

Priority port master planning

Port overlay

Priority Port of Hay Point/Mackay

Queensland | Australia | 2024



Acknowledgement of Traditional Owners

The Department of Transport and Main Roads acknowledges the Traditional Owners and Custodians of this land and waterways. We also acknowledge their ancestors and Elders both past and present.

The Department of Transport and Main Roads is committed to reconciliation among all Australians.

The Department of Transport and Main Roads (TMR) recognises, embraces and celebrates the Aboriginal and Torres Strait Islander peoples continued rights and responsibilities as the First Peoples of Queensland, including traditional ownership and connection to land and waters.

Recognising the Queensland Government's Statement of Commitment, TMR supports a reframed relationship between Aboriginal and Torres Strait Islander peoples and the Queensland Government.

Master planning has worked with the Yuwi Aboriginal Corporation, ensuring their knowledge, experiences and connection to Country were intrinsically considered in preparing the port master planning documents.

TMR is committed to working with the Yuwi Aboriginal Corporation to ensure their knowledge and connection to Yuwibara country continues to inform master planning for the priority Port of Hay Point/Mackay.

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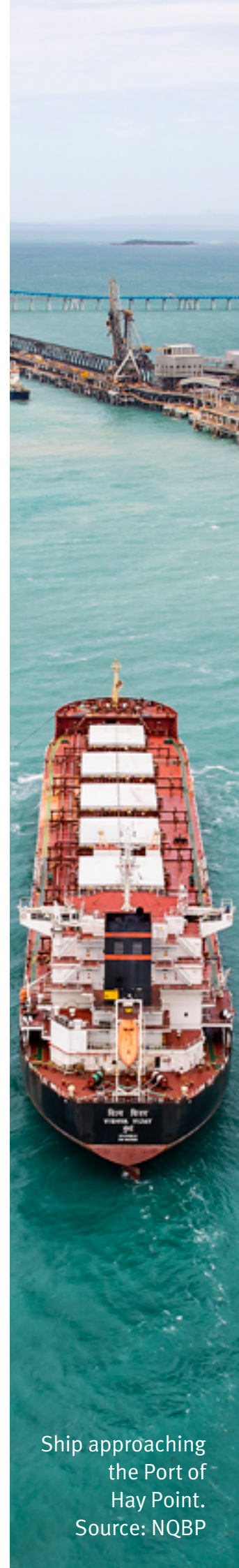
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Front cover image — The Port of Mackay. Source: NQBP

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Ship approaching
the Port of
Hay Point.
Source: NQBP



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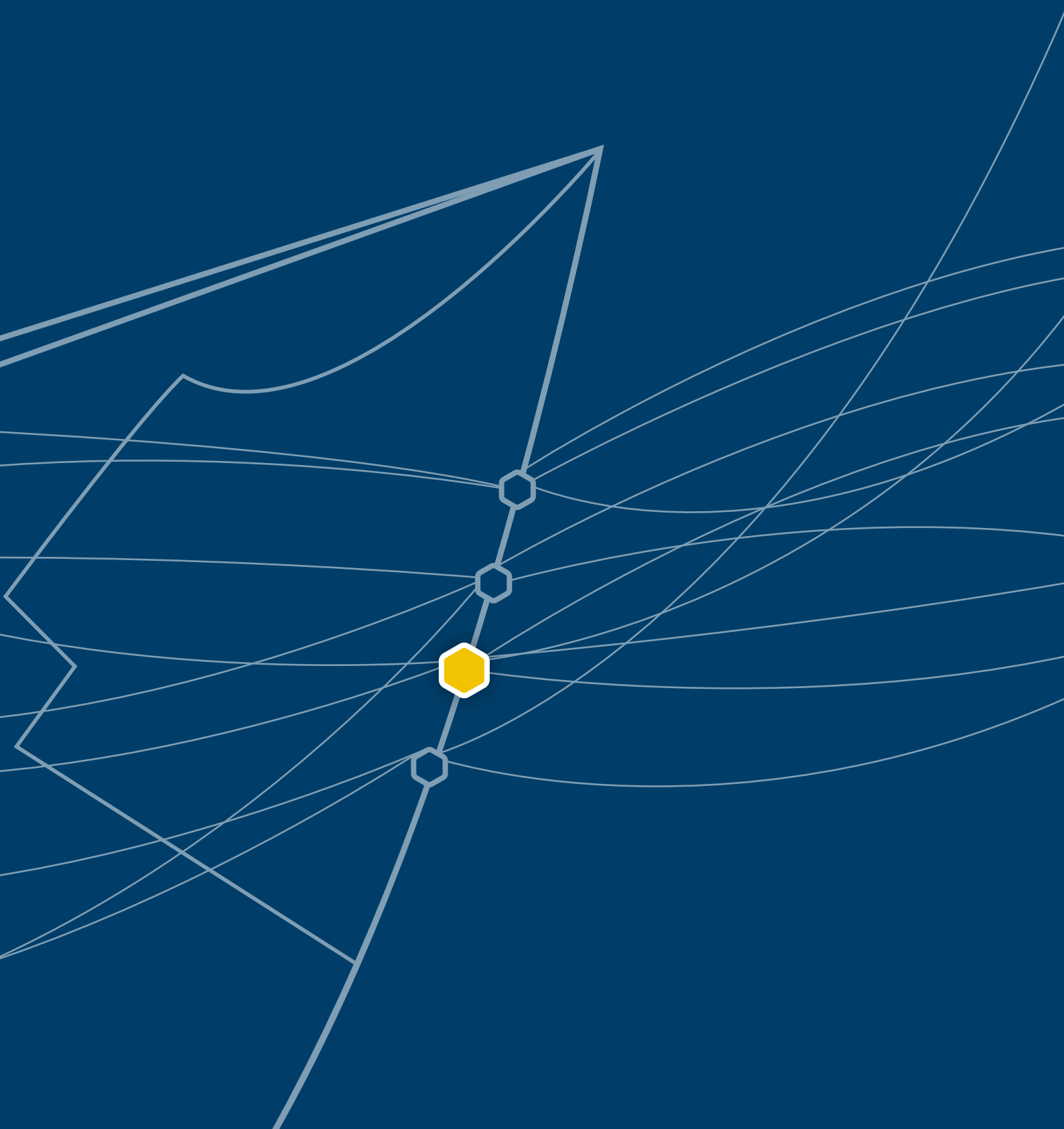
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Section 1

Introduction and context



1. Introduction and context

1.1 Background

The *Sustainable Ports Development Act 2015* (Ports Act) provides for master plans to be implemented by port overlays, which operate alongside existing planning requirements to guide future development and achieve the long-term strategic vision of the master plan.

The port overlay for the priority Port of Hay Point/Mackay (port overlay) has been prepared in accordance with the Ports Act. The Ports Act requires that a port overlay is made as soon as practicable after a master plan takes effect and implements the master plan.

The port overlay regulates development by exception and operates in addition to existing planning and environmental legislative requirements where further requirements are necessary to implement the master plan. The port overlay sets out requirements to regulate development in the master planned area. **Figure 1** illustrates how port overlays work within existing frameworks.

The port overlay minimises duplication of requirements by operating in conjunction with existing instruments and approval processes, only adding requirements where they are needed to achieve master plan outcomes. It does not replace or remove any existing processes or instruments and does not modify decision-making entities for existing planning and other regulatory processes.

Once made, the final port overlay will be a statutory instrument under the *Statutory Instruments Act 1992* and will have the force of law as provided for under that Act. The final port overlay is not subordinate legislation.

1.2 Components of the port overlay

Section 1: Introduction and context describes the port overlay and how it is implemented.

- describes the port overlay and how it is implemented.
- states the matters that an Assessment manager must have regard to in assessing development.

Section 2: Purpose and application outlines the purpose of the port overlay and where and how it applies.

Section 3: Strategic direction identifies the strategic intent for the port overlay to implement the master plan.

Section 4: Environmental Management Framework (EMF) states the measures and objectives required for managing the potential impacts on environmental values identified in the master plan.

Section 5: Plan-making prescribes the requirements to be considered by:

- Mackay Regional Council (MRC) when making or amending local planning instruments
- North Queensland Bulk Ports Corporation Limited (NQBP) when making or amending the Port of Hay Point Land Use Plan and the Port of Mackay Land Use Plan.

Figure 1 — How port overlays work

Port overlays implement master plans through existing planning frameworks



Plan-making

Plan-making involves preparing long term plans to guide future development.

Port overlays include requirements about master plan outcomes, which must be considered when plans are made.

Preparation and adoption

Port overlay content:

- ▶ must be considered
- ▶ prevails to the extent of any inconsistency
- ▶ applies in addition to existing requirements
- ▶ if not integrated into plans, remains in effect.

Plans are consistent with port overlay requirements.

Note: For information on State Development Areas or Priority Development Areas, refer to the *Sustainable Ports Development Act 2015*

1.3 How to use the port overlay in plan-making

The port overlay prescribes matters that must be considered in either making or amending instruments within the master planned area.

The requirements of the port overlay apply in addition to existing plan-making requirements, and will prevail to the extent of any inconsistency over planning instruments under the *Planning Act 2016* (Planning Act) or land use plan under the *Transport Infrastructure Act 1994* (Transport Infrastructure Act). The port overlay does not affect the operation of Schedule 6 and Schedule 7 of the *Planning Regulation 2017* (Planning Regulation).

As part of the plan-making process, decision makers must have regard to the port overlay requirements to ensure a master plan is implemented to balance economic, environmental and community outcomes.

In plan making, a decision maker may give weight to the strategic vision, objectives and desired outcomes for the master planned area.

1.4 How to use the port overlay in development assessment

It is intended that both plan making and development assessment is consistent with the port overlay.

The Ports Act states that the port overlay prevails where there is an inconsistency between:

- a planning instrument under the *Planning Act 2016* (Planning Act) and the port overlay; or
- a land use plan made under the *Transport Infrastructure Act* Chapter 8, Part 4 (Transport Infrastructure Act) and the port overlay.

The port overlay for Hay Point/Mackay does not identify any specific types of development to be accepted or assessable development, however the overlay does include priority management measures (PMM), including how they will be achieved and the entities responsible. For any development made assessable by a planning instrument under the *Planning Act 2016* or by a land use plan under the *Transport Infrastructure Act 1995*, an assessment manager must:

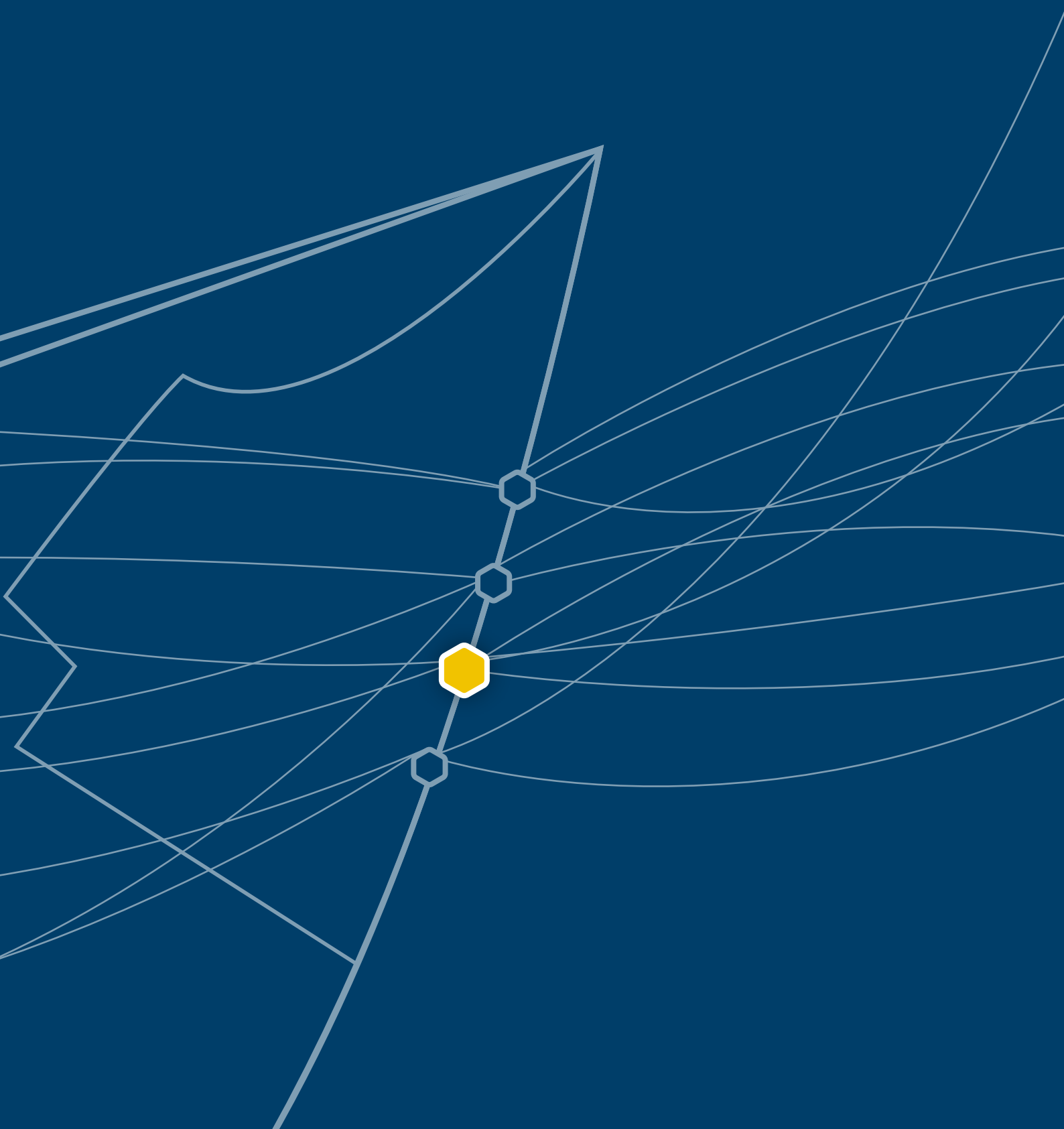
- identify if development is within the master planned area and what precinct or precincts apply (**Appendix A**)
- if development is within the Interface Precinct, Marine Services and Recreation Precinct or Port Industry and Commerce Precinct, have regard to PMM1 under **Section 4.1**
- if development is within the Environmental Management Precinct, Marine Services and Recreation Precinct or Port Industry and Commerce Precinct, have regard to PMM2 under **Section 4.1** (note this PMM is only relevant to NQBP).

The port overlay does not affect the operation of Schedule 6 and Schedule 7 of the *Planning Regulation 2017*.

In addition, priority ports, including the priority Port of Hay Point/Mackay, are further recognised as strategic ports and are a matter of state interest under the [Queensland Government, State Planning Policy](#) (SPP). The SPP notes that the state interest applies to all local government areas that are impacted by or contain a priority port.

Section 2

Purpose and application



2. Purpose and application

2.1 Purpose

The purpose of the port overlay is to implement the master plan in accordance with the Ports Act. While the port overlay applies to the entire master planned area, the EMF in **Section 4** states how the PMM from the master plan will be achieved. Additional requirements are only provided in **Section 5** where needed to implement the master plan.

2.2 Application

The port overlay applies to all the master planned area identified in the master plan for the priority Port of Hay Point/Mackay (master plan) and is shown in **Figure 2** and **Appendix A**.

The port overlay establishes requirements for the following regulatory instruments:

- for the Planning Act:
 - ▶ matters MRC must consider in making or amending the Mackay Region Planning Scheme or other local planning instruments
 - ▶ matters an assessment manager (MRC or NQBP) must have regard to in assessing development under the port overlay.
- for the Transport Infrastructure Act:
 - ▶ matters NQBP must consider in making or amending the Port of Hay Point Land Use Plan and Port of Mackay Land Use Plan.

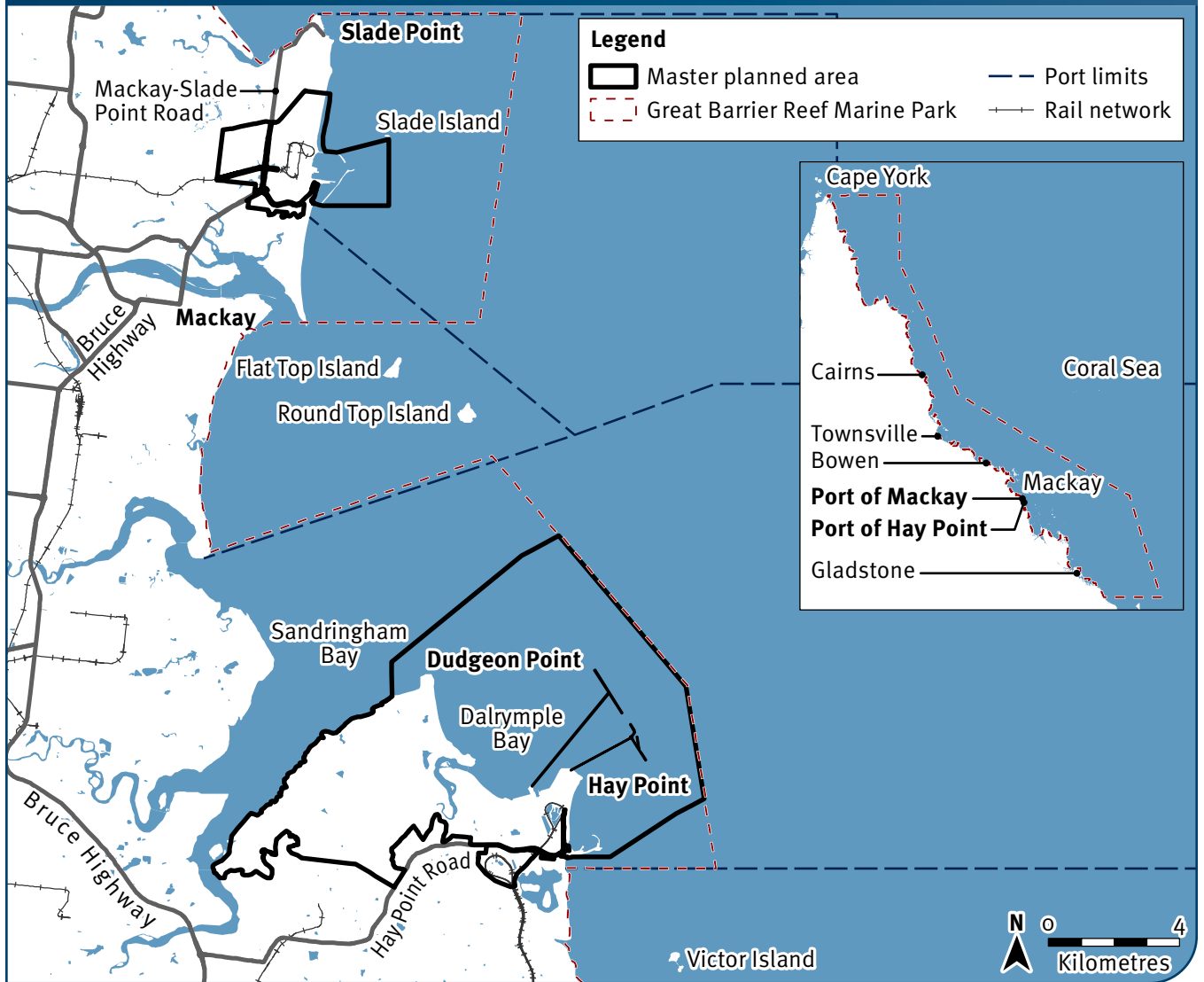
In the port overlay, any reference to a document, instrument or policy means the version that is current at the date of making or amending an instrument within the master planned area.

The spatial extent of instruments under the above legislation is identified in **Figure 3** and the relationship of the port overlay to other legislation and regulatory instruments is summarised in **Table 1**.



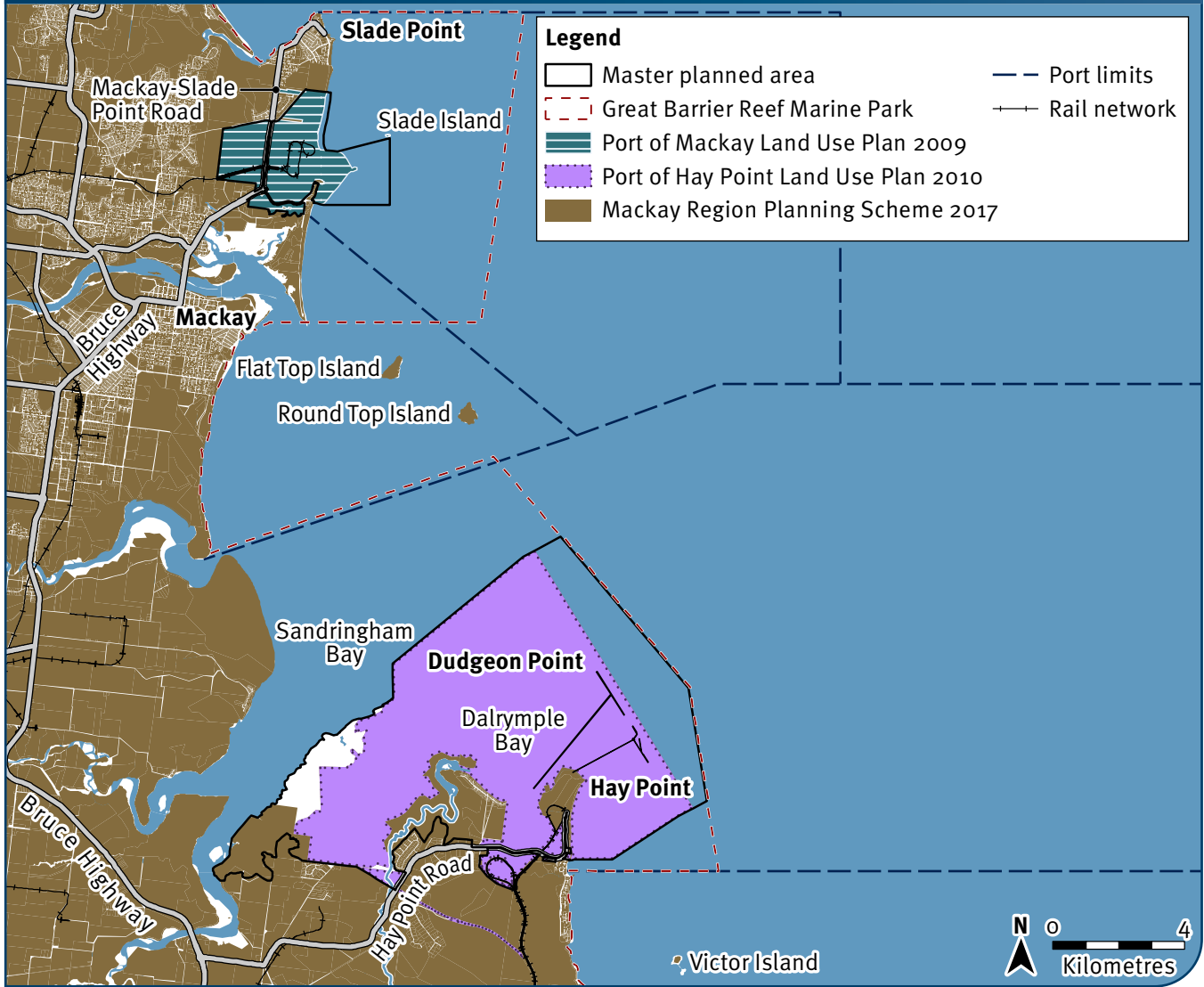
Aerial photo of the Port of Hay Point. Source: NQBP

Figure 2 — Master planned area of the priority Port of Hay Point/Mackay



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 Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap

Figure 3 – Planning instruments operating within the master planned area



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Table 1 – Relationship of the port overlay to other legislation and regulatory instruments

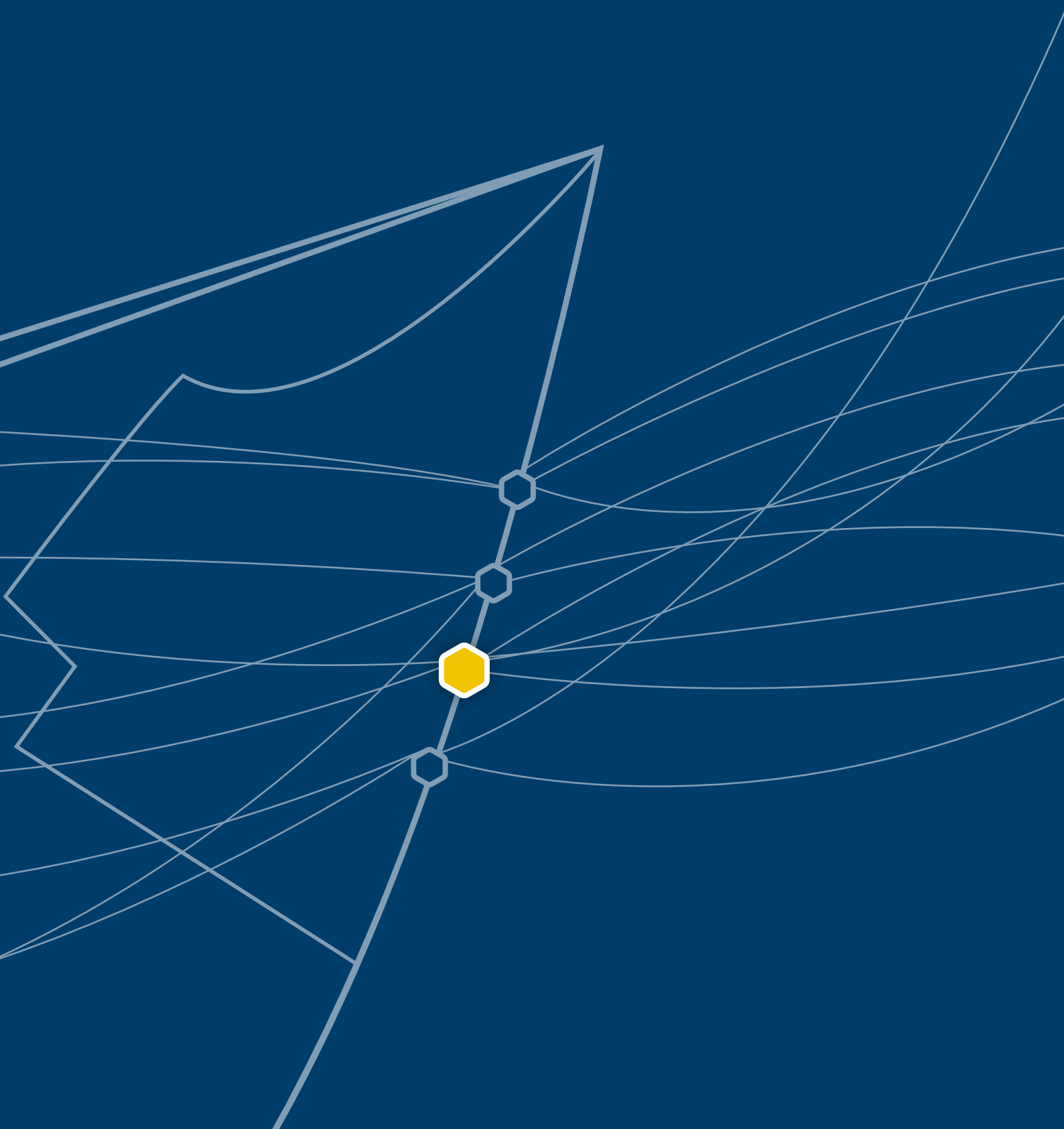
Legislation	Regulatory instrument within the master planned area	Relationship to the Port Overlay	Action for Development Assessment	Action for Plan-Making
Planning Act 2016	Local planning instruments including the MRC Planning Scheme	The planning scheme and the port overlay apply. The port overlay prevails to the extent of any inconsistency	Section 1.4 “How to use port overlay in development assessment”	MRC must consider the content of the port overlay when making or amending local planning instruments under the Planning Act
Planning Act 2016	Port of Hay Point Land Use Plan Port of Mackay Land Use Plan	The land use plan and the port overlay apply. The port overlay prevails to the extent of any inconsistency	Refer to Section 1.4 “How to use port overlay in development assessment”	Not applicable
Planning Regulation 2017	<i>Planning Regulation 2017</i>	The State Development Assessment Provisions and the port overlay both apply	Refer to Section 1.4 “How to use port overlay in development assessment”	Not Applicable
Transport Infrastructure Act 1994	Port of Hay Point Land Use Plan Port of Mackay Land Use Plan	The port overlay prevails to the extent of any inconsistency	Refer to Section 1.4 “How to use port overlay in development assessment”	NQBP must consider the content of the port overlay when making or amending a land use plan under the Transport Infrastructure Act



Ship approaching the Port of Hay Point. Source: NQBP

Section 3

Strategic direction



3. Strategic direction

This section outlines the strategic intent of the port overlay to implement the master plan.

3.1 Strategic vision

The strategic vision identified in the master plan is the long-term outlook for sustainable port development at the priority Port of Hay Point/Mackay:

‘The priority Port of Hay Point/Mackay will maximise opportunities to connect diverse regional industries with global markets, supporting resilient and prosperous communities. Sustainable development across the ports of Hay Point and Mackay will optimise economic, environmental and social opportunities while also protecting the Outstanding Universal Value of the Great Barrier Reef World Heritage Area and other critical values within and surrounding the master planned area.’

The strategic vision is supported by objectives and desired outcomes (**Appendix B**) which provide higher order strategic outcomes applicable across the master planned area.

3.2 Environmental Management Framework

The EMF in the master plan describes the interaction of development with environmental values with a focus on the local expression of the Outstanding Universal Value (OUV) of the Great Barrier Reef World Heritage Area (GBRWHA) and Matters of National Environmental Significance (MNES) and Matters of State Environmental Significance (MSES).

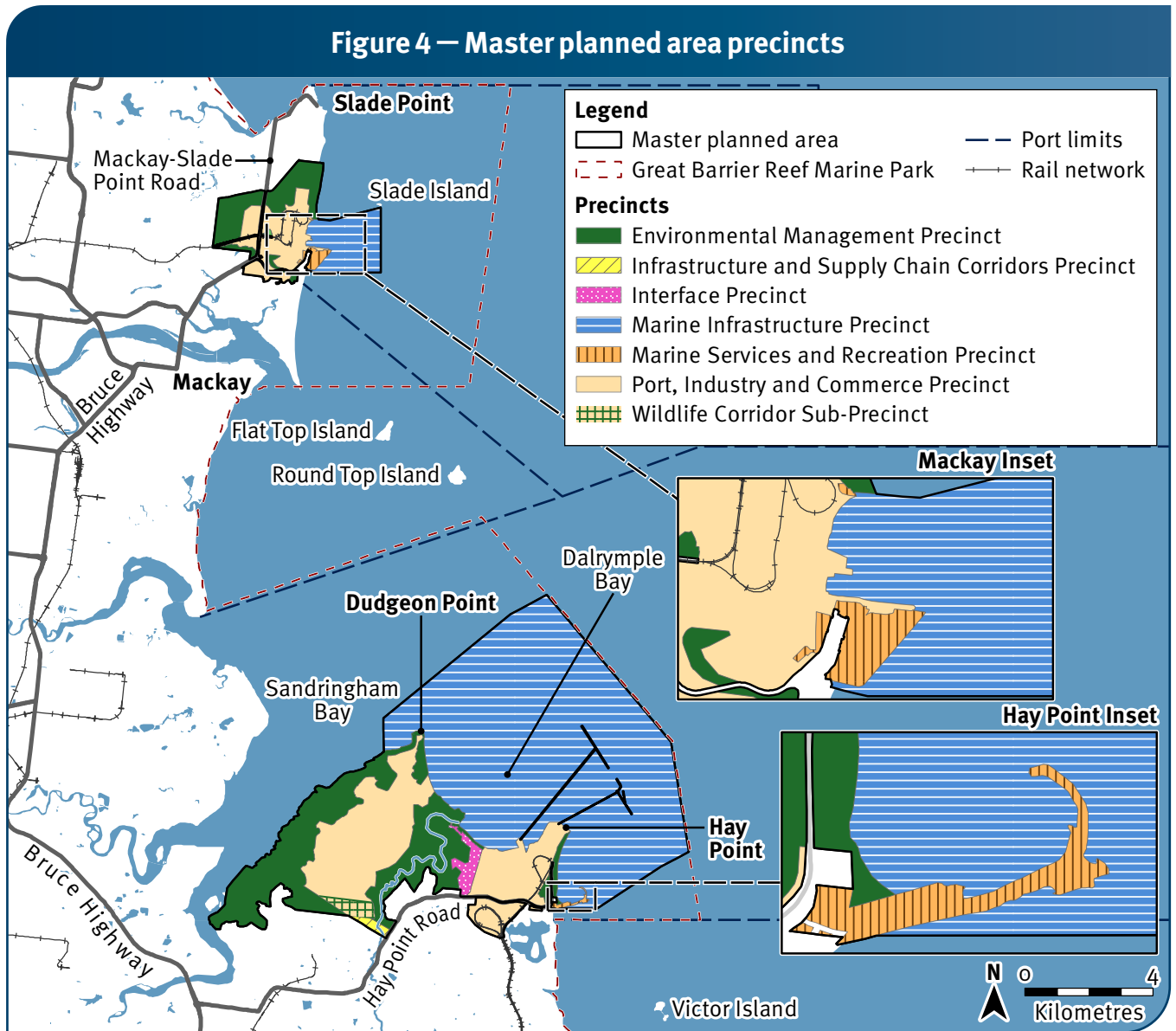
The EMF contains objectives that apply to specific precincts and includes a PMM to manage impacts from development on environmental values. The EMF objectives combine with the precinct purpose and outcomes to provide direction to achieve the strategic vision for the master plan.



The Port of Hay Point. Source: NQBP

3.3 Precincts

Within the master planned area, the purpose and outcomes of the precincts identified in the master plan indicate the long-term intent for development in specific locations and areas where environmental considerations are predominant. The spatial extent of each precinct is identified in **Figure 4** with the purpose, outcomes and EMF objectives provided in **Appendix C**.

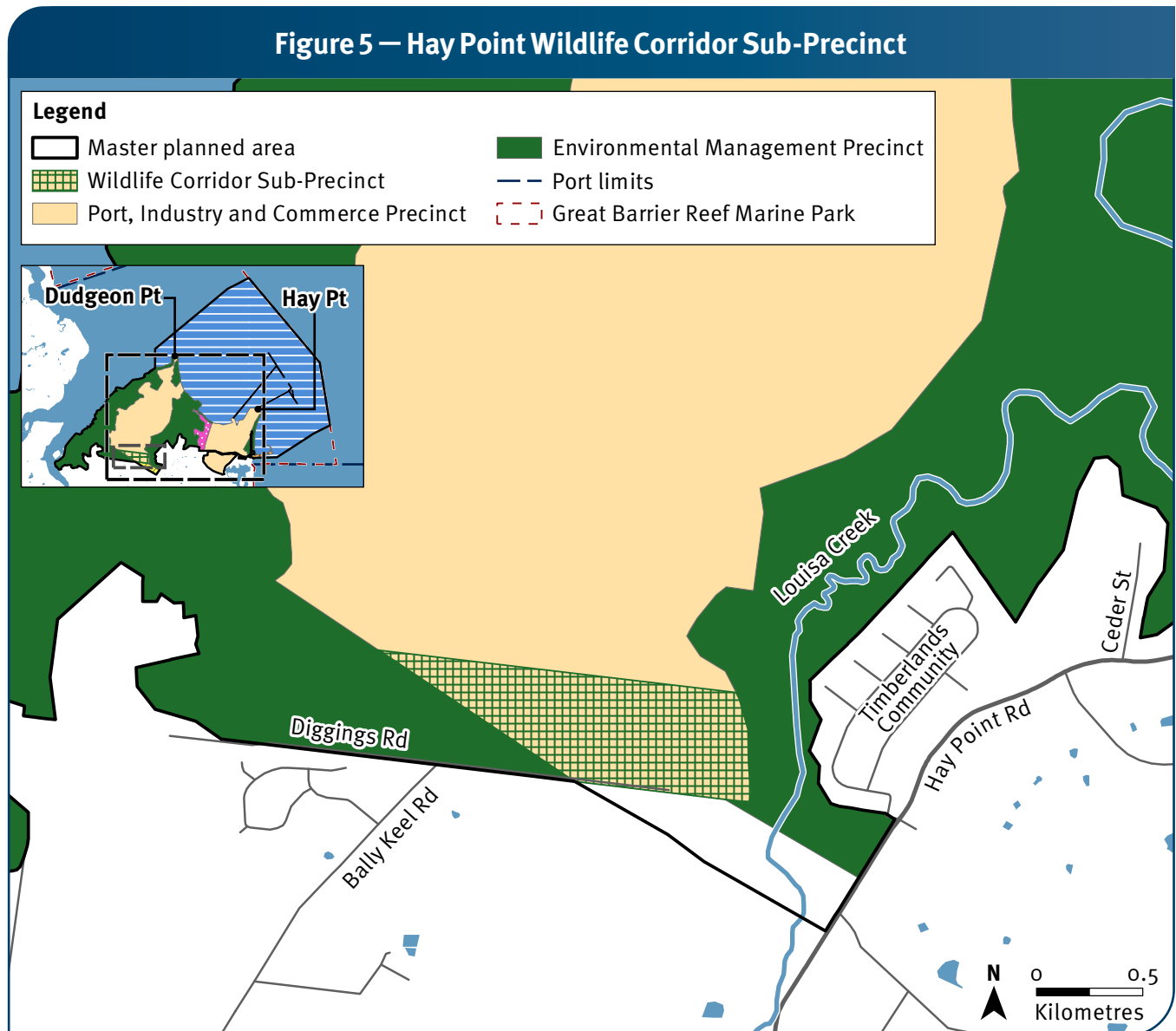


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3.4 Hay Point Sub-precinct

The port overlay identifies one sub-precinct which provides additional outcomes for a defined area within a precinct to implement the master plan at a finer grain. A sub-precinct boundary is identified in **Figure 5** and **Appendix B**.

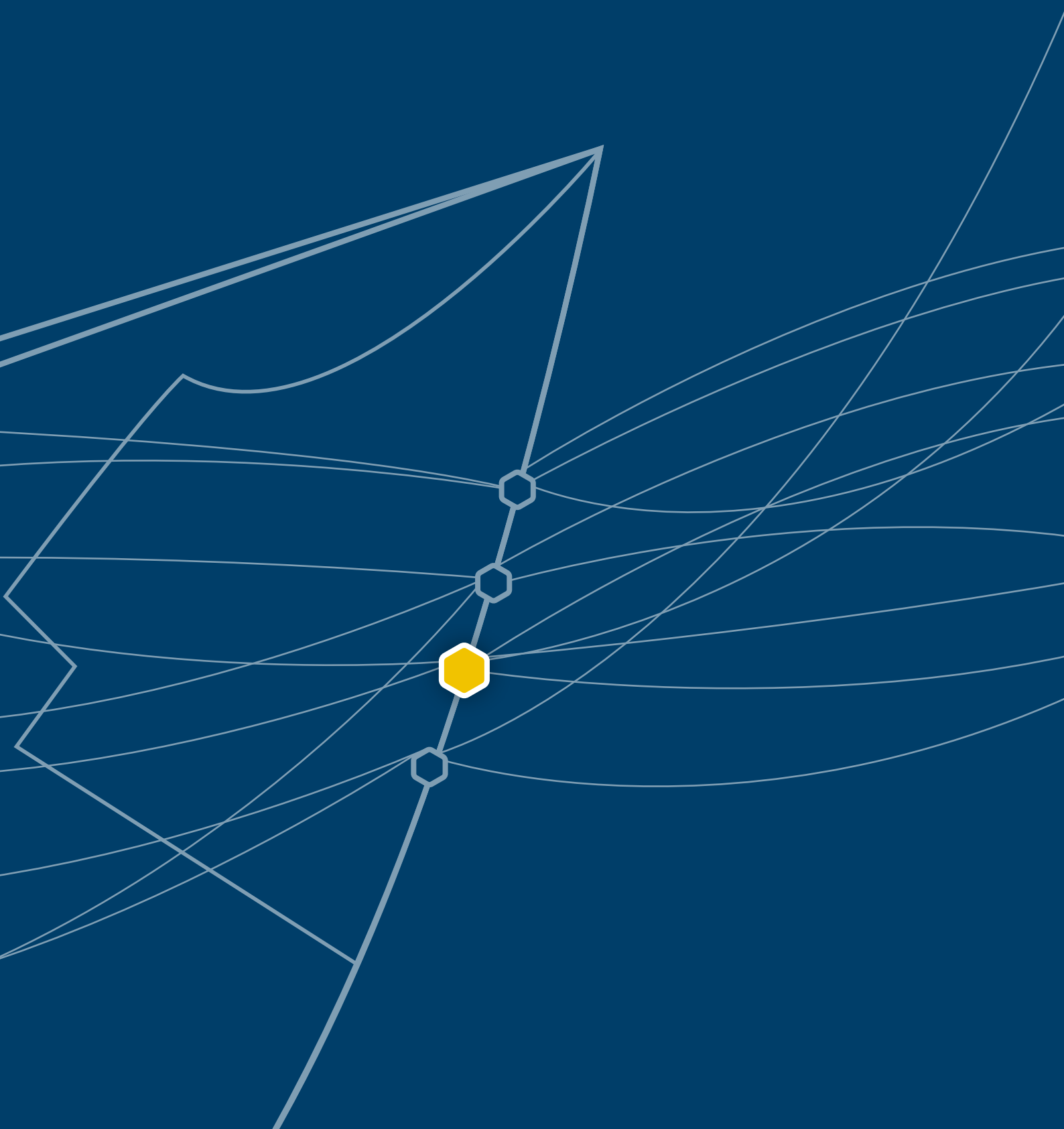
This sub-precinct is a wildlife corridor located at Dudgeon Point within the Port, Industry & Commerce Precinct of the Port of Hay Point and applies in addition to the relevant precinct and the matters that an assessment manager must have regard to in assessing development under the port overlay. A sub-precinct must also be considered in plan-making.



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Section 4

Environmental Management Framework



4. Environmental Management Framework

The Ports Act establishes a legislative requirement to have an EMF for a priority port. The EMF outlined in the master plan includes EMF objectives and PMMs to manage impacts from development on environmental values.

The EMF objectives and PMMs are given effect through the provisions in **Section 5**.

4.1 Priority management measures

Three PMMs have been identified for the priority Port of Hay Point/Mackay.

Table 2 — Priority management measure for the priority Port of Hay Point/Mackay

Priority management measure 1

Port interface management – Port of Hay Point

Manage development involving sensitive land uses and port operations to minimise potential light, noise, odour, dust and visual impacts.

Responsibility: NQBP and MRC

Master planned area precinct
Interface
Marine services and recreation
Port, industry and commerce

Priority management measure 2

North Harbour Beach – Port of Mackay

Manage development and operations on port land adjacent to North Harbour Beach to minimise impacts on nesting turtles and vegetation adjacent to the beach. Enable community access to the beach for recreational purposes.

Responsibility: NQBP

Master planned area precinct
Environmental management
Marine services and recreation
Port, industry and commerce

Table 2 – Priority management measure for the priority Port of Hay Point/Mackay

Priority management measure 3

Environmental assessment of western port lands – Port of Mackay

Undertake a detailed environmental assessment of port lands west of Slade Point Road in the Port of Mackay to inform appropriate management of the area. The assessment report is to be provided to TMR on completion to determine the implications for future master planning.

Responsibility: NQBP

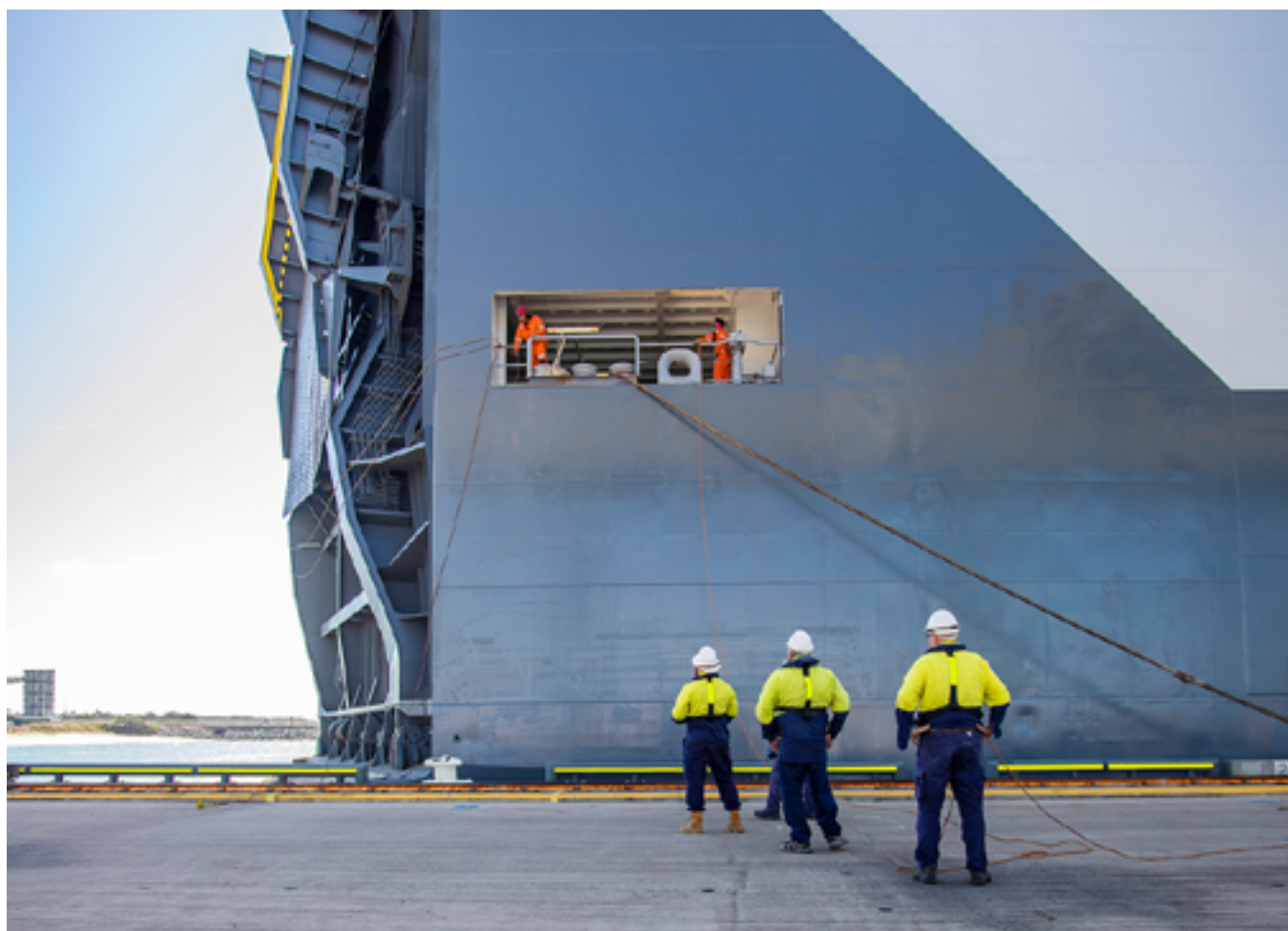
Master planned area precinct

Environmental management

Port, industry and commerce

4.2 Environmental Management Framework objectives

The EMF objectives for each precinct provides for the management of potential impacts from development on environmental values within the master planned area (**Appendix C**).



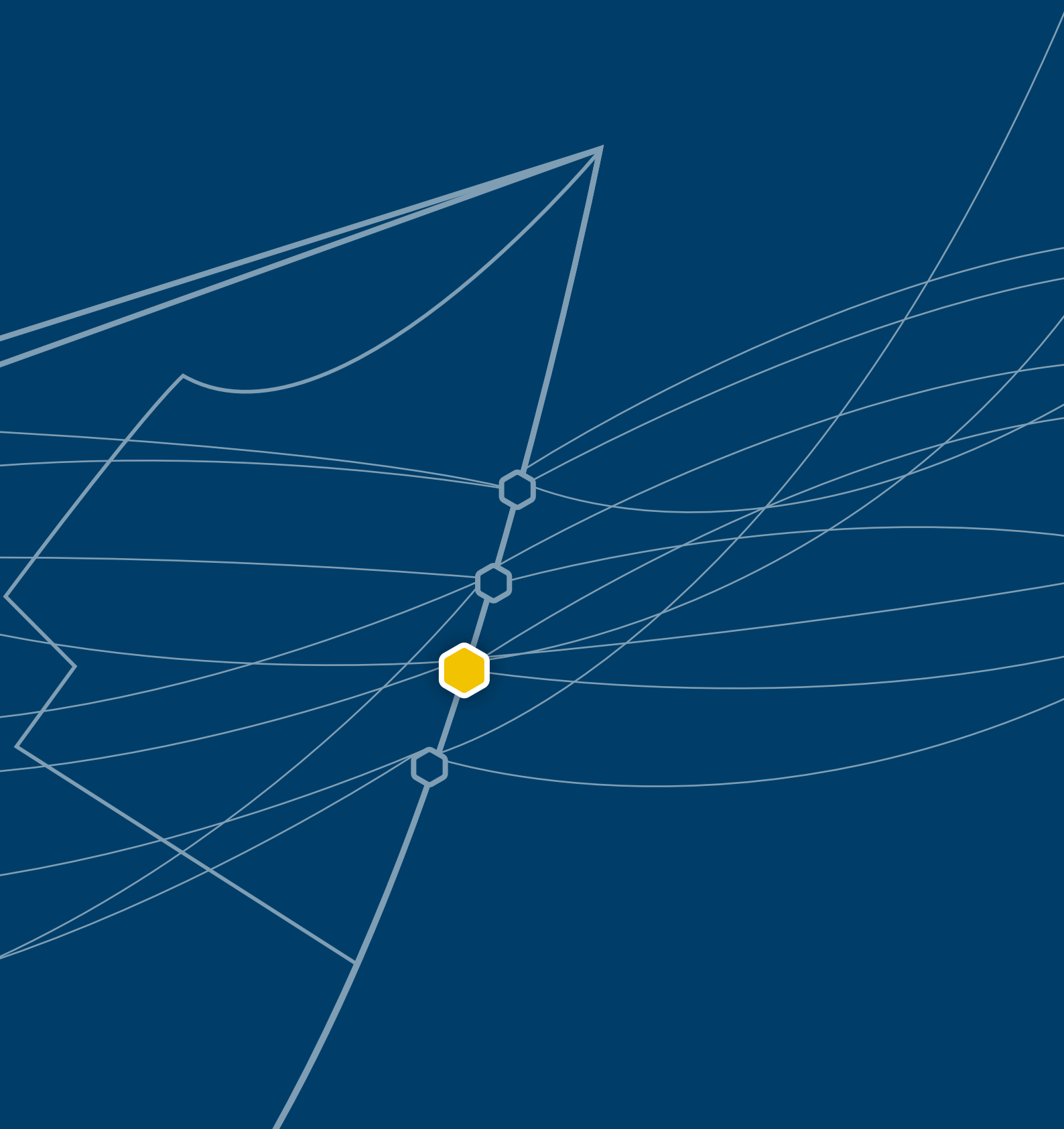
A Roll-on Roll-off ship alongside at the Port of Mackay. Source: NQBP



Half Tide Tug Harbour. Source: NQBP

Section 5

Plan-making



5. Plan-making

5.1 Purpose

The purpose of this section is to prescribe the requirements or considerations for either making or amending the following instruments, in accordance with the following sections of the Ports Act:

- Section 21(2)(a)(i) for the MRC Planning Scheme or other local planning instruments
- Section 21(2)(b) for the Port of Hay Point Land Use Plan and the Port of Mackay Land Use Plan.

This section also identifies how port overlay requirements may be integrated into the new or amended instruments.

5.2 Mackay Regional Council

When making or amending the MRC Planning Scheme or other local planning instruments under the Planning Act, MRC must consider the:

- strategic vision in **Section 3.1**
- objectives and desired outcomes for the master planned area (**Appendix B**)
- the PMMs identified in **Section 4.1**
- purpose, outcomes and EMF objectives of the precincts and sub-precinct in the master plan (**Appendix C**)
- potential impacts from development on environmental values identified in the master plan (**Appendix D**)
- local attributes of the OUV of the GBRWHA identified in the master plan (**Appendix E**).

These plan-making requirements provide further matters to be considered in addition to the requirements under the *State Planning Policy*. The state interest policies for strategic ports continue to apply within and surrounding the master planned area when making or amending the MRC Planning Scheme or other local planning instruments under the Planning Act.



5.3 Port of Hay Point Land Use Plan

When making or amending a land use plan under the Transport Infrastructure Act, NQBP must consider the:

- strategic vision in **Section 3.1**
- objectives and desired outcomes for the master planned area (**Appendix B**)
- PMM for the Port of Hay Point identified in **Section 4.1**
- purpose, outcomes and EMF objectives of the precincts and sub-precinct identified in the master plan (**Appendix C**)
- potential impacts from development on environmental values identified in the master plan (**Appendix D**)
- local attributes of the OUV of the GBRWHA identified in the master plan (**Appendix E**).

5.4 Port of Mackay Land Use Plan

When making or amending a land use plan under the Transport Infrastructure Act, NQBP must consider the:

- strategic vision in **Section 3.1**
- objectives and desired outcomes for the master planned area (**Appendix B**)
- two PMMs identified for the Port of Mackay in **Section 4.1**
- purpose, outcomes and EMF objectives of the precincts identified in the master plan (**Appendix C**)
- potential impacts from development on environmental values identified in the master plan (**Appendix D**)
- local attributes of the OUV of the GBRWHA identified in the master plan (**Appendix E**).



5.5 Implementing master plan outcomes

The plan-making process provides the opportunity to plan at a local scale. In considering the port overlay in plan making, entities preparing instruments may give weight to the strategic vision, objectives and desired outcomes of the master plan to balance economic, environmental and community outcomes to achieve the intent of the master plan.

The inclusion of land within a precinct does not imply all land can be used for the intent envisaged by the precinct. For example, land may be unsuitable for development because of environmental constraints such as vegetation, marine plants, or water quality and alternative outcomes may be required to deliver the intent of the master plan effectively.

If the regulatory extent of an instrument is amended, the port overlay requirements relevant to the change must be considered.

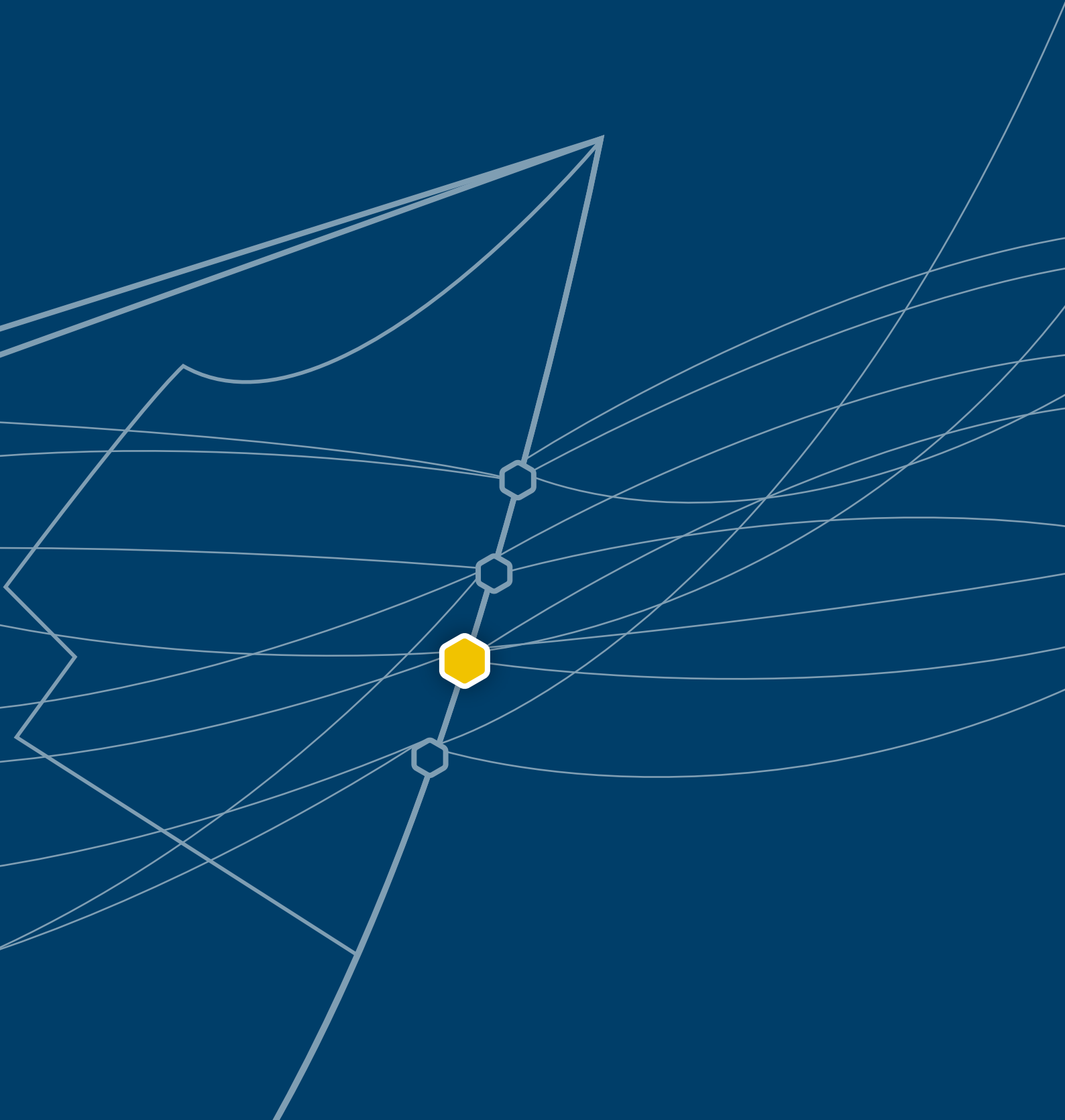
If an instrument identified in **Section 5** is consistent with and adequately integrates the port overlay, a statement (integration statement) may be included in the instrument that states:

- the name and date of the port overlay that has been adequately integrated in the instrument
- that all or part of the port overlay has been adequately integrated in the instrument
- if the port overlay has only been integrated in part, a description of the parts of the port overlay that have been adequately integrated in the instrument.



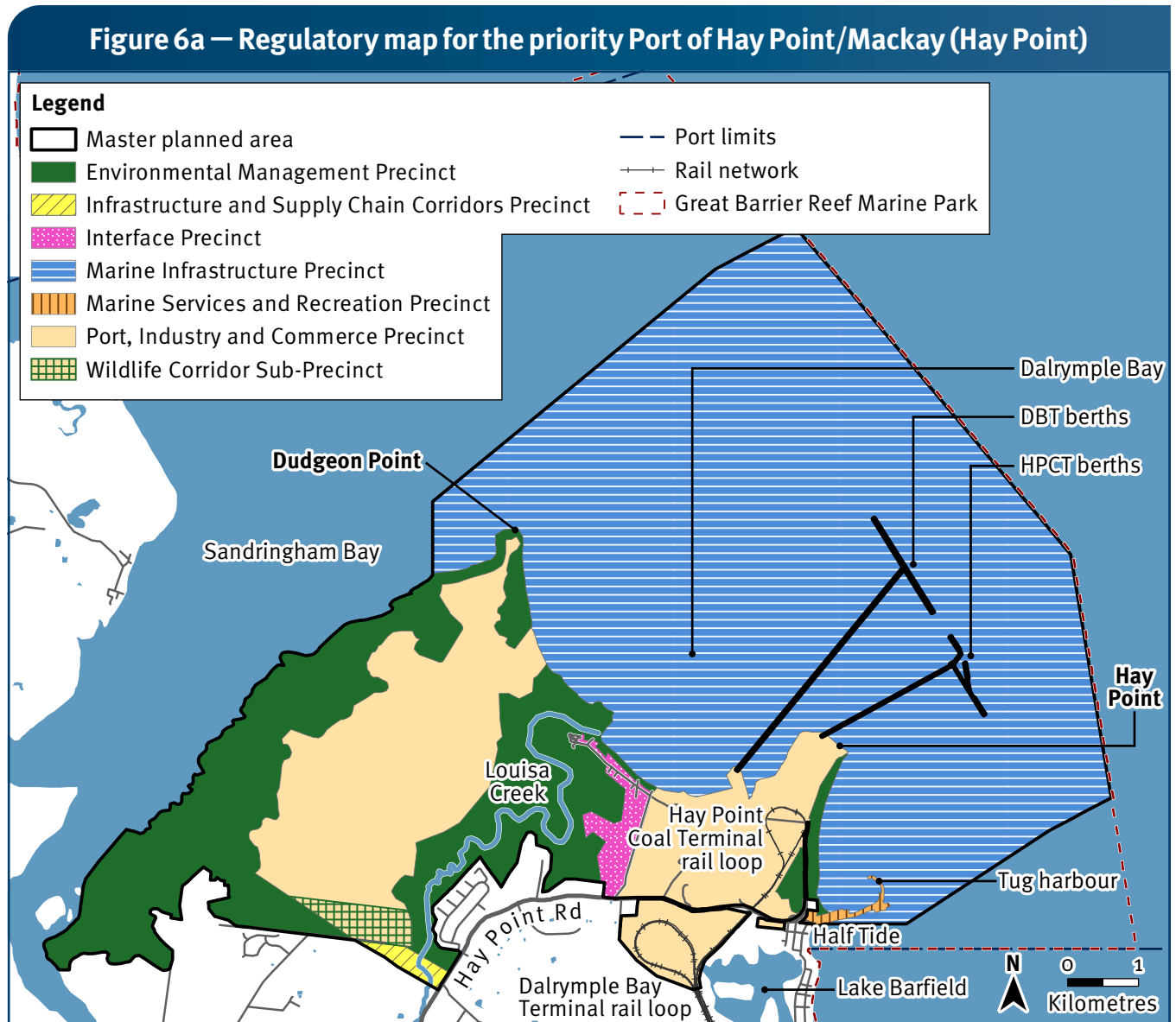
Ship loading at the Port of Mackay – Wharf 5. Source: NQBP

Appendices



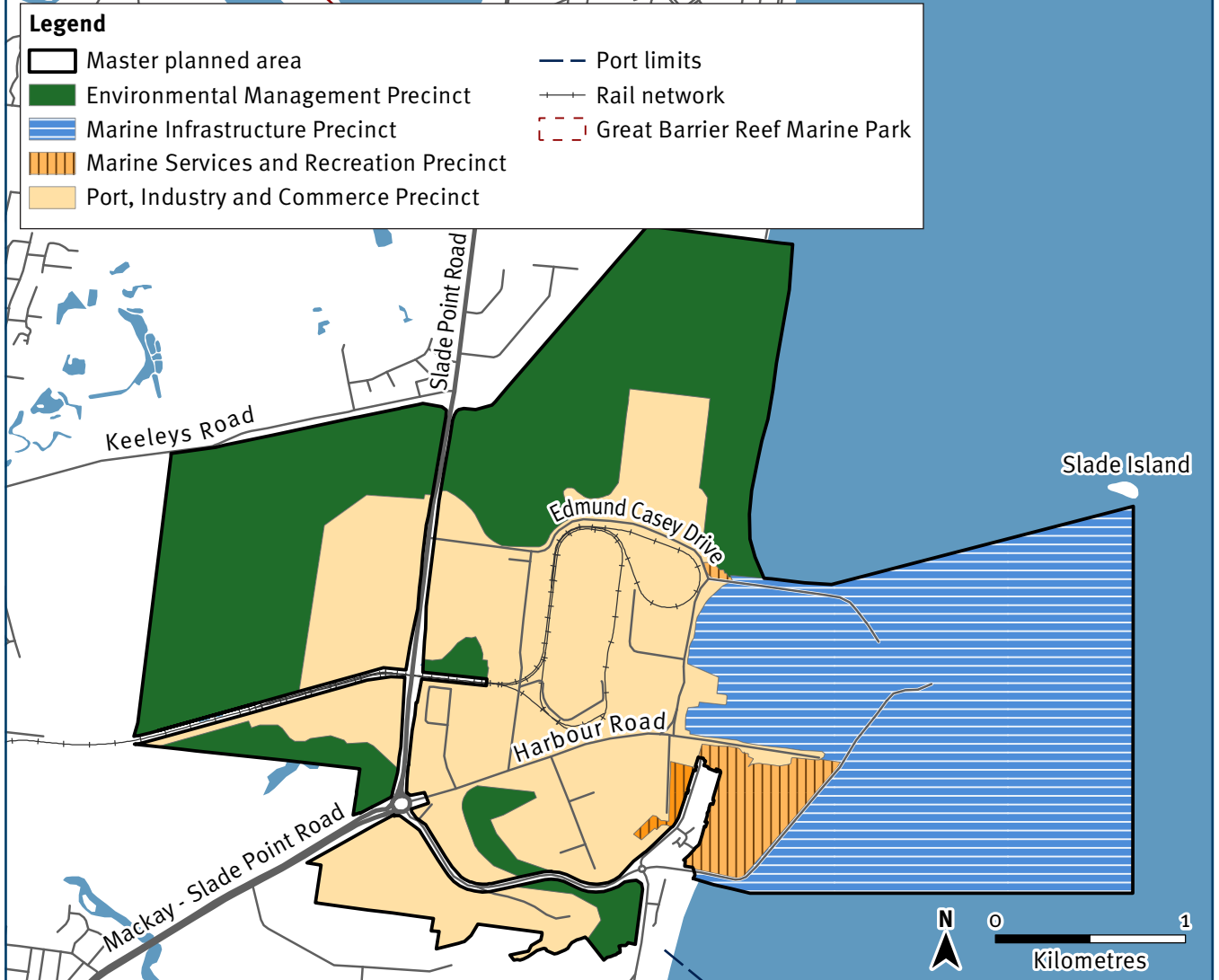
Appendix A – Mapping

Regulatory map for the priority Port of Hay Point/Mackay



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Figure 6b — Regulatory map for the priority Port of Hay Point/Mackay (Mackay)



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Appendix B – Objectives and desired outcomes of the master planned area

Objectives

The objectives for the master planned area identify how the strategic vision will be achieved and align with state interests. Objectives may align with more than one state interest.

State interest: Management of port-related development

Objectives
Sustainable development – enable ongoing sustainable trade growth through the priority Port of Hay Point/Mackay
Efficient land use – use, adapt and develop land and marine infrastructure efficiently to minimise impacts on surrounding areas
Port optimisation – maintain and enhance the effective and efficient operation of the port

State interest: Economic

Objectives
Economic prosperity – facilitate economic growth, supporting prosperous and resilient regional communities
Sustainable trade – ensure the priority port is positioned to support emerging industry and trade diversification

State interest: Environment

Objectives
Protecting the GBRWHA – port-related development contributes to the protection of the OUV of the GBRWHA
Environmental values – protect and manage ecological processes and systems. Apply the hierarchy -avoid, minimise, mitigate, offset – to impacts from development on environmental values within and surrounding the master planned area

State interest: Infrastructure

Objectives
Supply chain efficiency – maximise the effective operation of supply chain infrastructure and the transport network servicing the port
Efficient logistics – improve freight efficiency and support the operation of supply chain infrastructure
Industrial opportunities – promote port, freight and logistics infrastructure to support existing trade and emerging industries

State interest: Community

Objectives

Safety and security – provide for the safety and security of people, shipping and property

Community access – provide for recreational use of waterways and public open space

Connection to country – recognise the ongoing cultural and spiritual connection the Yuwibara people have with Land and Sea Country and advance knowledge, culture and tradition¹

1. The master plan supports working with Traditional Owners to advance Aboriginal and Torres Strait Islander Interests in land use planning to value, protect and promote Aboriginal and Torres Strait Islander knowledge, culture and tradition.

Desired outcomes

The desired outcomes for the master planned area will contribute to achieving the strategic vision. Outcomes may align with more than one state interest.

State interest: Management of port-related development

Desired outcomes

Port optimisation – land and marine areas are optimised for port operations and associated industries

Capital dredging – capital dredging is undertaken, where necessary, to support the ongoing operation and development of the priority Port of Hay Point/Mackay

Safe navigation – safe and efficient access for all vessels is provided

Maintenance dredging – maintenance dredging is undertaken to ensure safe and efficient navigation of waterways in accordance with the relevant legislative requirements

Built environment – encroachment from incompatible uses and activities is avoided to safeguard port operations and development

State interest: Economic

Desired outcomes

Trade gateway – diverse regional industries are connected with global markets by the priority Port of Hay Point/Mackay

Regional prosperity – economic benefit and employment opportunities are provided to regional communities

Extractive resources – the strategic value of extractive resources and other minerals to national, state and regional economies is recognised

Emerging industry – the establishment and growth of emerging industries that support the strategic vision is enabled

State interest: Environment

Desired outcomes

Beneficial re-use – material generated from capital dredging is beneficially reused

Sustainable port development – biodiversity, environmental values and ecological processes are protected, including values that contribute to the OUV of the GBRWHA

Leading environmental practice – existing federal and state legislation, planning processes and policies are addressed to achieve leading practice in a Great Barrier Reef context

State interest: Infrastructure

Desired outcomes

Supply chain infrastructure – supply chain infrastructure is protected including connectivity between land and marine areas

Responsive infrastructure – port and supply chain infrastructure are developed and managed to accommodate changing technology, market demands and shared use

Optimised infrastructure – the capacity of port and supply chain infrastructure is optimised to encourage efficient use of land, including optimised land use planning and allocation supporting common user infrastructure outcomes

State interest: Community

Desired outcomes

Sensitive uses – adverse impacts from port-related development on sensitive uses are minimised

Health and safety – industrial activities including hazardous chemical facilities are designed, located and managed to minimise risks to human health and safety and the built environment

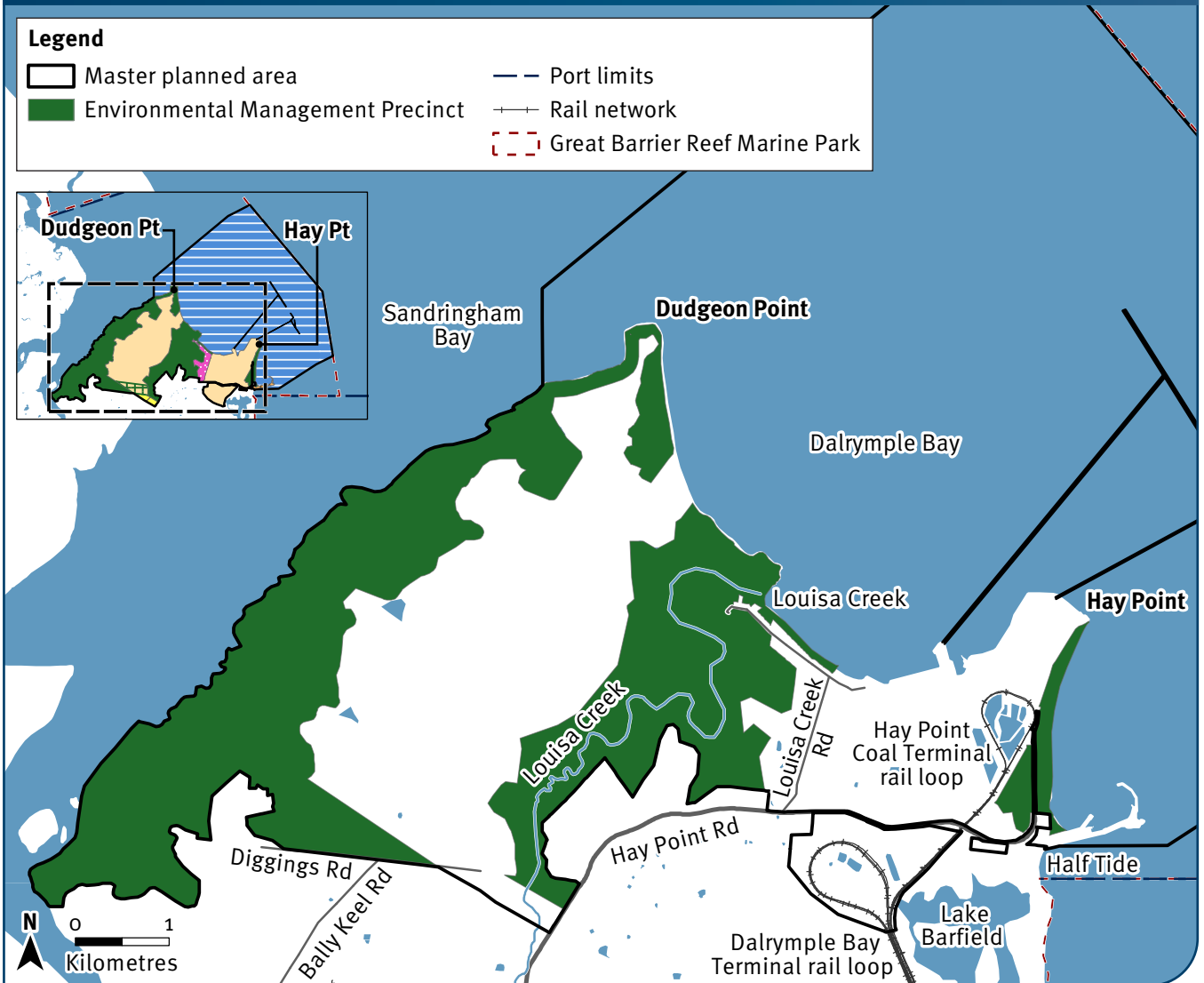
Waterfront access – public access to the waterfront is provided, having regard to port operational needs, safety and security

Cultural significance – development and activities are managed to afford protection to cultural heritage and connections with Land and Sea Country

Appendix C – Precincts

Environmental Management Precinct

Figure 7a – Hay Point Environmental Management Precinct



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Figure 7b — Mackay Environmental Management Precinct



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Purpose

The purpose of the Environmental Management Precinct is to preserve areas of environmental and cultural significance.

Description

The precinct comprises areas of environmental or cultural significance to be protected from potential adverse impacts. These attributes contribute to the local expression of the OUV of the GBRWHA and areas of cultural significance to the Yuwibara people. The environmentally significant areas include habitat for endangered or vulnerable species such as migratory and shore birds, wetlands, coastal dunes and marine plants.

The precinct may also include areas containing other MNES and MSES, such as regulated vegetation or essential habitat.

Outcomes

- The health and resilience of biodiversity is maintained or enhanced.
- Cultural values, ecological processes and habitat connectivity are protected.
- Potential adverse impacts on marine and intertidal areas, especially light and water quality impacts, are minimised.
- Essential infrastructure to service adjoining industry (such as pipelines, telecommunications, electricity network infrastructure and service roads) may only be located in this precinct if other Environmental Management Precinct outcomes are achieved.
- Restoration of natural areas through weed and feral pest management, replanting of habitat, or beach replenishment is encouraged.
- Sensitive areas containing fish habitat, including waterways and marine plants below and adjacent to HAT, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.

EMF objectives

Development avoids, minimises and offsets potential impacts (direct, indirect and cumulative) on environmental values within and surrounding the precinct with particular regard to:

- marine and estuarine water quality and hydrological processes that support aquatic ecosystems
- marine plants
- coastal processes
- coral reefs including near-shore and mid-shelf reefs
- fish and declared fish habitat areas
- marine reptiles, marine mammals and migratory marine species
- terrestrial vegetation communities and regional ecosystems
- MSES regulated vegetation and essential habitat
- threatened ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)
- listed threatened and migratory species and associated habitat
- surface water and groundwater resources, including water quality that supports aquatic ecosystems and hydrological processes
- turtle nesting areas
- wetlands of high ecological significance.

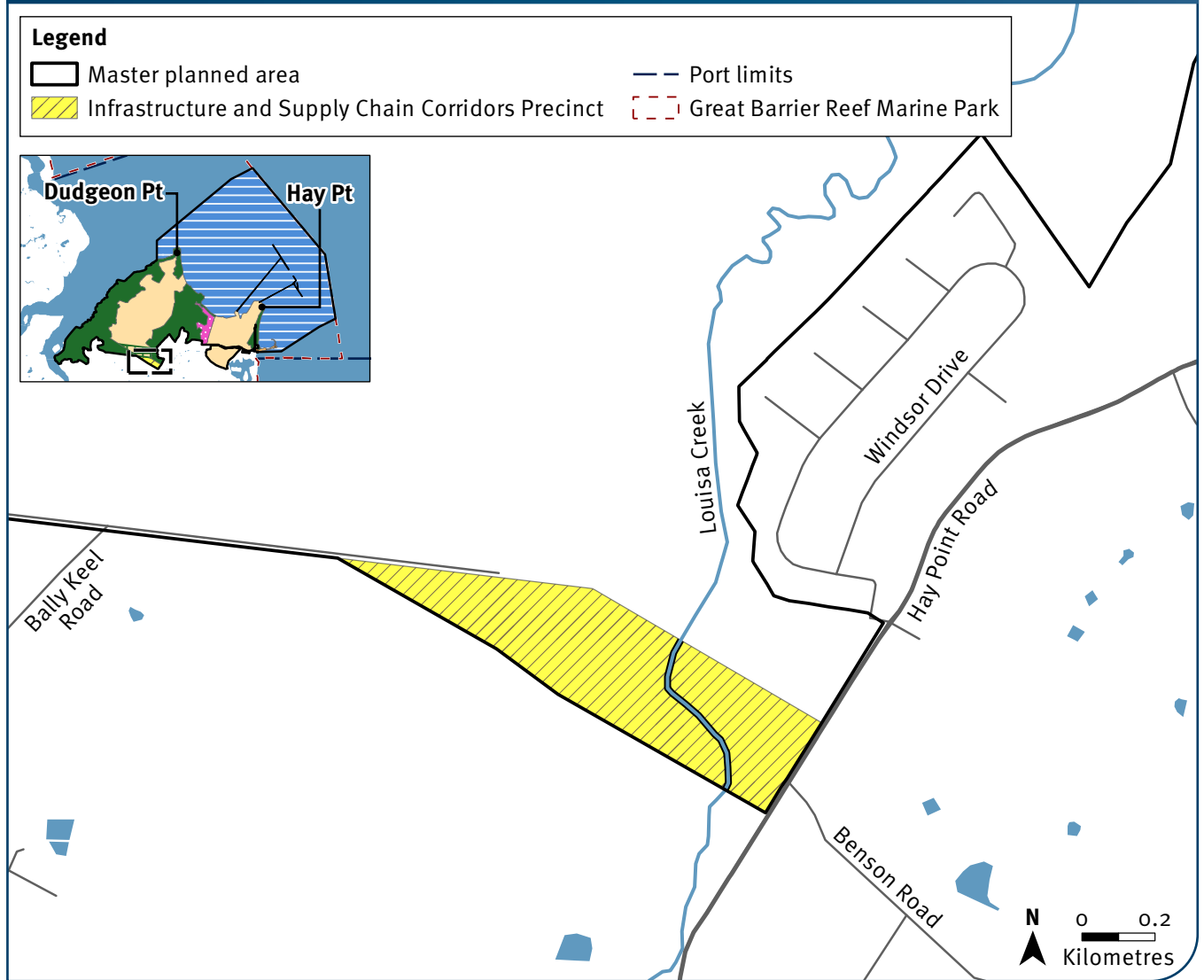
Development protects areas of cultural significance for the Yuwibara people to maintain the ongoing connection to Land and Sea Country.

Development should have particular regard to maintaining the ecological processes of the:

- endangered and of concern ecosystems associated with the Keeleys Road wetland
- Sandringham Bay Baker Creek wetland aggregation
- ecologically important wildlife corridor linking Mount Hector and Dudgeon Point to Louisa Creek and Sandringham Bay
- shorebird and migratory bird habitats along the north-western coastline of Dudgeon Point.

Infrastructure and Supply Chain Corridors Precinct

Figure 8 – Infrastructure and Supply Chain Corridors Precinct



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Purpose

The purpose of the Infrastructure and Supply Chain Corridors Precinct is to safeguard land for infrastructure that supports the sustainable development of the port.

Description

The precinct accommodates multi-user infrastructure corridors to accommodate transport, pipelines, telecommunications, powerlines, conveyors and other required infrastructure. The precinct facilitates the development and efficient operation of the port and enables new industrial and trade development opportunities.

Outcomes

- Corridors are safeguarded to support the safe and efficient operation of the port and port related industrial uses.
- The safe and efficient operation and management of supply chain infrastructure is maintained or enhanced.
- Environmental and cultural values are protected from adverse impacts of development.
- Multi-user infrastructure is facilitated and could enable the maximum number of complementary uses, where practical.
- Sensitive areas containing fish habitat, including waterways and marine plants below and adjacent to HAT, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.

EMF objectives

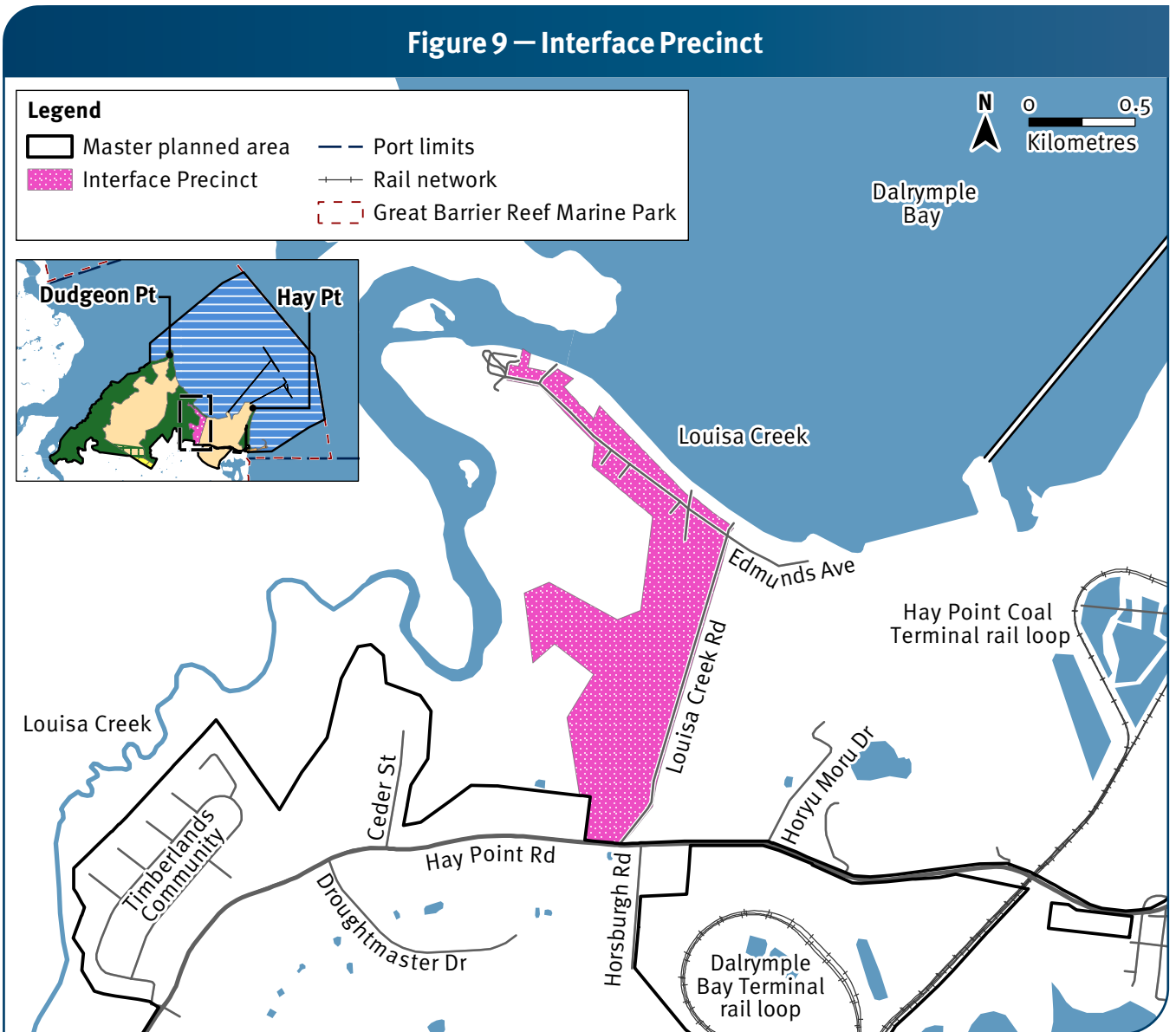
Development avoids, minimises and offsets potential impacts (direct, indirect, and cumulative) on environmental values within and surrounding the precinct with particular regard to:

- terrestrial vegetation communities and regional ecosystems
- surface water and groundwater resources, including water quality that supports aquatic ecosystems and hydrological processes
- social values associated with health, safety and amenity of surrounding communities.

Development protects areas of cultural significance for the Yuwibara people to maintain the ongoing connection to Land and Sea Country.

Interface Precinct

Figure 9 – Interface Precinct



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Purpose

The purpose of the Interface Precinct is to manage the interface between current or potential sensitive land uses, including dwellings, port operations and industry.

Description

This precinct mitigates the risk of adverse impacts on port operations arising from the development of sensitive land uses within this precinct.

Access is retained to existing homes and safeguards residential amenity within the precinct from adverse impacts of the construction and operation of new port-related development.

Essential services can be located in this precinct subject to achieving the Outcomes.

Outcomes

- Development has a low environmental impact and minimises harm to residential amenity.
- Development does not restrict adjacent port activities including infrastructure corridors.
- Public access is maintained to community infrastructure or the waterfront, outside the security-regulated port boundaries.
- Essential infrastructure (such as power infrastructure, pipelines, dams and service roads) may be located in this precinct if the other Outcomes are achieved.
- Sensitive areas containing fish habitat, including waterways and marine plants below and adjacent to HAT, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.

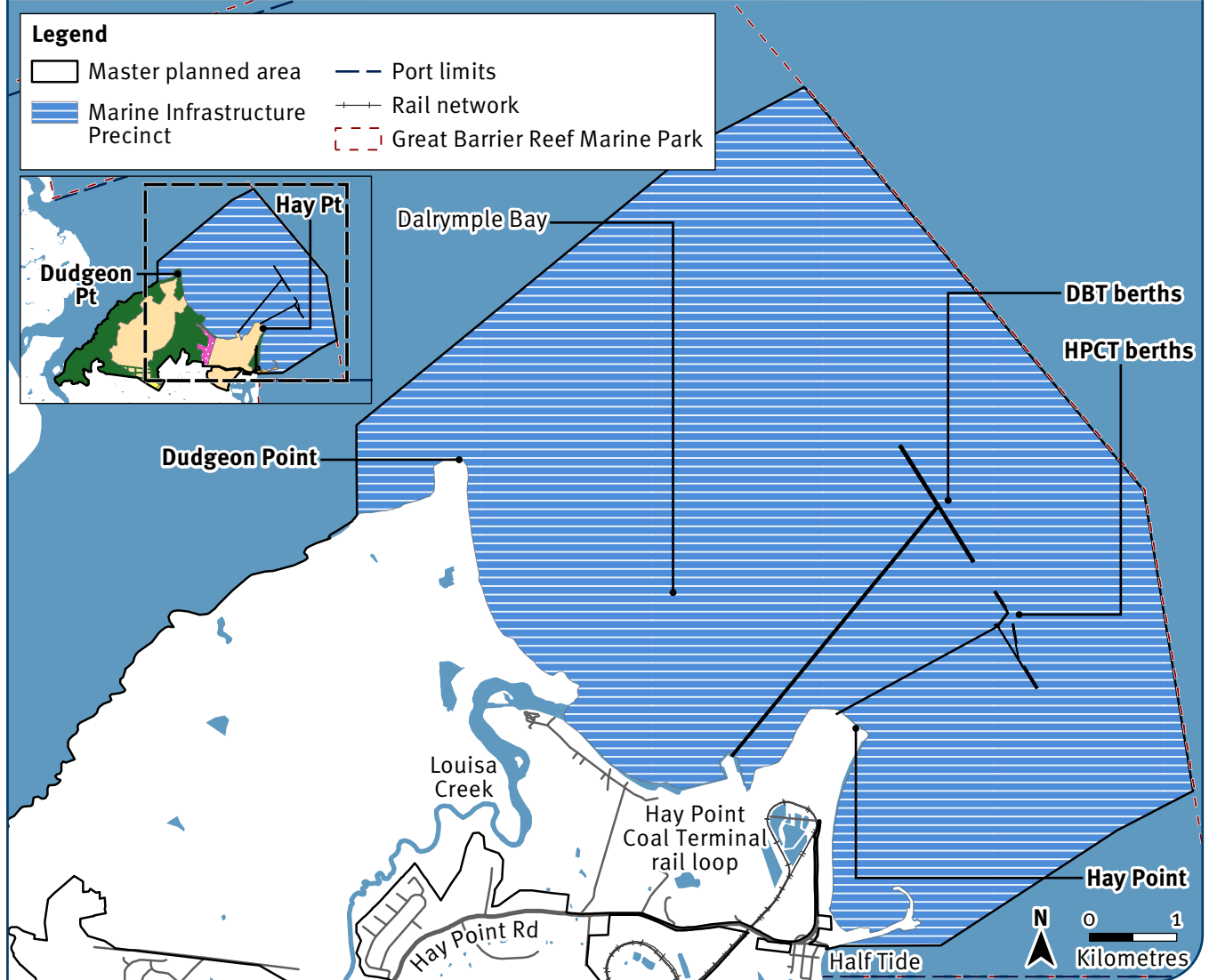
EMF objectives

Development avoids, minimises and offsets potential impacts (direct, indirect, and cumulative) on environmental values within and surrounding the precinct with particular regard to marine plants.

Development incorporates measures and other controls that minimise health, safety and amenity impacts from adjoining port and industrial land uses.

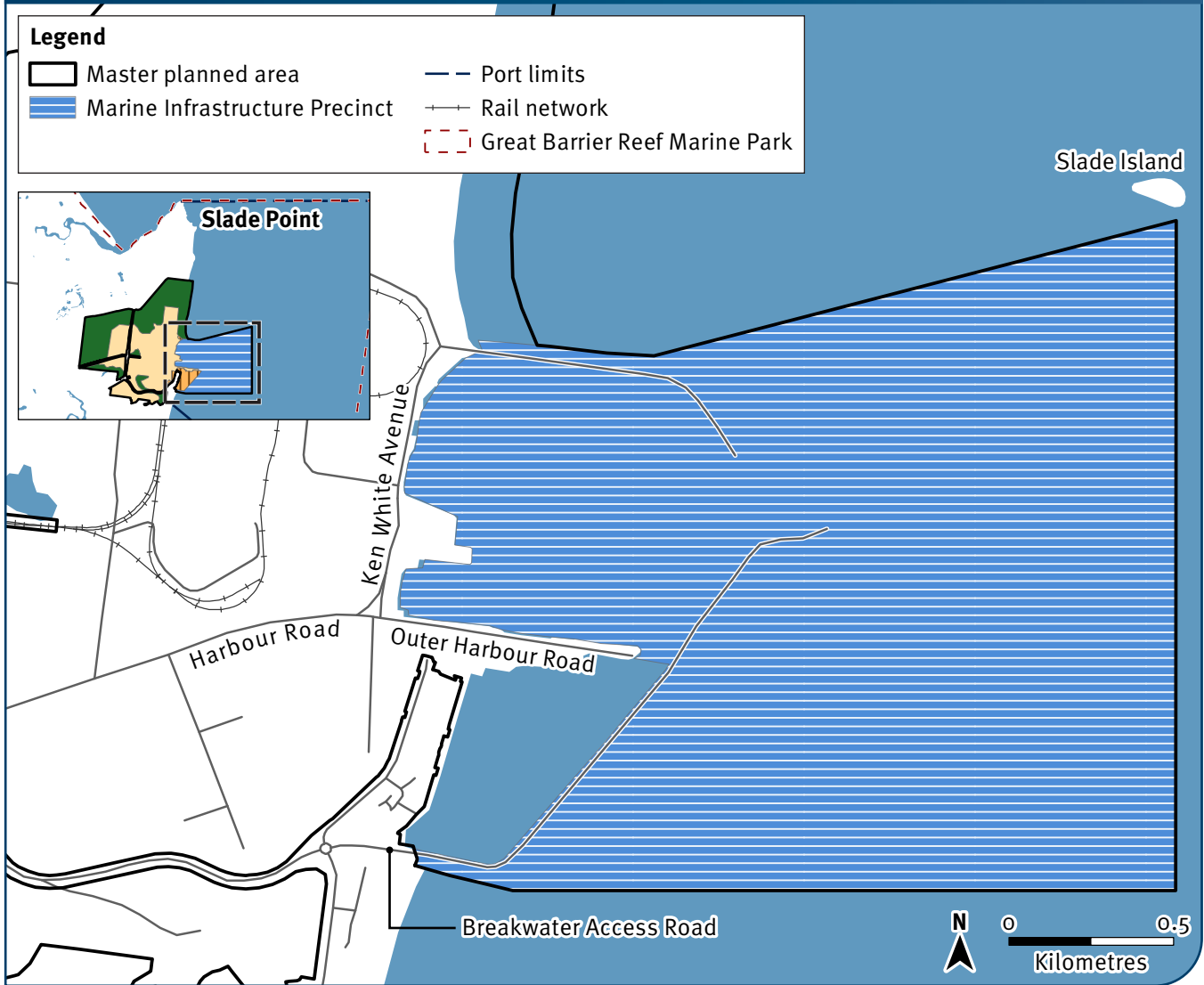
Marine Infrastructure Precinct

Figure 10a — Hay Point Marine Infrastructure Precinct



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Figure 10b — Mackay Marine Infrastructure Precinct



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Note: The boundary of the Marine Infrastructure Precinct provides for ongoing maintenance and the possible future increase in height of the Mackay Harbour seawalls for sea level rise, if required.

Purpose

The purpose of the Marine Infrastructure Precinct is to make provision for marine-based port infrastructure.

Description

This precinct accommodates existing and future port facilities including offshore jetty structures, breakwaters, swing basins, berth pockets and loading and unloading facilities. Development to establish new infrastructure and increase the capacity of the port may require capital dredging and/or reclamation within this precinct.

Outcomes

- Marine-based infrastructure is designed and operated to optimise its effectiveness and efficiency, including efficient shipping and berths infrastructure.
- Adverse impacts on marine life, especially light and water quality impacts, are minimised.
- The safe navigation and operation of port waterways are maintained or enhanced by capital or maintenance dredging (and associated works).
- Material from capital dredging must only be placed within the precinct if beneficially reused.
- Avoid or minimise the impacts from marine infrastructure of artificial light on any adjacent turtle nesting beaches.
- Sensitive areas containing fish habitat, including waterways and marine plants below and adjacent to HAT, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.

EMF objectives

Development avoids, minimises and offsets potential impacts (direct, indirect, and cumulative) on environmental values within and surrounding the precinct with particular regard to:

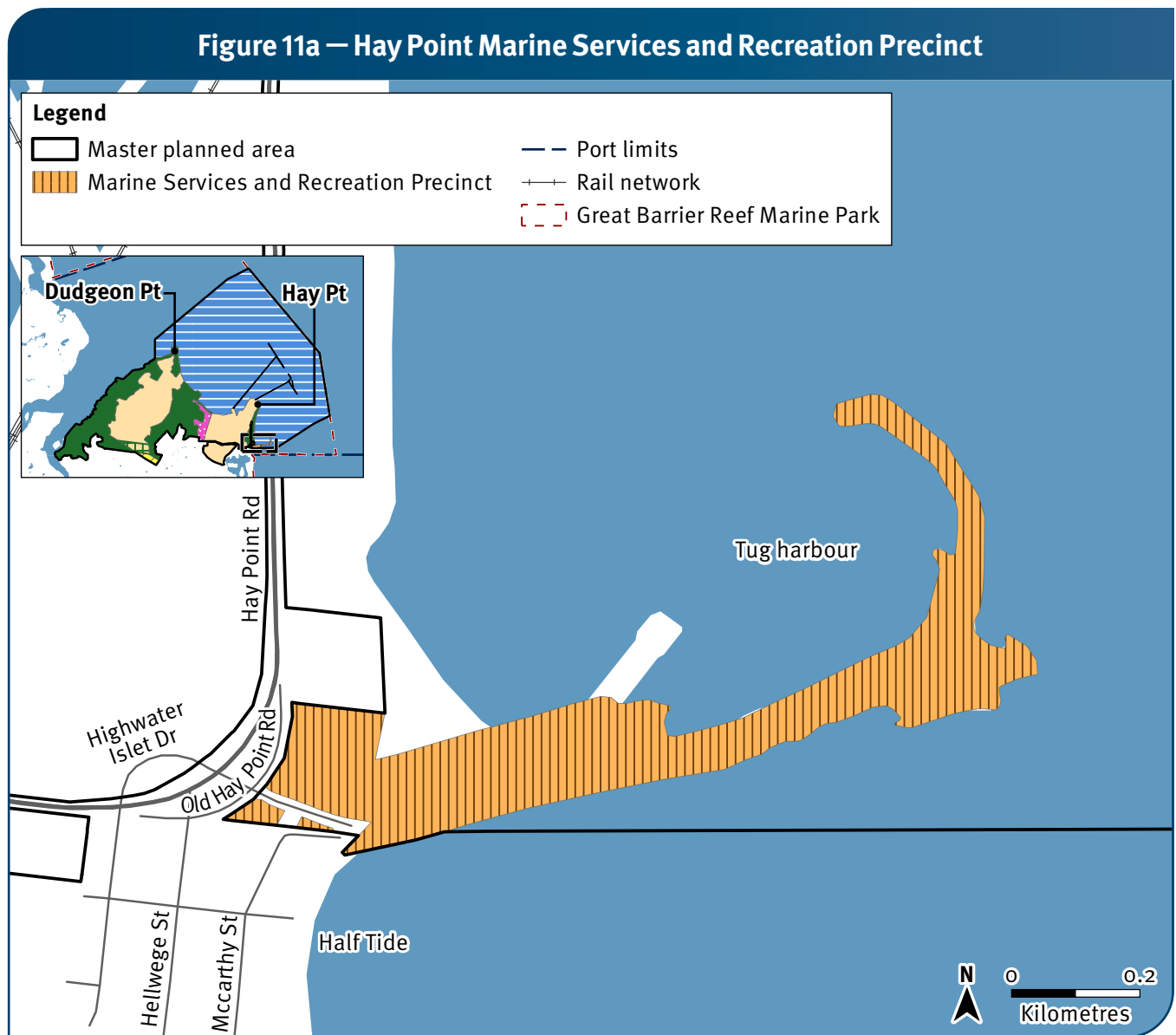
- estuarine water quality and hydrological processes that support aquatic ecosystems
- marine plants
- coastal processes
- coral reefs including near-shore and mid-shelf reefs
- marine reptiles, marine mammals and migratory marine species
- turtle nesting areas.

Development protects areas of cultural significance for the Yuwibara people to maintain the ongoing connection to Land and Sea Country is maintained.

Marine infrastructure is established to balance maritime access, industrial activities and adverse impacts on the local expression of the OUV of the GBRWHA and other environmental values.

Development increases the understanding of the presence and contribution of attributes associated with the local expression of the OUV of the GBRWHA through data and information collection.

Marine Services and Recreation Precinct



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Figure 11b — Mackay Marine Services and Recreation Precinct



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Purpose

The purpose of the Marine Services and Recreation Precinct is to provide for marine services for both ports and to accommodate recreational uses outside any restricted areas of the ports.

Description

The precinct will continue to support marine services including: administration and construction laydown; facilitate recreational boating in the Half Tide Tug harbour to operate as a recreational hub for the Mackay Marina and Mulherin Park; and provide community access to the car park at North Harbour Beach.

Outcomes

- Development accommodates a range of marine-related and compatible uses including marine industries, public boat ramps and recreational facilities.
- Access to the waterfront and harbour is maintained where it does not compromise public safety or the security of port operations.
- Potential impacts on sensitive land uses are minimised.
- Sensitive areas containing fish habitat, including waterways and marine plants below and adjacent to HAT, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.

EMF objectives

Development avoids, minimises and offsets potential impacts (direct, indirect, and cumulative) on environmental values within and surrounding the precinct with particular regard to:

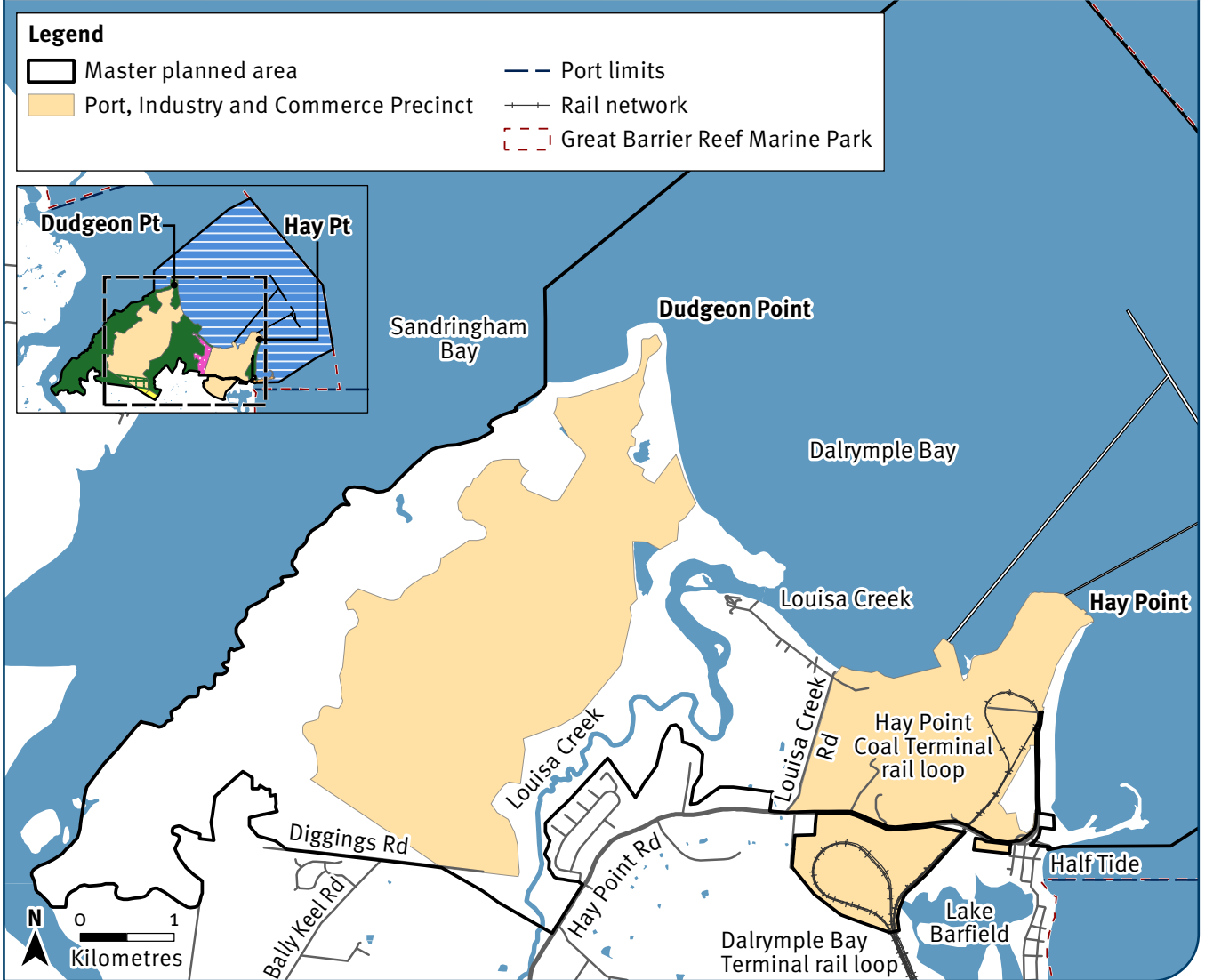
- marine plants
- marine water quality and hydrological processes that support aquatic ecosystems
- marine reptiles, marine mammals and migratory marine species.

Development within the precinct incorporates design measures and other controls that avoid and minimise noise, light, visual amenity, and air quality impacts from adjoining port and industrial land uses.

Development maintains safe access to the waterfront and harbour for commercial operations, residents, recreational users, and tourists.

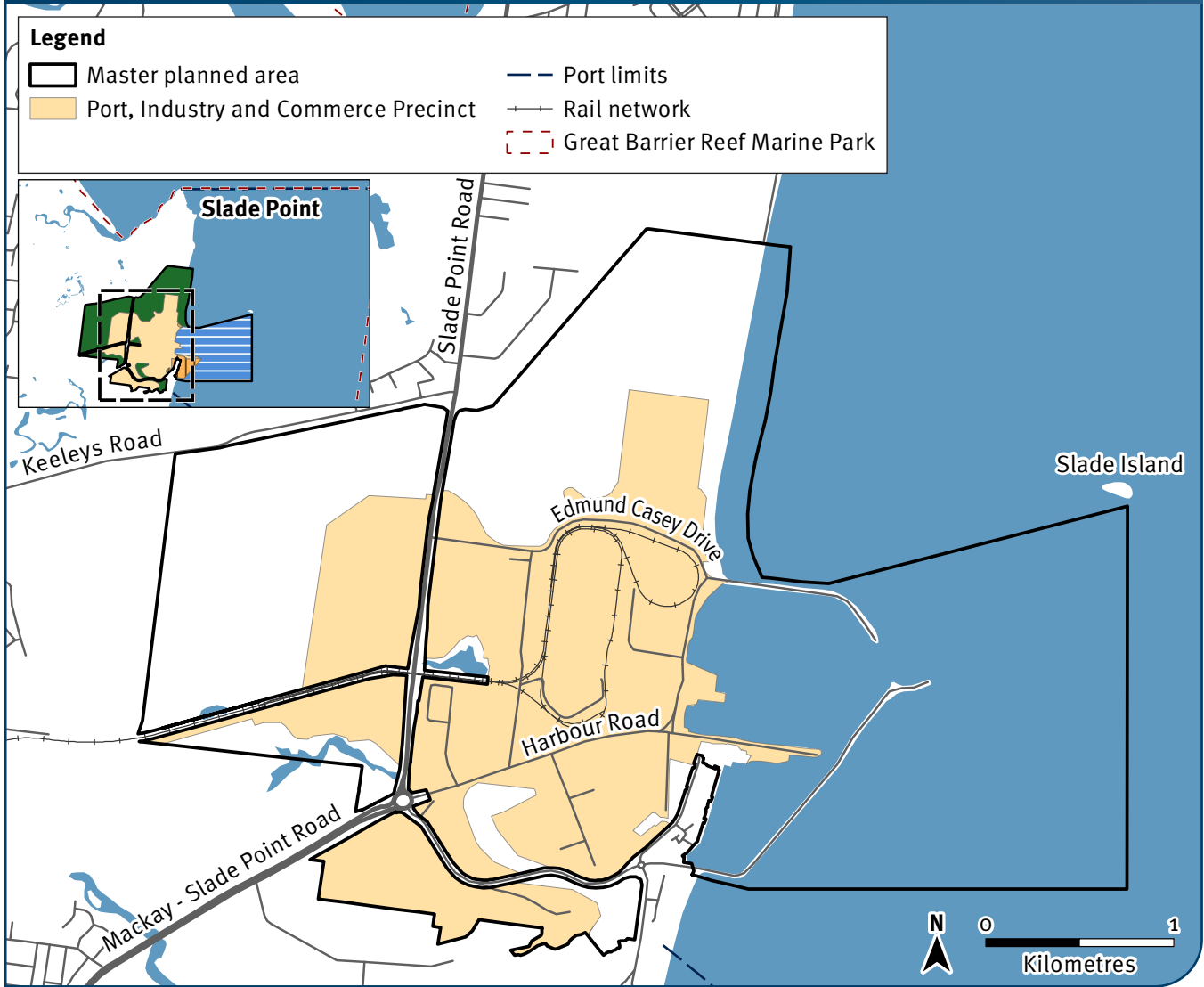
Port, Industry and Commerce Precinct

Figure 12a — Hay Point Port, Industry and Commerce Precinct



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Figure 12b — Mackay Port, Industry and Commerce Precinct



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Purpose

The purpose of the Port, Industry and Commerce Precinct is to accommodate port operations, commodity handling, industry, port-related commercial activities, supporting infrastructure and other related development.

Description

This precinct is the primary industrial and commercial hub supporting growth opportunities for industrial uses, port-related development and commercial activities.

It provides for large-scale port and industrial development, including terminal operations, commodity handling, emerging industries (including hydrogen), buffer zones, supporting infrastructure (including power, pipelines and water storage) and associated supply chain infrastructure and corridors.

This precinct benefits from its proximity to existing and proposed transport and other infrastructure.

Outcomes

- Ongoing access to and from cargo handling areas is maintained.
- Supply chain and infrastructure corridors are appropriately located, designed and constructed to support sustainable development and optimisation of the port.
- Similar industrial and commercial activities are co-located where this would achieve land, infrastructure and supply chain efficiencies.
- Adverse impacts on marine life, especially water quality, particularly on light and water quality, are minimised.
- Impacts from industry of artificial light and noise on any adjacent turtle nesting beaches are avoided or minimised. Use turtle friendly lighting where possible in any potential impact area.
- The safe and efficient operation of current and future planned road and rail networks is protected, and potential corridors preserved.
- Long-term efficient utilisation of the port and industrial land is prioritised to maximise trade opportunities.
- Appropriate buffer zones/separation distances around industrial installations are provided.
- Sensitive areas containing fish habitat, including waterways and marine plants below and adjacent to HAT, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.
- Impacts from industry involving hazardous chemical facilities, are managed in accordance with the SPP and/or the relevant SDAP regulatory codes.

EMF objectives

Development avoids, minimises and offsets impacts (direct, indirect and cumulative) on environmental values within and surrounding the precinct with regard to:

- coastal processes
- marine and estuarine water quality and hydrological processes that support aquatic ecosystems
- marine plants
- fish and declared fish habitat areas
- terrestrial vegetation communities and regional ecosystems
- threatened ecological communities
- listed threatened and migratory species and associated habitat
- surface water and groundwater resources, including water quality and hydrological processes that supports aquatic ecosystems
- turtle nesting areas
- wetlands
- social values associated with health, safety, and amenity of surrounding communities.

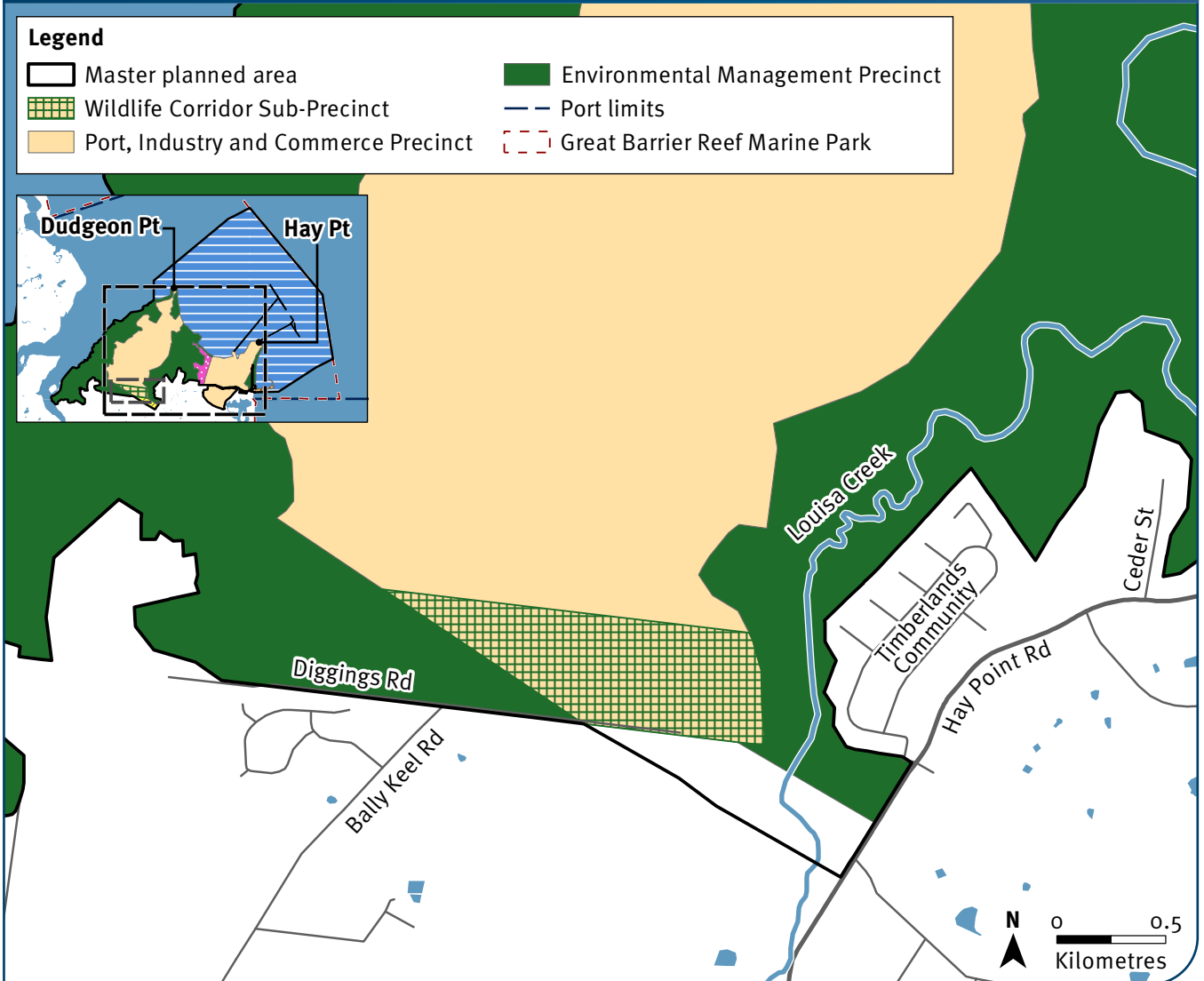
Development minimises impacts to connectivity between areas of the environmental management precinct to the greatest extent possible.

Development protects areas of cultural significance for the Yuwibara people to maintain the ongoing connection to Land and Sea Country.

Development increases the understanding of the presence and contribution of attributes associated with the local expression of the OUV of the GBRWHA.

Wildlife Corridor Sub-Precinct (Port, Industry and Commerce Precinct)

Figure 12c – Wildlife Corridor Sub-Precinct



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Purpose

Maintain the functioning and resilience of local communities of plants and animals by maintaining a wildlife corridor to provide connectivity to adjacent environmental areas.

Description

Development for linear infrastructure such as pipelines and conveyors; utilities and services; and transport (fauna-sensitive road and rail) is appropriate in this sub-precinct to facilitate the migration of fauna through the area.

Outcomes

- Habitat for native fauna within the defined wildlife corridor is preserved where possible.
- Any development within the wildlife corridor is designed to facilitate the movement of fauna between key areas.

EMF objectives

As for the Port, Industry & Commerce Precinct

Appendix D – Potential impacts on environmental values

Indigenous cultural heritage

Loss and/or degradation of Indigenous cultural heritage sites due to port-related development and increased access availability to these sites

Non-indigenous heritage

Loss and/or degradation of non-Indigenous heritage sites due to port-related development and increased access availability to these sites

Marine and estuarine water quality

Increased sedimentation and turbidity from maintenance and/or capital dredging

Elevated levels of sediment, nutrient and contaminants from stormwater runoff and from other construction and operational activities

Disturbance of acid sulfate soils during construction and operational activities

Coastal processes

Changes to coastal processes such as currents, waves and sediment transport due to development of port-related infrastructure

Marine plants

Loss and/or reduced quality of marine plant habitat, including mangroves, saltmarsh, macroalgae and seagrass communities due to direct clearing and/or removal and the introduction of pests and weed species

Changes to coastal processes, resulting in erosion and accretion of sediment leading to loss of marine plants and/or reduction of habitat quality

Impacts to marine plants and/or reduction of habitat quality due to stormwater runoff, air emissions and discharges

Coral reefs

Loss of coral reefs and coral habitat through development of port-related infrastructure

Changes to coastal processes, including altered sediment transport impacting coral reefs, habitat and/or reduction of habitat quality

Loss of coral reefs, habitat and/or reduction of habitat quality due to stormwater runoff, air emissions and discharges

Fisheries resources and declared fish habitat areas

Loss of fish and fish habitat and/or reduction of habitat quality through development of port-related infrastructure, including vessel strike or entrapment, altered flow paths and water availability

Changes to coastal processes and/or surface water resources, including altered sediment transport leading to loss of fish, fish habitat and/or reduction of habitat quality and connectivity

Stormwater runoff, emissions and discharges from port-related development causing a loss of fish habitat and/or decline in fish habitat quality

Deposits from offshore disposal of dredge material on marine organisms and marine plants

Elevated levels of noise, vibration and lighting from port-related development resulting in fish species and/or fish habitat loss

Marine reptiles, marine mammals and marine migratory species

Loss of individuals and habitat through development of port-related infrastructure, including mortality or injury due to vessel strike or entrapment

Changes to coastal processes, including altered sediment transport resulting in a loss of habitat and/or decline of habitat quality

Stormwater runoff, air, noise, vibration and light emissions and discharges from port-related development causing a loss of habitat and/or decline in habitat quality

Terrestrial vegetation communities and ecosystems

Loss of individuals and habitat through clearing of terrestrial vegetation communities and ecosystems

Stormwater runoff, air emissions and discharges resulting in a loss of habitat and/or decline of habitat quality

Modification to surface water and groundwater resources from construction and operational activities causing a loss of habitat and/or reduced habitat quality

Increased weeds and pests from port-related development causing a loss of habitat and/or reduced habitat quality

Listed threatened and migratory species

Loss of threatened and migratory species and their habitat due to clearing of terrestrial vegetation communities and ecosystems for port-related development

Stormwater runoff, air emissions and discharges from port-related development causing a decline in quality and/or loss of species

Modification to surface water and groundwater resources from construction and operational activities causing a loss of habitat and/or reduced habitat quality

Injury or mortality of listed threatened and migratory species due to port-related activities such as through vessel strike

Elevated levels of air, noise, vibration and lighting emissions from port-related development resulting in reduced habitat quality

Increased weeds and pests from port-related development causing a loss of habitat and/or reduced habitat quality

Surface water resources

Elevated levels of sediment, nutrient and contaminants from stormwater runoff and from other construction and operational activities

Disturbance of acid sulfate soils during construction and operational activities

Modification to surface water resources, including altered flow paths and water availability due to construction and operational activities such as earthworks causing a loss of habitat and/or reduced habitat quality

Disturbance of historic mining sites

Groundwater

Altered groundwater resource availability and quality along with surface water resource connectivity due to construction and operational activities

Wetlands

Clearing and/or loss of wetland habitat due to development of port-related infrastructure

Stormwater runoff, emissions and discharges causing a decline in quality and/or loss of wetland habitat from port-related development

Loss of wetland habitat and/or a decline in quality due to surface water and groundwater resources modification from operational and construction activities

Elevated levels of air, noise, vibration and light emissions impacting wetland habitat quality and migratory species

Increased weeds and pests causing a decline in quality and/or loss of wetland habitat due to port-related development

Social values associated with amenity of surrounding communities and sensitive land uses

Increased road traffic and associated road safety management issues due to construction and operational activities

Elevated levels of air, noise, vibration, light emissions and altered visual amenity of port land and surrounding areas due to construction and operational activities

Social values associated with industrial safety

Industrial incident from port-related development causing harm and/or health impacts to the workforce and the community

Appendix E – Local attributes of the Outstanding Universal Value of the Great Barrier Reef World Heritage Area

Category: Corals

Local attribute	vii*	viii*	ix*	x*
Coral reefs (400 species of corals in 60 genera)				Min
Coral reef ecosystem		Min		
Inshore fringing reefs, mid-shelf reefs, and exposed outer reefs		Min		
Hard and soft corals	Min			
Coral reefs, sand banks and coral cays			Min	
Coral spawning	Min			

* Relevant Outstanding Universal Value criteria and contribution classifications

Reefs present in the waters offshore include: Flat Top Island, Keswick Island and St Bees Island, Hay Reef, Victor Islet, Victor Island, Round Top Island and Dudgeon Point.

Fringing reefs are present at Victor Island and Round Top Island.

Inshore turbid coral reefs communities are present at Hay Reef, which is located between the existing jetties at the Hay Point terminal, Taroba Rocks, Slade Island/Slade Rock, Dangerous Reef and Downward patches. They are also present in shallow waters south of Dudgeon Point.

Common corals in the turbid marine environment include *Montipora*, *Acropora*, *Pocillopora* and *Turbinaria*, as well as a diverse range of soft corals, sea fans, ascidians and hydroids. These coral reef areas are important habitat for locally important fish and other marine species.

The nearest significant coral reef ecosystems to Hay Point are over 20 kilometres distance.

The inshore reefs of the region are relatively small and limited in extent in comparison to other inshore reefs. They have relatively low diversity and low cover.

They have persisted over time with fluctuations driven mainly by cyclonic disturbances. As the reefs are relatively isolated from other systems, they tend to be regenerative.

The size and density of inshore reefs are not the result of mass spawning events more commonly associated with mid shelf and outer reefs. Local spawning is important for the ongoing presence of the reefs, but it is not on a level of the mass phenomenon important for reef persistence across the wider World Heritage Area.

Category: Mangroves

Local attribute	vii*	viii*	ix*	x*
Diversity of mangroves				Mod

* Relevant Outstanding Universal Value criteria and contribution classifications

The Hay Point area has 22 hectares of mangroves within enclosed wetland areas. There are 21 species present in wetlands of national importance. Minor stands of mangroves can be found at Half Tide Beach and an extensive community at Louisa Creek. The most common species include Red mangrove (*Rhizophora stylosa*), Grey mangrove (*Avicennia marina*) and Yellow mangrove (*Ceriops australis*).

Local attribute	vii*	viii*	ix*	x*
Vast mangrove forests	Mod			

* Relevant Outstanding Universal Value criteria and contribution classifications

Important areas of mangroves include:

- The Sandringham Bay – Bakers Creek Aggregation, listed as a wetland of national importance due to its mangrove diversity
- Hay Point Peninsula
- Sarina Inlet – Ince Bay Aggregation (predominantly south of the study area)
- Slade Point and McCready's Creek
- Basset Basin, an estuary of the Pioneer River.

Category: Seagrass and macroalgae

Local attribute	vii*	viii*	ix*	x*
Beds of <i>Halimeda algae</i>			Min	

* Relevant Outstanding Universal Value criteria and contribution classifications

Macroalgae communities in this region are variable in terms of density and frequency of occurrence with species observed including *Sargassum*, *Udotea* and *Caulerpa*. In the area surrounding Hay Point Port, macroalgae density is low (<1-5%), while the seafloor offshore of both ports supports large areas of medium density algae (5-20%).

Local attribute	vii*	viii*	ix*	x*
Diversity of seagrass				Min

* Relevant Outstanding Universal Value criteria and contribution classifications

Meadows provide foraging habitat for species of turtles and dolphins and nursery habitat for a diversity of fish species. There are seagrass habitats off Hay Point and Mackay in shallow water and in mid-shelf deeper water, containing four species of seagrass:

- *Halpphila decipiens*
- *Halophila ovalis*
- *Halophila spinulosa*
- *Halodule uninervis*
- *Halophila tricostata* (Mackay only).

Deepwater seagrass meadows are also present at Hay Point but are low and medium densities.

Category: Marine turtles

Local attribute	vii*	viii*	ix*	x*
Marine turtles				Min
Green turtle breeding	Min			Min
Nesting turtles	Mod			
Marine turtle rookeries				Mod

* Relevant Outstanding Universal Value criteria and contribution classifications

Species of marine turtles present include:

- Green turtle
- Loggerhead turtle (occasional sightings)
- Leatherback turtle
- Hawksbill turtle
- Olive Ridley turtle
- Flatback turtles.

The inshore areas of the port support a population of resident Green turtles that forage on the algae covered reefs and deep-water seagrass.

Green turtles (*Chelonia mydas*) are the most frequently observed Marine turtle, with nesting recorded by Mackay Turtle watch on beaches in the Mackay region including Bucasia Beach, Blacks Beach, North Harbour Beach and Salonika Beach.

Low density Flatback turtle nesting has been observed within the Port on Hay Point Beach and Salonika Beach and at Dudgeon Point and Mt Hector Conservation Area between the months of November and April.

Flatback turtles (*Natator depressus*) are the dominant nesting species in this region and nesting sites occur on the mainland beaches between November and April. Holiday Bay north of Mackay is recognised as one of the most important Flatback turtle nesting beaches in the Mackay Region.

There are peripheral Flatback turtle rookeries at Hay Point Beach, Salonika Beach and Sarina Beach. Green turtles have been recorded at Bushy Islet (approximately 80 kilometres off the Mackay coast).

Category: Marine mammals

Local attribute	vii*	viii*	ix*	x*
Migrating whales	Mod			

* Relevant Outstanding Universal Value criteria and contribution classifications

Humpback whales migrate through the project area annually between June and October (peak in August). Females with calves have been observed within the Hay Point port limits.

Core aggregation and calving areas for migrating Humpback whales are located approximately 80 kilometres east of Mackay.

The waters off Mackay (approximately 100 kilometres from the coast) have been identified as important wintering areas for Humpback whales, particularly in the inner reef lagoon.

Local attribute	vii*	viii*	ix*	x*
Species of whales				Mod

* Relevant Outstanding Universal Value criteria and contribution classifications

Humpback whales (*Megaptera novaeangliae*) is the most prevalent in this area. The Sei whale (*Balaenoptera musculus*) and Fin whale (*Balaenoptera physalus*) are occasionally observed.

Local attribute	vii*	viii*	ix*	x*
Dugong				Min

* Relevant Outstanding Universal Value criteria and contribution classifications

There are low density seagrass meadows that dugongs may use for foraging while transiting between dugong protection areas north and south of the port.

Local attribute	vii*	viii*	ix*	x*
Species of dolphins				Mod

* Relevant Outstanding Universal Value criteria and contribution classifications

Several species of dolphins occur in the waters off Hay Point. The most prevalent species is the Australian Humpback dolphin (*Sousa sahalensis*) and others include the Spotted dolphin (*Stenella attenuate*), Indian Ocean Bottlenose dolphin (*Tursiops aduncus*), Australian Humpback dolphin (*Sousa sahalensis*) and potentially the Irrawaddy dolphin (*Orcaella brevirostris*).

The Australian Snubfin dolphin (*Orcaella heinsohni*) may also occur in the riverine and estuarine areas of the bays and lagoons.

Category: Landscapes and seascapes

Local attribute	vii*	viii*	ix*	x*
Green vegetated islands	Min			

* Relevant Outstanding Universal Value criteria and contribution classifications

Vegetated islands include Round Top Island and Flat Top Island (Yuwi Paree-Toolkoon National Park), Slade Island, Keswick Island, Victor Island and St Bees Island. These islands include varying degrees of vegetation, some with remnant areas.

Local attribute	vii*	viii*	ix*	x*
Continental islands		Min		
Vegetation of the cays and continental islands			Min	

* Relevant Outstanding Universal Value criteria and contribution classifications

Continental islands include Keswick Island, St Bees Island and Prudhoe Island.

Local attribute	vii*	viii*	ix*	x*
Unique and varied seascapes and landscapes		Min		
Significant diversity of reef and island morphologies that reflects ongoing geomorphic, oceanographic and environmental processes			Min	

* Relevant Outstanding Universal Value criteria and contribution classifications

There is a variety of seascapes and landscapes that are well represented across the GBRWHA including beaches, coastal dunes, river deltas, wetlands, mangroves, sand beaches, mudflats, open water, coastal islands and coral reefs.

Local attribute	vii*	viii*	ix*	x*
Superlative natural beauty	Mod			

* Relevant Outstanding Universal Value criteria and contribution classifications

Large aggregations of shorebirds, seabirds and migratory birds at Sandringham Bay, Dudgeon Point and other estuarine wetlands areas.

Ocean and island vistas.

Local attribute	vii*	viii*	ix*	x*
Human interaction with the natural environment illustrated between Aboriginal and Torres Strait Islanders and their Sea Country.	Sig			

* Relevant Outstanding Universal Value criteria and contribution classifications

Numerous shell deposits (middens) and fish traps, the application of story places and marine totems.

Category: Species diversity

Local attribute	vii*	viii*	ix*	x*
Over 4000 species of molluscs and over 1500 species of fish, plus a great diversity of sponges, anemones, marine worms, crustaceans			Min	

* Relevant Outstanding Universal Value criteria and contribution classifications

There are diverse marine and terrestrial habitats including coral reefs, mangroves, seagrass, macroalgae, wetlands, continental islands, intertidal areas and beaches. These support a range of invertebrate and macroinvertebrate species.

Local attribute	vii*	viii*	ix*	x*
Thousands of species of reef fish	Min			

* Relevant Outstanding Universal Value criteria and contribution classifications

The inshore and fringing reefs support reef fish communities. The reef fish communities in this region are comprised of typical inshore fishes including Wrasses, Damselfishes, Angelfishes, Butterflyfishes and Snapper.

Local attribute	vii*	viii*	ix*	x*
Diversity supporting marine and terrestrial species (global conservation significance)				Mod

* Relevant Outstanding Universal Value criteria and contribution classifications

Nationally important wetlands in the study area include the Sandringham bay – Bakers Creek Aggregation and the Sarina Inlet – Ince Bay Aggregation (predominantly south of the study area).

A total of 31 listed migratory wetland species are either known to inhabit or visit these wetlands, or have habitat or roosting sites suitable for their visitation within the project area.

There is the additional moderate presence of whales, dolphins and flatback turtle nesting.

State significant wetlands within the study area include the Keeleys Road wetlands to the east of the Port of Mackay. Locally significant wetlands include those at the mouth of the Pioneer River.

Local attribute	vii*	viii*	ix*	x*
Plant species and diversity and endemism (species being unique to a defined geographic location)				Min

* Relevant Outstanding Universal Value criteria and contribution classifications

One Threatened Ecological Community, the critically endangered Littoral Rainforest and Coastal Vine Thickets of eastern Australia is likely to be present within the study area. Listed flora species includes Bluegrass (*Dichanthium setosum*), Black ironbox (*Eucalyptus raveretiana*), an evergreen vine thicket (*Omphalea celata*), Lesser swamp orchid (*Phaius australis*), Holly-leaved graptophyllum (*Graptophyllum ilicifolium*).

Local attribute	vii*	viii*	ix*	x*
Important role of birds, such as the pied imperial pigeon, in processes such as seed dispersal and plant colonisation			Min	

* Relevant Outstanding Universal Value criteria and contribution classifications

The seed dispersal role played by birds is important in terrestrial environments and particularly to help maintain biological and genetic diversity between vegetated islands and the mainland. The Imperial pigeon for instance migrates daily as flocks from the islands to the mainland rainforests to eat fruit, returning to the islands at dusk. These environments are limited and sparse and as such the ecological role of birds in spreading seeds is minor.

Local attribute	vii*	viii*	ix*	x*
Breeding colonies of seabirds and marine turtles	Min			
242 species of birds				Sig
22 seabird species breeding				Min

* Relevant Outstanding Universal Value criteria and contribution classifications

There is significant habitat for shorebird and migratory birds which vary from year to year. There are internationally recognised roosting sites at Sandringham Bay that supports up to 23,000 shorebirds each year during annual migration.

Estuarine wetlands associated with the local rivers and bays which provide breeding habitat for resident shorebird species. The Mackay Region is recognised as the fifth most important site for shorebirds in Queensland. Eighteen different shorebird species utilise habitats in the Mackay regions for foraging and roosting.

There are areas at Dudgeon Point where large emergent trees are present and provide suitable nesting sites for large raptors such as the White-bellied sea eagle (*Haliaeetus leucogaster*).

Eshelby Island, 1200 kilometres north west of Mackay and Bushy Islet, 90 kilometres east of Mackay are recognised as regionally important breeding site for seabirds within the Whitsunday region.

Category: Coastal processes

Local attribute	vii*	viii*	ix*	x*
Cross-shelf, longshore and vertical connectivity			Min	

* *Relevant Outstanding Universal Value criteria and contribution classifications*

Offshore areas form part of the larger longshore connections within the Great Barrier Reef lagoon. Intertidal and estuarine habitats connecting terrestrial and marine habitats.

Appendix F – Dictionary

Term	Definition
Adjoin (or adjoining) development	development that is directly adjacent (for example, shares a common boundary)
environmental value	as defined in the <i>Environmental Protection Act 1994</i> .
local attributes of the OUV of the GBRWHA	see Appendix E and the master plan for the priority Port of Hay Point/Mackay
local planning instrument	as defined in the Planning Act
master plan	has the same meaning as in the Ports Act, however for this port overlay means the master plan for the priority Port of Hay/Point Mackay
master planned area	has the same meaning as in the Ports Act, however for this port overlay means all of the area shown in Appendix A
matters of national environmental significance (MNES)	matters of national environmental significance which includes world heritage properties, national heritage properties, wetlands of national importance, nationally threatened species and ecological communities
matters of state environmental significance (MSES)	means the natural values and areas listed for MSES in the <i>State Planning Policy</i> (Glossary)
outstanding universal value (OUV)	as defined in the <i>United Nations Educational, Scientific and Cultural Organization Operational Guidelines for the Implementation of the World Heritage Convention</i> means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community.
port optimisation	the act of making a port system, design or decision as effective or functional as possible. This may include making efficient use of strategic port land, berths and/or land-based facilities, ability to control berthing allocations and scheduling, minimising capital-intensive marine-based infrastructure, minimising the distance between land-based facilities and berths and/or minimising capital or maintenance dredging.
port overlay	has the same meaning as in the Ports Act
precincts	zones of development for specific areas within the master planned area (see Appendix C)
priority management measure	has the same meaning as in the Ports Act
priority port	has the same meaning as in the Ports Act

Term	Definition
sensitive land use or uses	has the same meaning as in the <i>Planning Regulation 2017</i>
supply chain infrastructure	<p>infrastructure, services and utilities identified as critical to supporting the future functioning of priority Port of Hay/Point Mackay and its associated trade and economic growth for the region.</p> <p>Note: this may include, road, rail, marine, port and other infrastructure that service the priority Port of Hay Point/Mackay and associated industrial development.</p>

Appendix G – Abbreviations and acronyms

Acronym / Abbreviation	Definition
EMF	Environmental Management Framework
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
GBRWHA	Great Barrier Reef World Heritage Area
MRC	Mackay Regional Council
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NQBP	North Queensland Bulk Ports Corporation Limited
OUV	Outstanding Universal Value
Planning Act	<i>Planning Act 2016</i>
Planning Regulation	<i>Planning Regulation 2017</i>
PMM	Priority Management Measure
Ports Act	<i>Sustainable Ports Development Act 2015</i>
SDAP	State Development Assessment Provisions
Transport Infrastructure Act	<i>Transport Infrastructure Act 1994</i>
TMR	Department of Transport and Main Roads, Queensland

