APPENDIX **H**

Threatened and Migratory EPBC Act Significant Impact Assessments

Appendix H Threatened and migratory EPBC Act significant impact assessments

Assessment against significant impact criteria – critically endangered and endangered migratory shorebird species

SHOREBIRDS	
Scientific Name	**Common Name**
Calidris canutus	Red Knot
Calidris ferruginea	Curlew Sandpiper
Calidris tenuirostris	Great Knot
Charadrius mongolus	Lesser Sand Plover
Limosa lapponica menzbieri	Northern Siberian Bar-tailed Godwit
Numenius madagascariensis	Eastern Curlew

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Threatened species criteria		
Lead to a long-term decrease in the size of a population	No	There are a number of significant shorebird feeding and roosting sites in the project area. The region is known to support over 23,000 shorebirds annually. All feeding and roosting locations are located on land or subtidal areas that will not be directly impacted by dredging activities. Indirect impacts are restricted to short-term decrease in nearshore water quality that will be within the range of ambient conditions of the naturally turbid environments in Sandringham Bay and around Hay Point.
Reduce the area of occupancy of the species	No	As above. There will be no reduction of onshore area associated with dredging and disposal.
Fragment an existing population into two or more populations	No	Direct impacts on shorebird populations will not result. The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at the Port of Hay Point and consequently is unlikely to fragment populations of this species.
Adversely affect habitat critical to the survival of the species	No	Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect habitat critical to the survival of the species.
Disrupt the breeding cycle of a population	No	Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect shorebird feeding and roosting sites.

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	There will be no direct impacts to this species. Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect shorebird feeding and roosting sites.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Introduce disease that may cause the species to decline	No	As above.
Interfere with the recovery of the species	No	The Curlew Sandpiper and Eastern Curlew are frequently encountered along the coastline from Mackay Harbour to Armstrong Beach. The Northern Siberian Bar-tailed Godwit is a sub-species of the Bar-tailed Godwit and is known to occur in northern Australia. There are no current records of its occurrence in the project area or region, however, there are many records of the Bar-tailed Godwit and therefore there is also the potential for the Northern Siberian sub-species to occur. The lack of direct and indirect impacts means that interference with the recovery of any of the species is highly unlikely.
Migratory Species Criteria		
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	Direct impacts to endangered migratory birds and their habitat will not occur as all dredged material will be disposed of at sea.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	The dredging vessel will operate well away from any breeding or feeding sites, consequently it is unlikely to disrupt existing populations.

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Assessment against significant impact criteria – critically endangered and endangered sea turtle species (note – these species are also listed as migratory)

TURTLES	
Scientific Name	**Common Name**
Caretta caretta	Loggerhead Turtle
Dermochelys coriacea	Leatherback Turtle
Lepidochelys olivacea	Olive Ridley Turtle

Significant Impact Criteria	**Significant Impacts (Yes/No)**	**Response to Criteria**
Threatened species criteria		
Lead to a long-term decrease in the size of a population	No	The Port of Hay Point does not provide any critical breeding, nesting, inter-nesting or foraging habitat for large populations of Leatherback, Loggerhead or Olive Ridley Turtles. The area does, however, provide local foraging habitat for individuals including coastal and deeper-water seagrass beds and algal communities. Loggerhead turtles are known to forage in the project area. There are occasional records of low-density nesting in the region. Direct impacts to seagrass and algal habitat as a result of dredging will be small. There is no seagrass present in the dredge areas (berth pockets) and deepwater seagrass within the disposal ground is ephemeral. Results of previous dredge campaigns recorded recovery of seagrass at the disposal ground within 1-year of impact (for a large capital campaign). Maintenance dredging is anticipated to occur on an approximately 5-year cycle, allowing sufficient time for recovery between campaigns. Indirect impacts to marine water quality, and consequently seagrass habitat as a result of dredging (increased turbidity and sedimentation) are likely to be relatively minor and temporary in nature.
Reduce the area of occupancy of the species	No	There will be no reduction of onshore area or underwater area associated with dredging and disposal. Temporary smothering of ephemeral seagrass within the disposal ground may occur, however this is a very small area in comparison to larger areas of seagrass north and south of Hay Point.
Fragment an existing population into two or more populations	No	The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at the Port of Hay Point. Existing fauna populations will already have adapted to the presence of multiple large vessels. Consequently, the dredging vessel is unlikely to fragment populations of this species.

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Adversely affect habitat critical to the survival of the species	No	No habitat critical to the survival of the species will be affected. Direct impacts to seagrass and algal habitat as a result of dredging will be small. There is no seagrass present in the dredge areas (berth pockets) and deepwater seagrass within the disposal ground is ephemeral. Results of previous dredge campaigns recorded recovery of seagrass at the spoil disposal ground within 1-year of impacts (for a large capital campaign). Maintenance dredging is anticipated to occur on an approximately 5-year cycle, allowing sufficient time for recovery between campaigns. Indirect impacts to marine water quality, and consequently seagrass habitat as a result of dredging (increased turbidity and sedimentation) are likely to be relatively minor and temporary in nature.
Disrupt the breeding cycle of a population	No	As above.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	As above. Increased artificial lighting will be concentrated in the dredge areas (berth pockets and spoil ground) and will come from a single dredge vessel. The increase in light will be negligible compared to that generated by the operating port. Increased levels of underwater noise will be minimal, as only one dredge will be operating for short durations.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Introduce disease that may cause the species to decline	No	As above.
Interfere with the recovery of the species	No	The proposed dredging will not impede the success of any of the recovery objective listed in the approved Recovery Plan (DoEE 2017). Most relevant to this project is the need to prevent impacts from dredging, including habitat removal and direct interactions. As discussed in detail above, habitats at Hay Point are marginal and ephemeral and short-term impacts from dredging are not expected to impact turtle communities. Best practice dredging methods will

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
		be employed to prevent interactions between turtles and dredge vessels.
Migratory Species Criteria		
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	The Port of Hay Point and surrounds does not provide important breeding, nesting, inter-nesting or foraging habitat for large populations of Leatherback, Loggerhead or Olive Ridley Turtles. Direct permanent impacts to endangered turtles habitat will not occur. Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect important habitat for these species.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	The Port of Hay Point and surrounds do not support an ecologically significant proportion of these species.

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Assessment against significant impact criteria – vulnerable migratory shorebird species

BIRDS	
Scientific Name	**Common Name**
Charadrius leschenaultii	Greater Sand Plover
Limosa lapponica baueri	Bar-tailed Godwit (western Alaskan)

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Threatened species criteria		
Lead to a long-term decrease in the size of an important population of a species	No	There are a number of significant shorebird feeding and roosting sites in the project area. The region is known to support over 23,000 shorebirds annually. All feeding and roosting locations are located on land or subtidal areas that will not be directly impacted by dredging activities. Indirect impacts are restricted to short-term decrease in nearshore water quality that will be within the range of ambient conditions of the naturally turbid environments in Sandringham Bay and around Hay Point.
Reduce the area of occupancy of an important population	No	As above. There will be no reduction of onshore area associated with dredging and disposal.
Fragment an existing important population into two or more populations	No	Direct impacts on shorebird populations will not result. The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at the Port of Hay Point Existing fauna populations will already have adapted to the presence of multiple large vessels operating in the vicinity. Consequently, the dredging vessel is unlikely to fragment populations of this species.
Adversely affect habitat critical to the survival of the species	No	Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect habitat critical to the survival of the species.
Disrupt the breeding cycle of an important population	No	Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect shorebird feeding and roosting sites.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	There will be no direct impacts to habitat for these species. Potential indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect shorebird feeding and roosting sites.

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Introduce disease that may cause the species to decline	No	As above.
Interfere substantially with the recovery of the species	No	The lack of direct and indirect impacts means that interference with the recovery of any of the species is highly unlikely.
Migratory Species Criteria		
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	Direct impacts to vulnerable migratory birds and their habitat will not occur as all dredged material will be disposed of at sea.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at the Port of Hay Point and consequently is unlikely to disrupt existing populations of migratory species.

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Assessment against significant impact criteria – vulnerable marine turtle species (note- these species are also listed as migratory)

TURTLES	
Scientific Name	**Common Name**
Chelonia mydas	Green Turtle
Eretmochelys imbricata	Hawksbill Turtle
Natator depressus	Flatback Turtle

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Threatened species criteria		
Lead to a long-term decrease in the size of an important population of a species	No	Green turtles are the most frequently observed of all turtle species in the study area. The inshore areas of the Port of Hay Point support a small population of Green Turtles that forage on algae covered reefs and deep-water seagrass. Low density turtle nesting has been observed in the area from Nov - April. Hawksbill and Flatback species have been recorded in the Hay Point region. There are no known important populations of threatened, migratory turtles within the assessment area. The assessment area does however support local populations.
Reduce the area of occupancy of an important population	No	There will be no reduction of onshore area or underwater area associated with dredging and disposal.
Fragment an existing important population into two or more populations	No	The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at the Port of Hay Point and consequently is unlikely to fragment populations of this species.
Adversely affect habitat critical to the survival of the species	No	Direct impacts to seagrass and algal habitat as a result of dredging will be small. There is no seagrass present in the dredge areas (berth pockets) and deepwater seagrass within the disposal ground is ephemeral. Results of previous dredge campaigns recorded recovery of seagrass at the spoil disposal ground within 1-year of impacts (for a large capital campaign). Maintenance dredging is anticipated to occur on an approximately 5-year cycle, allowing sufficient time for recovery between campaigns. Indirect impacts to marine water quality, and consequently seagrass habitat as a result of dredging

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
		(increased turbidity and sedimentation) are likely to be minor and temporary in nature.
Disrupt the breeding cycle of an important population	No	As above.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	As above.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Introduce disease that may cause the species to decline	No	As above.
Interfere substantially with the recovery of the species	No	The proposed dredging will not impede the success of any of the recovery objective listed in the approved Recovery Plan (DoEE 2017). Most relevant to this project is the need to prevent impacts from dredging, including habitat removal and direct interactions. As discussed in detail above, habitats at Hay Point are marginal and ephemeral and short-term impacts from dredging are not expected to impact turtle communities. Best practise dredging methods will be employed to prevent interactions between turtles and dredge vessels.
Migratory Species Criteria		
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	Direct impacts to vulnerable turtles and their habitat will not occur. Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect important habitat for this migratory species.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of	No	The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
the population of a migratory species.		the Port of Hay Point and consequently is unlikely to disrupt existing populations of migratory species. Increased artificial lighting will be concentrated in the dredge areas (berth pockets and spoil ground) and will come from a single dredge vessel. The increase in light will be negligible compared to that generated by the operating port. Increased levels of underwater noise will be minimal, as only one dredge will be operating for short durations.

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Assessment against significant impact criteria – vulnerable species (note – this species are also listed as migratory)

MAMMALS	
Scientific Name	**Common Name**
Megaptera novaeangliae	Humpback Whale

Significant Impact Criteria	**Significant Impacts (Yes/No)**	**Response to Criteria**
Threatened species criteria		
Lead to a long-term decrease in the size of an important population of a species	No	The Port of Hay Point does not support an important population of Humpback Whales species or habitat that is critical to the survival of these species. There is also an important aggregation area for humpback whales 80km off the coast of Mackay. It is thought that whales aggregate for resting and calving in these waters.
Reduce the area of occupancy of an important population	No	As above.
Fragment an existing important population into two or more populations	No	Transfer of dredged material from the Port of Hay Point to the proposed disposal area will not fragment humpback whale populations.
Adversely affect habitat critical to the survival of the species	No	Impacts to marine water quality are likely to be small and temporary in nature. The risk of vessel strike to Humpback Whales in the Hay Point region is considered to be low, given the short-duration of dredging and fauna spotter monitoring and controls that will be implemented in the Dredging EMP.
Disrupt the breeding cycle of an important population	No	The Humpback Whale is known to occur in the waters of the Port of Hay Point and mothers with calves have been observed. However, the Port of Hay Point is not considered to be an important aggregation area for Humpback Whales.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	Impacts to marine water quality are likely to be small and temporary in nature. Increased levels of underwater noise will be minimal, as only one dredge will be operating for short durations.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Introduce disease that may cause the species to decline	No	As above.
Interfere substantially with the recovery of the species	No	Humpback whale populations have increased in recent years and short duration of infrequent dredging unlikely to interfere substantially with recovery of species.
Migratory Species Criteria		
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	Impacts to marine water quality are likely to be small and temporary in nature. Increased levels of underwater noise will be minimal, as only one dredge will be operating for short durations.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	The Port of Hay Point is not considered to be an important aggregation area for Humpback Whales in the GBR

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Assessment against significant impact criteria – vulnerable species

MAMMALS	
Scientific Name	**Common Name**
Xeromys myoides	Water Mouse

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Lead to a long-term decrease in the size of an important population of a species	No	The Water Mouse has a stronghold in the Mackay Region. Whilst the project area can be considered to contain both an important population and habitat critical to the survival of the Water Mouse, direct impacts to the species and its habitat will not occur.
Reduce the area of occupancy of an important population	No	The water mouse typically inhabits creeks, estuaries and mangrove areas. Dredging operations and disposal proposed to occur at sea and underwater.
Fragment an existing important population into two or more populations	No	The dredging vessel will operate in a similar vicinity to existing number of large vessels that operate daily at the Port of Hay Point and consequently is unlikely to fragment populations of this species.
Adversely affect habitat critical to the survival of the species	No	Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect estuarine and mangrove habitat.
Disrupt the breeding cycle of an important population	No	Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect estuarine and mangrove habitat.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	No	There will be no direct impacts to this species. Indirect impacts are restricted to short-term decrease in nearshore water quality that is highly unlikely to affect estuarine and mangrove habitat.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Introduce disease that may cause the species to decline	No	As above.
Interfere substantially with the recovery of the species	No	The Water Mouse has a stronghold in the Mackay Region. However, direct and indirect impacts are not likely for this species and no inference with its recovery will occur.

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Assessment against significant impact criteria – migratory marine bird species

MARINE BIRDS	
Scientific Name	**Common Name**
Sternula albirfrons	Little Tern

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	Direct impacts to marine birds and their habitat will not occur as all dredged material will be disposed of at sea. This species inhabits sheltered coastal environments. There are no breeding colonies in the project area or region.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	This species inhabits sheltered coastal environments. There are no breeding colonies in the project area or region.

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Assessment against significant impact criteria – migratory wetland bird species

WETLAND BIRDS	
Scientific Name	**Common Name**
Actitis hypoleucos	Common Sandpiper
Arenaria interpres	Ruddy Turnstone
Calidris acuminata	Sharp-tailed Sandpiper
Calidris alba	Sanderling
Calidris melanotos	Pectoral Sandpiper
Calidris ruficollis	Red-necked Stint
Double-banded Plover	Charadrius bicinctus
Charadrius veredus	Oriental Plover
Gallinago hardwickii	Latham's Snipe
Limicola falcinellus	Broad-billed Sandpiper
Limosa lapponica	Bar-tailed Godwit
Limosa limosa	Black-tailed Godwit
Numenius minutus	Little Curlew
Numenius phaeopus	Whimbrel
Pandion haliaetus	Osprey
Pluvialis fulva	Pacific Golden Plover
Pluvialis squatarola	Grey Plover
Tringa brevipes	Grey-tailed Tattler
Tringa glareola	Wood Sandpiper
Tringa incana	Wandering Tattler
Tringa nebularia	Common Greenshank
Tringa stagnatilis	Marsh Sandpiper
Xenus cinereus	Terek Sandpiper

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	The Port of Hay Point does not provide important habitat or an ecologically significant proportion of the species' populations. Each of these species are widespread throughout their ranges and aggregation areas are located elsewhere.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.

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Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	Direct impacts to the species and their habitats are unlikely to occur given the short duration of dredge campaigns and the range of management and mitigation measures that will be implemented. Indirect impacts will be short in duration and may include temporary reductions in water quality, disruption of feeding and underwater noise. However, each of these species is highly mobile and will be able to exit the impacted areas and access resources elsewhere in the region.

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Assessment against significant impact criteria – migratory marine species

MARINE SPECIES	
Scientific Name	**Common Name**
Crocodylus porosus	Salt-water Crocodile
Dugong dugon	Dugong
Manta alfredi	Reef Manta Ray
Manta birostris	Giant Manta Ray
Orcella brevirostris	Irrawaddy Dolphin
Sousa Chinensis	Indo-Pacific Humpback Dolphin

Significant Impact Criteria	Significant Impacts (Yes/No)	Response to Criteria
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	No	The salt-water crocodile is known to inhabit the creeks and estuaries of the project area. Impacts to this species are highly unlikely. Dugongs are known to occur in the waters off Hay Point. They are not known to forage in the project area due to the low abundance of seagrass. Indirect impacts to marine water quality, and consequently seagrass habitat as a result of dredging (increased turbidity and sedimentation) are likely to be relatively minor and temporary in nature. The Port of Hay Point does not support an important population of inshore dolphin species or habitat that is critical to the survival of these species. Manta Rays are not commonly know from the region
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	No	The proposed dredge operates on the Queensland coastline and consequently is unlikely to result in any invasive species. Any other dredge would be assessed for invasive marine species to ensure the risk is as low as reasonably practical.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	No	The Port of Hay Point does not support an important population of inshore dolphin species or habitat that is critical to the survival of these species. The Port of Hay Point does not support an ecologically significant proportion of Dugong or important habitat for the species. There are no major feeding grounds and no resident population.

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