavement, macroalgae and seagrass within Champion Bay.
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the *Environmental Protection Act 1986*, or the **CEO's** delegate.
Coastal processes management zone	The beaches located between the Pages Beach and Chapman River, Geraldton, WA.
Confirmed	In relation to a plan required to be made and submitted to the **CEO**, means, at the relevant time, the plan that the **CEO** confirmed, by notice in writing, meets the requirements of the relevant condition. In relation to a plan required to be implemented without the need to be first submitted to the **CEO**, means that plan until it is revised, and then means, at the relevant time, the plan that the **CEO** confirmed, by notice in writing, meets the requirements of the relevant condition.

Contingency measures	Planned actions for implementation if it is identified that an environmental outcome, environmental objective, threshold criteria, or management target are likely to be, or are being, exceeded. Contingency measures include changes to operations or reductions in disturbance or **adverse impacts** to reduce impacts and must be decisive actions that will quickly bring the impact to below any relevant threshold, management target and to ensure that the environmental outcome and/or objective can be met.
Detecting/ Detectable	The smallest statistically discernible effect size that can be achieved with a monitoring strategy designed to achieve a statistical power value of at least 0.8 or an alternative value as determined by the **CEO**.
Development envelope	The area shown in Figure 1 and spatially defined by co-ordinates in Schedule 1.
Environmental Quality Guidelines	Threshold numerical values or narrative statements which if met indicate there is a high degree of certainty that the associated environmental quality objective has been achieved.
Ha	Hectare.
Irreversible loss	**Adverse impact** which is unlikely to or does not return to pre-impact state within five (5) years following the completion of proposal related activities that are likely to have an impact on **benthic communities and habitats**.
Low Ecological Protection Area	The area shown in Figure 4, spatially defined by co-ordinates in Schedule 1, and as defined in Appendix 1, Table 1 of the **Marine Water Quality Technical Guidance**.
m^3	Cubic meter.
Management action	The identified actions implemented with the intent of achieving the environmental objective.
Management target	A type of indicator to evaluate whether an environmental objective is being achieved.
Marine Water Quality Technical Guidance	*Technical Guidance for protecting the quality of Western Australia's marine environment*, as amended from time to time, and available at www.epa.wa.gov.au. The relevant indicator type in Appendix 1, Table 1 of this Technical Guidance that applies to B2-1(2) is the **Environmental Quality Guidelines** for toxicants in water.
Marine environmental values	Particular values or uses of the marine environment that are important for a healthy ecosystem or for public benefit, welfare, safety, or health and which require protection from the effects of pollution, waste discharges and deposits as defined in the *Technical Guidance: Protecting the Quality of Western Australia's Marine Environment*, as amended from time to time, and available at www.epa.wa.gov.au.

Port maximisation project	The elements of the proposal related to the 'Port Maximisation Project' as defined in table 2 of the proponent's Proposal Content Document (August 2025).
Post-construction	The continuous phase following construction of the **port maximisation project** when routine port activities occur, including ongoing monitoring of environmental impacts and adaptive management practices.
Significant amendment area	The area shown in Figure 1 and spatially defined by co-ordinates in Schedule 1.
Significant marine fauna	Includes cetaceans and pinnipeds.
Soil acceptance criteria	Numeric limits that contaminants of potential concern must not exceed for **terrestrially derived re-use material**. These criteria are to be developed through appropriate risk assessments specifically for Geraldton Port and be appropriate for the intended end use.
Terrestrially derived re-use material	Surplus soils originating from Geraldton Port lands owned by Midwest Ports Authority.
Trigger criteria	Indicators that have been selected for monitoring to provide a warning that, if exceeded, the environmental outcome may not be achieved. They are intended to forewarn of the approach of the threshold criteria and trigger response actions.
Threshold criteria	The indicators that have been selected to represent limits of impact beyond which the environmental outcome is not being met.
Zone of High Impact	The area shown in Figure 3 and spatially defined by co-ordinates in Schedule 1.
Zone of Moderate Impact	The area shown in Figure 3 and spatially defined by co-ordinates in Schedule 1.

Figures (attached)

Figure 1 Geraldton Port Maximisation Project – Development Envelope

Figure 2 Geraldton Port Maximisation Project – Development Envelope and Disturbance Footprint

Figure 3 Geraldton Port Maximisation Project – Impact Zonation Scheme

Figure 4 Geraldton Port Maximisation Project – Low Ecological Protection Area

(The Figures 1-4 are a representation of the co-ordinates referenced in Schedule 1)

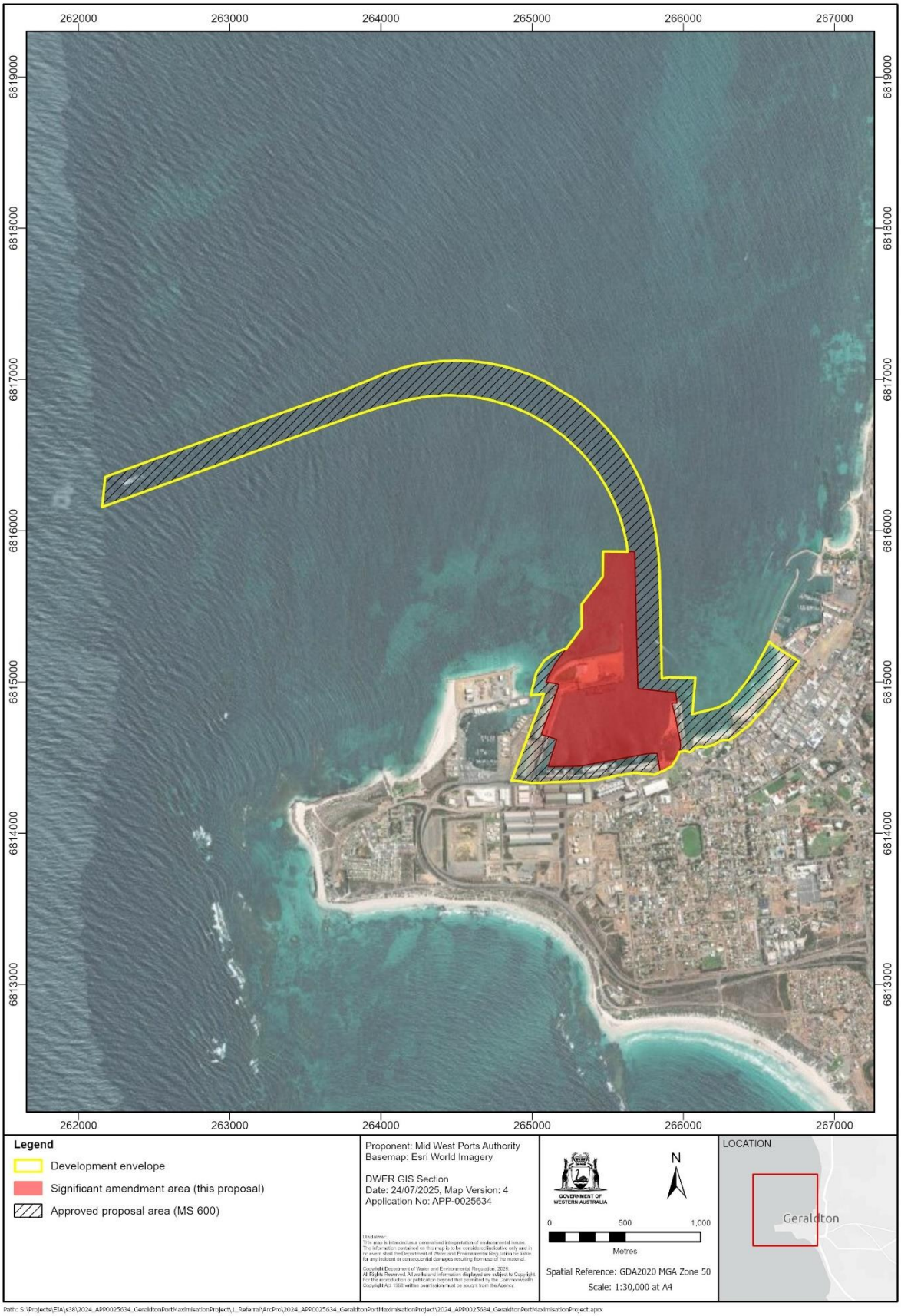

Figure 1 Geraldton Port Maximisation Project – Development Envelope

Figure 2 Geraldton Port Maximisation Project - Development Envelope and Disturbance Footprint

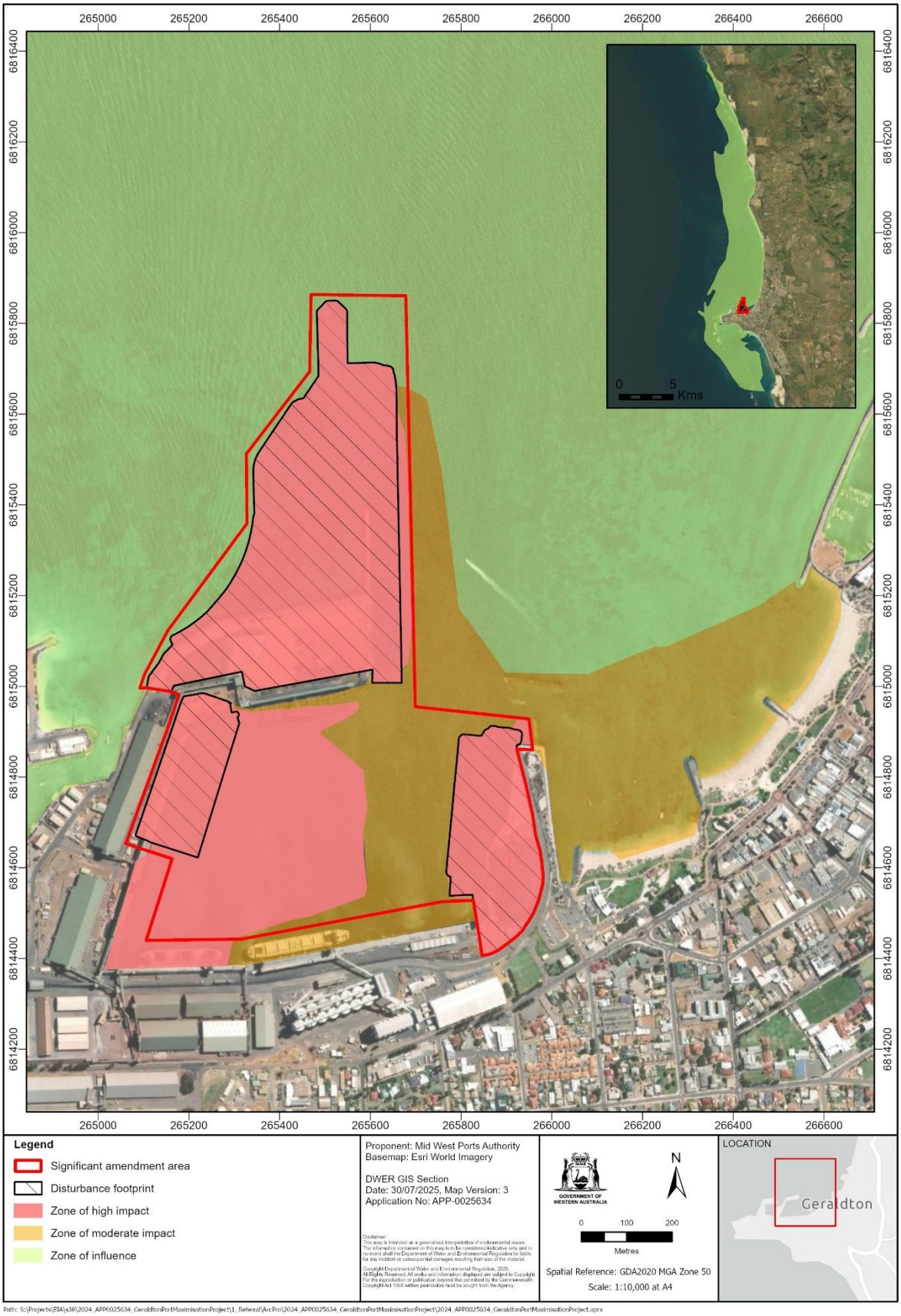

Figure 3 Geraldton Port Maximisation Project – Impact Zonation Scheme

Figure 4 Geraldton Port Maximisation Project – Low Ecological Protection Area

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 2020 (GDA2020).

Spatial data depicting the figures are held by the Department of Water and Environmental regulation. Record no. APP-0025634.

Appendix B: Decision-making authorities

Table B1: Identified relevant decision-making authorities for the proposal

Decision-Making Authority	Legislation (and approval)
1. Minister for Environment	*Biodiversity Conservation Act 2016* - section 40 authority to take or disturb threatened species
2. Chief Dangerous Goods Officer Department of Local Government, Industry Regulation and Safety	*Dangerous Goods Safety Act 2004* - storage and handling of dangerous goods
3. Chief Executive Officer, Department of Water and Environmental Regulation	*Environmental Protection Act 1986* - Part V works approval and licence
4. Chief Executive Officer, City of Greater Geraldton	*Environmental Protection (Noise) Regulations 1997* - approval of noise management plans for construction outside of prescribed hours

Appendix C: Environmental Protection Act principles

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

EP Act principle	Consideration
1. The precautionary principle *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.* *In application of this precautionary principle, decisions should be guided by –* *(a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and* *(b) an assessment of the risk-weighted consequences of various options.*	The EPA has considered the precautionary principle in its assessment of marine environmental quality, benthic communities and habitats, coastal processes and marine fauna. The assessment of these impacts is provided in this report. The proponent has investigated the biological and physical environment to identify environmental values of the proposal area. The EPA notes that the proponent has undertaken avoidance and minimisation measures to avoid potential serious or irreversible damage to the environment by: • committing to utilising dredge methodologies that are suitable for the limestone substrate that underlies the majority of Champion Bay • avoiding dredging activities during summer months to avoid peak seagrass growth periods • staging construction works to prevent the concurrent loss of Australian sea lion haul-out sites at the port. The EPA has recommended conditions to impose limits on the disturbance of environmental values, ensure achievement of environmental outcomes, and for monitoring to be conducted during implementation of the proposal. The EPA has concluded that subject to the recommended implementation conditions, the proposal is unlikely to pose a threat of serious or irreversible harm.
2. The principle of intergenerational equity *The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.*	The EPA has considered the principle of intergenerational quality in its assessment of marine environmental quality, benthic communities and habitats, coastal processes and marine fauna. The EPA has also considered this principle when considering the impacts of the proposal on social values of the Geraldton community. The EPA is of the view that consistency with this principle could be achieved with the implementation of recommended conditions, which requires the proponent to: • not disturb benthic communities and habitats beyond the authorised extent, to protect habitat

EP Act principle	Consideration
	• not impact marine fauna during construction of the proposal • maintain the public recreation and amenity value of surrounding beaches by undertaking appropriate measures to enable sand to bypass from Pages Beach to Town beach and northern beaches. The EPA has concluded that the environmental values will be protected, and the health, diversity and productivity of the environment will be maintained for the benefit of future generations.
3. The principles of the conservation of biological diversity and ecological integrity *Conservation of biological diversity and ecological integrity should be a fundamental consideration.*	The EPA has considered the principle of conservation of biological diversity and ecological integrity and has had particular regard to this principle in its assessment of benthic communities and habitats, and marine fauna. The EPA has considered to what extent the potential impacts from the proposal to benthic communities and habitats, and marine fauna can be ameliorated to ensure consistency with the principle of conservation of biological diversity and ecological integrity. The EPA has concluded that the actions to avoid and minimise impacts to environmental values, including setting limits on the extent of disturbance to benthic communities and habitat, and ensuring continued availability of suitable haul-out sites for Australian sea lions, which are also recommended as conditions, would likely ensure the conservation of biological diversity and ecological integrity.
4. Principles relating to improved valuation, pricing and incentive mechanisms *(1) Environmental factors should be included in the valuation of assets and services.* *(2) The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.* *(3) 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.*	In considering this principle, the EPA notes that the proponent will bear the costs relating to implementing the proposal to achieve environmental outcomes, and management and monitoring of environmental impacts during the construction of the proposal. The EPA has had particular regard to this principle in considering marine environmental quality, benthic communities and habitats, coastal processes and marine fauna.

EP Act principle	Consideration
(4) 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.	
5. The principle of waste minimisation *All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.*	The EPA has considered the principle of waste minimisation in its assessment of benthic communities and habitats, coastal processes, marine environmental quality and marine fauna. The EPA notes that the proponent has considered the minimisation of waste generation and its discharges to the environment during design of the proposal and in the development of the required environmental management plans (DEMMP). The EPA notes the design of the proposal has included measures for beneficial reuse of dredged material for land reclamation, minimising the requirement for dredge material disposal. The EPA notes that proponent has a sustainability framework aligned with the Ports Australia Sustainability Guidelines and the United Nations Sustainable Development Global Goals.

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
People			
Social surroundings	• Temporary impacts to water clarity from the dredge plume, potentially causing temporary impacts to recreational values. • Potential impacts to visual amenity from installation of permanent marine infrastructure. • Interruption of sediment transport causing erosion and amenity impacts to the recreational values, coastal infrastructure, and social amenity of the wider coastal zone. • Potential impacts to Australian sea lions at 'Seal Rocks', valued by the local community and visiting tourists for observing hauled-out Australian sea lions.	<u>Public comments</u> • One submission was received during the EPA's 7-day comment period. Concerns raised related to risks to marine fauna and disturbance of potentially contaminated sediments. <u>Targeted consultation by the proponent</u> • Community concerns predominantly focused on the protection of Australian sea lions. Consultation identified a general acceptance of the proposal as a necessary port upgrade, with limited concerns about visual amenity. • Consultation was undertaken with Yamatji Southern Regional Corporation (YSRC), the established corporation under the Yamatji Nation Indigenous Land Use Agreement. The YSRC confirmed no need for further heritage surveys or management plans. Consultation between the YSRC and the proponent is proposed to be on-going.	Social surroundings were not identified as a preliminary key environmental factor when the EPA decided to assess the proposal. Given that: • the proposal is within the established operational port that is an intrinsic part of the City of Greater Geraldton • it would not result in long-term additional loss of recreational and commercial values compared to the approved proposal (MS 600) • does not contain any Aboriginal, maritime or historic heritage sites • the proponent undertakes an ongoing consultation process with the local community and key stakeholders. The EPA's assessment concluded that potential impacts to Australian sea lions and haul-out sites (and associated social values) can be managed under recommended conditions. The EPA's assessment concluded that while impacts to water clarity from suspended sediments during dredging may temporarily impact the recreational values of Town Beach, dredged derived suspended sediment concentration is not likely to be detectable within a month of cessation of dredging. The EPA has recommended conditions to require no adverse impacts to the marine environmental values of 'Recreation and Aesthetics' and 'Fishing and Aquaculture'. Further to this, the EPA has recommended a condition to require that dredging avoids the summer months to minimise impacts to seagrass. This would also minimise impacts to the

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
		• There is on-going consultation with the City of Greater Geraldton.	seasonal recreational values of Town Beach, which is likely to increase during summer. The EPA's assessment considered the combined effect from proposed and existing port structures on sediment transport. The EPA has recommended a condition requiring a Coastal Processes Management Plan (CPMP) to continue the proponent's existing sand bypassing programme to ensure the potential impacts on the coastal values of the northern beaches, including public recreational values, are minimised. The City of Greater Geraldton remains a key partner in the delivering of the CPMP. Noting the above, the EPA considers it unlikely that the proposal would have a significant impact on social surroundings and that the potential impacts to this factor are managed as part of the existing port's operations, the implementation of the EPA's recommended conditions, and its ongoing collaboration and consultation with the local community and key stakeholders. Accordingly, the EPA did not consider social surroundings to be a key environmental factor at the conclusion of its assessment.

Appendix E: List of submitters

7-day comment on referral

Organisations and public

- 1 public submission was received from an individual

Government agencies

- None

Appendix F: Assessment timeline

Date	Progress stages	Time (weeks)
18 September 2024	EPA decided to assess – level of assessment set	
14 October 2024	EPA requested additional information	4
17 April 2025	EPA received additional information	26
25 July 2025	EPA received final information for assessment	14
21 August 2025	EPA completed its assessment (s. 44(2b))	4
15 September 2025	EPA provided report to the Minister for Environment	4
19 September 2025	EPA report published	3 days
10 October 2025	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 EPA 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.

Appendix G: Contemporising of Ministerial Statement 600

MS 600 was approved by the then Minister for the Environment in July 2002. This proposal, which includes upgrades to marine infrastructure at the Geraldton Port, is a significant amendment. Accordingly, the EPA's assessment has been undertaken in the context of the approved proposal, having regard to the combined and cumulative effects on the environment. The EPA has also considered whether the implementation conditions for the approved proposal remain relevant. The statement proposed for this significant amendment incorporates the intent of MS 600 conditions under a contemporary conditions framework. The table below provides an assessment of the conditions of MS 600, their relevancy, and how they have been contemporised into the proposed new statement.

Table G1. Assessment and evaluation of proposed changes to conditions of Ministerial Statement 600

Topic	Condition (MS 600)	Assessment and evaluation of proposed changes and recommended conditions
1 Implementation and changes	1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this statement. 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority. 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment and Heritage determines, on advice of the Environmental Protection Authority, is not substantial, the proponent may implement those changes upon receipt of written advice.	<u>Replace condition 1 with contemporary conditions under Part A (proposal extent)</u> Condition 1-1 is replaced by contemporary condition A1-1 which sets out the limitations and maximum extents of the proposal. <u>Delete conditions 1-2 and 1-3</u> Conditions 1-2 and 1-3 are deleted, as it is no longer relevant for inclusion in the statement. Any changes to an approved proposal must be undertaken in accordance with section 40AA or section 45C of the EP Act.

2 Proponent commitments	2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement. 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of the conditions in this statement.	<u>Delete condition 2</u> Condition 2 relates to proponent commitments that are documented in Schedule 2 of MS 600. The EPA has reviewed each proponent commitment and considers that they: • duplicate requirements addressed by recommended contemporary conditions under Part B (environmental outcomes, prescription and objectives) • have been fully implemented. The EPA considers that all proponent commitments can be deleted. For full details of this assessment see Table G2 of Appendix H.
3 Proponent nomination and contact details	3-1 The proponent for the time being nominated by the Minister for the Environment and Heritage under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment and Heritage has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal. 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided. 3-3 The nominated proponent shall notify the Department of Environmental Protection of any change of contact name and address within 60 days of such change.	<u>Delete conditions 3-1 and 3-2</u> Conditions 3-1 and 3-2 are no longer relevant for inclusion within the statement and are deleted. The EPA now follows the Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021, gazetted on 22 October 2021. <u>Replace condition 3-3 with contemporary condition D3 (contact details)</u> Contemporary condition D3 requires the proponent to notify the CEO of any changes to their contact details. The intent of condition 3-3 is retained.

4 Commencement and time limit of proposal	4-1 The proponent shall provide evidence to the Minister for the Environment and Heritage within five years of the date of this statement that the proposal has been substantially commenced or the approval granted in this statement shall lapse and be void. Note: The Minister for the Environment and Heritage will determine any dispute as to whether the proposal has been substantially commenced. 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement to the Minister for the Environment and Heritage, prior to the expiration of the five-year period referred to in condition 4-1 The application shall demonstrate that: • the environmental factors of the proposal have not changed significantly; • new, significant, environmental issues have not arisen; and • all relevant government authorities have been consulted. Note: The Minister for the Environment and Heritage may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.	<u>Replace condition 4 with contemporary condition D4 (time limit for proposal implementation)</u> The approved proposal under MS 600 commenced following the issuing of the statement in 2002, and construction is complete. The requirements of condition 4 remain relevant for the commencement of the proposal under this significant amendment. Contemporary condition D4 requires the proponent to substantially commence the proposal within five years from the date of the statement. The intent of condition 4 is retained.
5 Compliance audit and performance review	5-1 The proponent shall prepare an audit program in consultation with and submit compliance reports to the Department of Environmental Protection which address: • the implementation of the proposal as defined in schedule 1 of this statement; • evidence of compliance with the conditions and commitments; and	<u>Replace condition 5-1 with contemporary condition D2 (compliance reporting)</u> Requirements of condition 5-1 remain relevant for inclusion within the statement. Contemporary condition D2 requires the proponent to prepare a compliance assessment plan, and submit annual compliance assessment reports, which must provide details of: • compliance against the implementation conditions

	• the performance of the environmental management plans and programs. Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986,* the Chief Executive Officer of the Department of Environmental Protection is empowered to audit the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement. Usually, the Department of Environmental Protection prepares an audit table which can be utilised by the proponent, if required, to prepare an audit program to ensure that the proposal is implemented as required. The Chief Executive Officer is responsible for the preparation of written advice to the proponent, which is signed off by either the Minister or, under an endorsed condition clearance process, a delegate within the Environmental Protection Authority or the Department of Environmental Protection that the requirements have been met. 5-2 The proponent shall submit a performance review report one year after the completion of construction and every five years thereafter, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority, which addresses: • the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets; • the level of progress in the achievement of sound environmental performance, including	• monitoring results to substantiate whether limitations and extents defined under contemporary conditions in Part A are achieved; as well as whether the environmental outcomes under contemporary conditions in Part B are achieved. The intent of condition 5-1 is retained. <u>Delete condition 5-2, add contemporary condition D1 (non-compliance)</u> At the time when the original proposal was approved, environmental management measures around dredging activities were not well developed. As such, there were uncertainties on the environmental outcomes of the proposal, and the requirement for performance review reporting under condition 5-2. The proposal subject to this significant amendment considers learnings from the implementation of the approved proposal and will be subject to a Dredging Environmental Monitoring and Management Plan (DEMMP), developed in accordance with the Technical Guidance – Environmental impact assessment of marine dredging proposals (EPA 2021d). The likely environmental outcomes of the proposal are known, and contemporary conditions under Part B (environmental outcomes, prescriptions and objectives) will require the proponent to achieve them. In the event that an environmental issue is noted, contemporary condition D1 (non-compliance reporting) requires the proponent to report, investigate and rectify all potential non-compliances.

	industry benchmarking, and the use of best available technology where practicable; • significant improvements gained in environmental management, including the use of external peer reviews • stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and • the proposed environmental targets over the next five years, including improvements in technology and management processes.	
6 Public availability of environmental management programmes and plans	6-1 Prior to the implementation of the environmental management programmes and/or plans referred to within the commitments, the proponent shall make the following programmes and plans publicly available to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority: • Environmental Management Programme (see commitment 1); • Water Quality Monitoring and Management Plan (see commitment 3); • Artificial Reef Management Plan (see commitment 5); • Seagrass Monitoring Plan (see commitment 7); • Marine Mammal Monitoring Plan (see commitment 9); • Breakwater Construction and Reclamation Management Plan (see commitment 12); • Northern Beaches Stabilisation Programme (see commitment 14); and	<u>Replace condition 6 with contemporary condition D5 (public availability of data)</u> Condition 6 remains relevant for inclusion in the statement. Contemporary condition D5 requires the proponent to make environmental management plans relevant to the proposal publicly available for the remainder of the life of the proposal. The intent of condition 6 is retained.

	• Dredging Management Plan (see commitment - 16).	
7 Marine management	7-1 The proponent shall monitor and manage water quality of the inner harbour basin and Town Beach to achieve the following Environmental Quality Objectives as defined in the Environmental Protection Authority document *"Perth's Coastal Waters, Environmental Values and Objectives"* (Environmental Protection Authority, 2000): 1. Maintenance of ecosystem integrity; 2. The levels of protection to apply are as follows; a. "High level" of protection for the waters of Town Beach as delineated in figure 4 of schedule 1; and b. "Moderate level" of protection for the waters of the inner harbour basin as delineated in figure 4 of schedule 1 3. Maintenance of aquatic life for human consumption; 4. Maintenance of aquaculture (Town Beach only); 5. Maintenance of primary contact recreational values; 6. Maintenance of secondary contact recreational values; and 7. Maintenance of aesthetic values, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority. Note: The above Environmental Quality Objective zones are subject to review in both extent and the guideline values and standard criteria applying to	<u>Condition 7 is replaced by contemporary conditions under Part B (environmental outcomes, prescriptions and objectives)</u> The purpose of condition 7 was to set out the Environmental Quality Objectives (EQOs) and levels of protection (LEPs) for the proposal, and require a Water Quality Monitoring and Management Plan to ensure that the water quality within the inner harbour basin and Town Beach were protected. The EQOs for the significant amendment are defined in line with the EPA's Technical Guidance – protecting the quality of Western Australia's marine environment (EPA 2016f) as: • maintenance of ecosystem integrity • seafood (caught) is of a quality safe for human consumption • water quality is suitable for aquaculture purposes • water quality is safe for primary contact recreation (e.g. swimming and diving) • water quality is safe for secondary contact recreation (e.g. fishing and boating) • aesthetic values of them marine environment are protected • cultural and spiritual values of the marine environment are protected • water quality is suitable for industrial supply purposes. Contemporary condition B2-1(1) requires the proponent does not adversely impact environmental values relevant to the EQOs defined above. In line with current technical guidance, the proponent has prepared a dredging environmental monitoring and management plan (DEMMP) which sets out the zonation scheme for the proposal and monitoring requirements. Implementation of the DEMMP and zonation scheme are

	them, and may be varied from time to time on advice of the Environmental Protection Authority. 7-2 In meeting the requirements of condition 7-1, the proponent shall address the following which are in addition to the requirements included in commitment 3 in schedule 2 (Water Quality Monitoring and Management Plan): • the identification of indicators to maintain the Environmental Quality Objectives (referred to in condition 7-1) appropriate to the inner harbour basin and Town Beach based on the threats to the environmental quality and the cause and effect pathways; • development and implementation of site-specific guideline values and standard criteria for the indicators, if available generic environmental quality criteria are not appropriate; and • the development arid implementation of adaptive management strategies to ensure that the Environmental Quality Objectives are achieved and maintained in the event that agreed guidelines and standards are not met, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.	required under contemporary condition B1 (benthic communities and habitat). The intent of condition 7, to monitor and manage water quality of the inner harbour basin and Town beach, is retained.
8 Town beach management	8-1 The proponent shall prepare and establish a new, stable Town Beach, as documented in schedule 1, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority and the City of Geraldton. 8-2 The proponent shall monitor the stability of Town Beach at a frequency consistent with the requirements of commitment 14 (Northern Beaches Stabilisation Programme), to the requirements of the Minister for the Environment and Heritage on advice	<u>Replace condition 8 with contemporary condition B4 (coastal processes)</u> Condition 8-1 is deleted as the construction of Town Beach, including stabilising structures (groynes), is complete. Conditions 8-2 and 8-3 remains relevant for inclusion in the statement. The requirement to monitor and maintain the long-term stability of northern beaches, including Town Beach, is recommended under contemporary condition B4 (coastal processes), which requires the proponent implement a

	of the Environmental Protection Authority. 8-3 The proponent, in consultation with the City of Geraldton, shall manage the Town Beach to achieve long-term stability and shall include replenishment and/or nourishment on an "as needs" basis for a period of at least four years, and thereafter to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.	contemporised Coastal Processes Management Plan, which replaces the existing Northern Beaches Stabilisation Programme. The intent of conditions 8-2 and 8-3 are retained.
9 Eastern breakwater	9-1 The proponent shall undertake further evaluation of the proposed eastern breakwater as part of the detailed design of the breakwater in accordance with the proponent's commitment 11, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority. Note: In providing further advice to the Minister for the Environment and Heritage, the Environmental Protection Authority will consider the environmental factors of marine mammals, water quality, water circulation, recreation, heritage, noise and visual impacts.	<u>Delete condition 9</u> Condition 9 is deleted as the construction of the eastern breakwater is complete.
10 Memorandum of understanding	10-1 The proponent shall implement the matters that relate to environmental management, which may be subject of a Memorandum of Understanding to be agreed between the proponent and the City of Geraldton, to the requirements of the Minister. for the Environment and Heritage on advice of the Environmental Protection Authority.	<u>Delete condition 10</u> Condition 10 is deleted as it is no longer relevant for inclusion in a Ministerial statement.

Table G2. Assessment and evaluation of proposed changes to proponent commitments of Ministerial Statement 600

Topic	Proponent commitment (MS 600)	Assessment and evaluation of proposed changes and recommended conditions
1 Environmental Management Programme (EMP)	Prepare an EMP containing the following: • Water Quality Management and Monitoring Programme (WQMMP) (commitment 3); • Seagrass Management and Monitoring Programme (SMMP) (commitment 7); • Artificial Reef Management Programme (ARMP) (commitment 5); Marine Mammal Management and Monitoring Programme (MMMP) (commitment 9) • Breakwater Construction and Town Beach Reclamation Management Plan (BCRMP) (commitment 12); • Northern Beaches Stabilisation Programme (NBSP) (commitment 14); and • Dredging Management Plan (DMP) (commitment 16). Each plan/programme will address: (1) plans to meet environmental management requirements of specific project activities; (2) implementation (method and timing); (3) measurement and evaluation of environmental performance; and (4) reporting and compliance auditing of environmental performance.	<u>Delete proponent commitment 1</u> Of the EMPs that were required under proponent commitments of MS 600, the NBSP is the only active plan for which monitoring continues. The other EMPs are fully implemented and complete, and are therefore deleted. Contemporary conditions in Part B (environmental outcomes, prescriptions and objectives) recommend the implementation of contemporised environmental monitoring and management plans that are specific to the proposed significant amendment. Further information is provided below under topics 3, 7, 9, 14 and 16.
2 EMP	Implement EMP	<u>Delete proponent commitment 2</u> As above.
3 Water Quality Monitoring and Management Programme (WQMMP)	Finalise the WQMMP which addresses the following key elements: (1) environmental quality objectives, environmental quality criteria and locations to be protected; (2) definitions of agreed 'alert' and 'action' levels of water turbidity and light attenuation, and locations at which they will apply;	<u>Replace proponent commitment 3 with contemporary condition B1 (benthic communities and habitat) and contemporary condition B2 (marine environmental quality)</u> The WQMMP as required under proponent commitment 3 is outdated and is therefore replaced with contemporary condition B1-3, which requires the implementation of a contemporary DEMMP that has been developed in line with the EPA's

	(3) definitions of 'alert' and 'action' levels agreed with the lobster exporters to protect water quality at the seawater intakes for the live lobster holding activities; (4) definition of management actions applicable to agreed 'alert' and 'action' levels; (5) location of monitoring stations and sampling frequency; and (6) means by which monitoring results will be reported.	Technical Guidance – Environmental impact assessment of marine dredging proposals (EPA 2021f). The DEMMP clearly sets out: • environmental outcomes for dredging activities • monitoring locations • trigger and threshold values for turbidity and associated light availability (reported as DLI) and water quality monitoring for toxicants (including PFOS and metals) • trigger actions and threshold contingency measures. To ensure EQOs are achieved, contemporary condition B2-1(1) requires that the proponent does not adversely impact environmental values of Ecosystem Health, Fishing and Aquaculture, Industrial Water Supply, Recreation and Aesthetics, and Cultural and Spiritual.
4 WQMMP	Implement WQMMP	Delete proponent commitment 4 As above.
5 Artificial Reef Management Plan (ARMP)	Prepare an ARMP which addresses the following key elements: detailed design and location of reefs; re-construction baseline survey of habitat character and lobster catch productivity; confirmation of impact predictions during construction stage; post-construction survey of bathymetry and reef habitat character; post-construction monitoring of reef habitat development and lobster catch productivity; and reporting of survey results.	Delete proponent commitment 5 The significant amendment does not involve offshore disposal of dredging material. As such, the requirement to create an artificial reef is no longer relevant.
6 ARMP	Implement ARMP	Delete proponent commitment 6 As above.
7 Seagrass Monitoring Programme (SMP)	Prepare an SMP which addresses the following: (1) anticipated impacts and objectives of monitoring; (2) location of monitoring sites;	Replace proponent commitment 7 with contemporary condition B1 (benthic communities and habitat)

	(3) sampling frequency; (4) parameters to be monitored; and (5) reporting of monitoring results,	A standalone SMP is no longer required, however, the requirement for a plan that sets out appropriate monitoring parameters for benthic communities and habitat is relevant for inclusion within the statement. Proponent commitment 7 is replaced with contemporary condition B1-3 which requires the proponent to implement a contemporised DEMMP that has been developed in accordance with the EPA's *Technical Guidance – Environmental impact assessment of marine dredging proposals* (EPA 2021). The DEMMP includes: • monitoring thresholds of benthic communities and habitats during dredging activities, and threshold contingency measures such as silt curtains and ceasing dredging to ensure irreversible impacts are not greater than predicted • monitoring of environmental outcomes for benthic communities and habitat, including seagrass health post-construction.
8 SMP	Implement SMP	<u>Delete proponent commitment 8</u> As above.
9 Marine Mammal Monitoring Plan (MMMP)	Prepare an MMMP to address the following: (1) collection of data during whale migrations; (2) recording of any whale encounters by trailer hopper dredge (THD) during dredged material disposal activities; (3) avoiding whales in accordance with the conditions of the dredging permit and permit to disturb cetaceans issued by EA; (4) collection of data to determine present and future abundance of Sealions in the vicinity of Geraldton Port; (5) incorporate flat rock surfaces slightly above the high tide level to create suitable haul-out locations for Sealions *(Neophoca cinerea*); (6) monitor use of replacement breakwater as a Sealion haul-out location; (7) design and construct a viewing shelter and wall across the end of the breakwater, to minimize the potential for disturbance to Sealions;	<u>Replace proponent commitment 9 with contemporary condition B3 (marine fauna)</u> The proponent has developed a contemporised marine fauna management plan (MFMP) that outlines the management measures required to ensure potential impacts to significant marine fauna are minimised. The MFMP, required to be implemented under contemporary condition B3-2, has been developed in consultation with the Department of Biodiversity, Conservation and Attractions, and includes provisions for: establishing marine fauna observation and exclusions zones, pre-start and soft start-up protocols, and shutdown procedures during noise-generating activities engaging dedicated marine fauna observers staging construction to ensure that not all Australian sea lion haul-out habitat is unavailable concurrently

	(8) design and implementation of a series of tests to simulate the disturbance to Sealions associated with train movements on the eastern breakwater, prior to, construction of the railway; (9) monitor and record the presence and abundance of dolphins in the port area, prior to, during and for one year following completion of the dredging programme; and (10) reporting results of all monitoring undertaken to DEP, CALM and the CoG,	the new breakwater to be designed and constructed so that is provides artificial haul-out sites for Australian Sea lions (flat rock surfaces).
10 MMMP	Implement MMMP	Delete proponent commitment 10 As above.
11 Eastern Breakwater	Undertake a review of the eastern breakwater design as part of the development of the Memorandum of Understanding with the City of Geraldton. The review to be managed by a "Mediation Team" comprising of three persons with experience in one or more of the following areas: mediation, transport, planning and environmental assessment, to be appointed by the Minister for the Environment and Heritage, The Mediation Team is to convene multi-party stakeholder groups; assist and facilitate resolution of issues; and consult with government agencies, the City of Geraldton, the proponent and the community. The Mediation Team is to prepare recommendations to the Environmental Protection Authority after reviewing options for the eastern breakwater against the environmental factors of marine mammals, water quality, water circulation, heritage, noise and visual impacts.	Delete proponent commitment 11 This proponent commitment is no longer relevant as the construction of the Eastern breakwater is complete.
12 Breakwater & Town Beach Reclamation Management Plan (BCRMP)	Prepare a BCRMP to address the following environmental issues: • impact of dust; • impact of wind-blown sand; • impact of noise; • impact of odour; • impact of traffic; and • impacts on public safety	Delete proponent commitment 12 The intent of the BCRMP was to minimise adverse effects of breakwater construction and Town Beach reclamation earthworks on the public. This commitment is no longer relevant as the construction of the breakwater and Town Beach is complete.
13 BCRMP	Implement BCRMP	Delete proponent commitment 13.

		As above.
14 Northern Beaches Stabilisation Programme (NBSP)	Prepare an NBSP to address the following key elements: (1) beach monitoring locations and frequency; (2) determine volume of sand nourishment and timing of placement; (3) location and scale of stabilisation works (if any); and (4) management of dust, noise and traffic impacts during nourishment.	<u>Replace proponent commitment 14 with contemporary condition B4 (coastal processes)</u> The NBSP is the only active plan required under proponent commitments of MS 600 and remains relevant for inclusion in the statement. However, the proponent has contemporised the NBSP to include learnings from 20 years of monitoring data and has developed the Coastal Processes Management Plan (CPMP), in consultation with the City of Greater Geraldton and the Department of Transport. The CPMP, required by contemporary condition B4-1, includes the requirement to undertake beach monitoring and continue the sand bypassing program. The CPMP also includes provisions to monitor for any sediment accretion against new port marine structures to ensure there is no loss of benthic communities and habitat cover from changes in sediment transport.
15 NBSP	Implement NBSP	<u>Delete proponent commitment 15</u> As above.
16 Dredging Management Plan (DMP)	Prepare a DMP lo address the following: • management of dredging based on the results of turbidity and light attenuation; • monitoring required under commitment 3; • best practice dredging management including operational strategies in the event of exceedances of the agreed action levels; • produce a detailed description of proposed dredging works and timing once contractors selected; • publish Notices to Mariners and public regarding location and timing of works; • confirm dredging equipment on arrival is free from sediment (holds) and of marine organisms (ballast water and hull fouling); and	<u>Replace proponent commitment 16 with contemporary condition B1 (benthic communities and habitat)</u> The requirement for a DMP prepared in accordance with items listed under proponent commitment 16 is outdated and is therefore deleted. However, the requirement for a plan that sets out appropriate monitoring and management of dredging activities is relevant for inclusion within the statement. Proponent commitments 16 is replaced with contemporary condition B1-2 which requires the proponent to implement a contemporised DEMMP that has been developed in accordance with the EPA's Technical Guidance – Environmental impact assessment of marine dredging proposals (EPA 2021).

	• management of works to minimise location of turbid water plumes, and interference to recreational activities in Town Beach area.	
17 DMP	Implement DMP	Delete proponent commitment 17. As above.

Appendix H: Relevant policy, guidance, procedures and references

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

Acoustic Engineering Solutions 2025, *Environmental noise impact assessment*, prepared by Acoustic Engineering Solutions for Mid West Ports Authority, Geraldton, WA.

ANZG 2018, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Governments and Australian state and territory governments, Canberra, ACT.

BMT 2021, *Seagrass communities in Champion Bay and surroundings*, report by BMT Commercial Australia Pty Ltd for Mid West Ports Authority, Perth, WA.

Curtin University 2024, *Australian sea-lion in-air noise exposure*, Curtin University, Perth, WA.

EPA 2002, *Geraldton Port Enhancement Project and Preparatory Works for the Town Beach Foreshore Redevelopment: Report and recommendations of the Environmental Protection Authority*, Bulletin 1050, Environmental Protection Authority, 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 – Marine fauna*, 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 2021a, *Environmental impact assessment (Part IV Divisions 1 and 2) administrative procedures*, Environmental Protection Authority, Perth, WA.
EPA 2021b, *Environmental impact assessment (Part IV Divisions 1 and 2) procedures manual*, Environmental Protection Authority, Perth, WA.

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

EPA 2021d, *Technical guidance – Environmental impact assessment of marine dredging proposals*, Environmental Protection Authority, Perth, WA.

LeProvost I, Collins P, Mulligan M & Hubbert G 2007, *Geraldton Port Dredging Project 2002-3: The Issues, the Events and the Final Outcome*, Coasts and Ports 2007: 18th Australasian Coastal and Ocean Engineering Conference 2007 and the 11th Australasian Port and Harbour Conference 2007.

Mid West Ports Authority 2025a, *Proposal content document*, Mid West Ports Authority, Geraldton, WA.

Mid West Ports Authority 2025b, *Port of Geraldton Coastal Processes Management*, Mid West Ports Authority, Geraldton, WA.

Royal HaskoningDHV 2024, *Geraldton PMaxP Sediment Transport Assessment*, prepared by Haskoning Australia Pty Ltd for SLR Consulting Australia, North Sydney, NSW.

Royal HaskoningDHV 2025, *Dredge plume modelling assessment*, prepared by prepared by Haskoning Australia Pty Ltd for SLR Consulting Australia, North Sydney, NWS.

SLR Consulting 2024a, *Benthic habitat survey report*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

SLR Consulting 2024b, *Geraldton port sediment assessment*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

SLR Consulting 2024c, *Underwater noise modelling study*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

SLR Consulting 2025a, *Berth 6 Material Characterisation*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

SLR Consulting 2025b, *Cumulative loss assessment*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

SLR Consulting 2025c, *Environmental Impact Assessment*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

SLR Consulting 2025d, *Social Surroundings Study*, prepared by SLR Consulting Australia for Mid West Ports Authority, Perth, WA.

State of Western Australia 2021, *Western Australia Government Gazette, No. 180*, *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021,* 22 October 2021.