

Port Development Plan 2010 - 2040



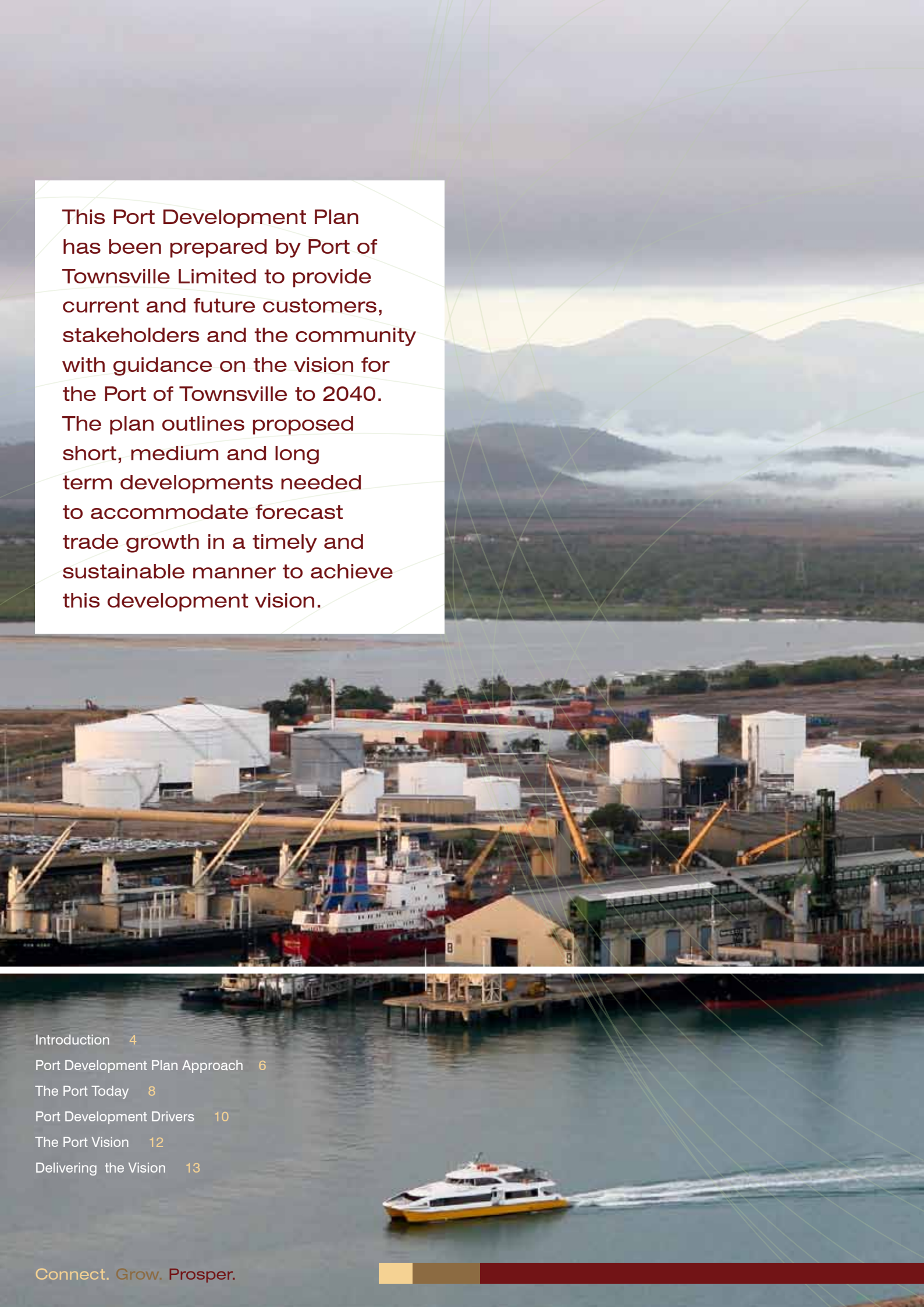
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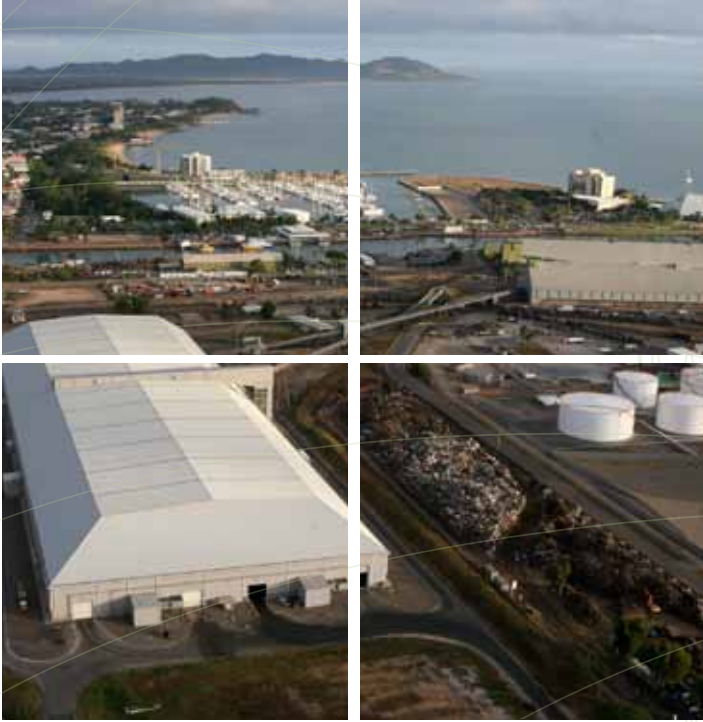
PORT of TOWNSVILLE
Nexus North Queensland

This Port Development Plan has been prepared by Port of Townsville Limited to provide current and future customers, stakeholders and the community with guidance on the vision for the Port of Townsville to 2040. The plan outlines proposed short, medium and long term developments needed to accommodate forecast trade growth in a timely and sustainable manner to achieve this development vision.

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Introduction

Located on the shoreline of tropical North Queensland, adjacent to the Great Barrier Reef Marine Park, the Port of Townsville is a world class gateway for global trade and investment. Managing approximately ten million tonnes of cargo each year, the port plays an integral role in international shipping operations. The Port of Townsville is one of the world's most diverse base metals export locations, and is also Australia's largest exporter of raw sugar and molasses. The port's contribution to the regional economy is unprecedented due to its link to the vast hinterland that serves the North West and North East Queensland mineral provinces.

Port of Townsville Limited (POTL) is a company government owned corporation and port authority responsible for the effective and efficient management of the Port of Townsville. This includes the establishment and operation of port facilities and services, making land available for port operations, ensuring appropriate levels of safety and security at the port and other supporting and ancillary functions.

Preliminary assessments of recent business activity indicates that trade at the Port of Townsville is forecasted to increase to more than 30 million tonnes in the next 30 years. Economic and trade forecasts suggest a positive outlook for growth in cargo throughput which will generate demand for port development. Global shipping and cargo handling trends will influence changes to infrastructure for the port to remain a viable and competitive gateway.

The Port Development Plan (PDP) outlines POTL's short, medium and long term vision for the port's developments until 2040 to accommodate projected growth in existing business and new trade prospects. The PDP is a product of ongoing port planning processes which involve consultation with key stakeholders including the Queensland Treasury, Queensland Department of Infrastructure and Planning (DIP), Department of Transport and Main Roads (DTMR), QR Limited (QR), Townsville City Council (TCC) and port users. The plan is regularly updated to reflect significant changes to key assumptions and development options and reflects recent planning initiatives undertaken, in particular the Townsville Port Master Plan, Land Use Plan, City-Port Strategic Plan, Townsville State Development Area (TSDA) and Eastern Access Corridor (EAC) Planning.

Planning for the Future

POTL's vision is to be the leader in the provision of innovative, efficient and effective port services which it strives to accomplish by:

- Acting commercially and competitively to promote a sustainable economic future for the port
- Providing best practice facilities and services to meet the needs of existing and future customers
- Identifying and securing commercial opportunities
- Delivering critical infrastructure to ensure timely and sustainable development of the port
- Maximising utilisation of existing resources
- Enhancing environmental performance in all aspects of the Corporation's operations.

POTL is set to embark on a campaign to increase and diversify trade and improve the flexibility of critical infrastructure to support this vision. This will enable the port to be a driver of sustainable growth in the region through the delivery of trade, port services and development solutions while obtaining better utilisation and efficiencies from existing port infrastructure.



This PDP embraces POTL's vision by providing a framework for the staged development of infrastructure and facilities with high regard for the environment, port users, stakeholders and the broader community. This PDP will:

- communicate POTL's vision for short, medium and long term development to its customers (existing and potential), stakeholders and the community
- identify the infrastructure requirements to support strategic growth opportunities and the likely time frames associated with each
- serve as a framework for future capital investment for the port
- affirm POTL's commitment to sustainable port development, operations and responsible environmental management.

In order to accommodate future global trade demands, POTL has commenced strategic forward planning to allow sufficient lead times for each development component, including approvals and construction. This proactive approach allows a thorough assessment of potential environmental impacts for developments to ensure that appropriate solutions are implemented, reducing the risk for the environment and projects to create certainty for port users.

Working Together

The port's location within a growing urban environment must be considered when planning for the port and its adjacent land uses. This attention will minimise the potential for land use conflicts. POTL has formed and is committed to maintaining close working relationships with the community (through the Port Community Partnerships Forum), their stakeholders and city and state government agencies by engaging them in formal and informal planning processes. This consultation enables cooperative development outcomes for the wider port community and stakeholders. POTL acknowledges the inseparable links between the City of Townsville, the industry and global trends which have formed the basis of this development framework.

City-Port Planning

POTL and TCC participated in a study facilitated by the DIP. The Townsville City-Port Strategic Plan examined lands and activities in the interface areas between the port and the CBD. The study identified key priorities for projects in this area and implementation timeframes.

The objective of the City-Port Strategic Plan is to provide a vision for coordinating key developments to ensure an effective interface. It is necessary for the port development to meet future trade tonnages and appropriately manage the City-Port interfaces.

Transportation Planning

A number of transport planning investigations have found that an Eastern Access Corridor (EAC) is essential for the long term sustainability of the land transport system for the port. The EAC will provide a connection between the Bruce and Flinders Highways, travelling through the Townsville State Development Area (TSDA) to the Port of Townsville. The corridor will be the primary preferred rail/road route to the port from the southern outskirts of Townsville providing customers with efficient freight transport access while reducing the impact on the existing networks in the city and the community. It will also provide an opportunity in the future for conveyor and pipeline connections between the port and the TSDA.

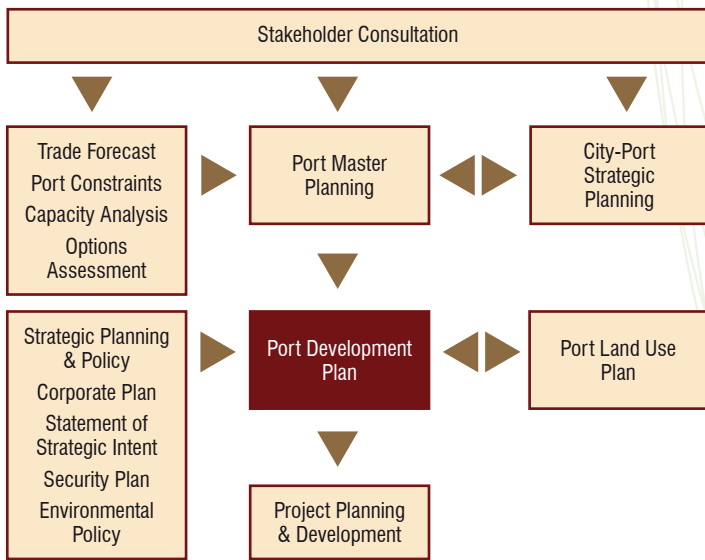
POTL is working alongside DTMR to deliver this transport corridor to accommodate the future land transport needs of the port's customers.

Port Development Plan Approach

PDP Process

The primary foundation for the PDP is the ongoing Port Master Planning process which guides decision-making with respect to future port infrastructure requirements to meet trade forecasts. The PDP also aligns with the guiding principles outlined in the Land Use Plan and various strategic planning and policy frameworks. The PDP process is outlined below.

Port Development Plan Process



Development Timeframes

The PDP has adopted short, medium and long term timeframes for the planned development of the port until 2040. These timeframes are as follows:

- Short term
2010 - 2015
- Medium term
2015 - 2025
- Long term
2025 - 2040

Development proposals and processes may fall across one or more of the terms, depending on the scope of work and the actual demand for port facilities.

PDP Foundation Studies

A number of studies conducted in recent years strongly influence the proposed development strategies of the port due to their findings and recommendations around trade forecasts and the foreseeable subsequent requirements.

The Port Master Plan provided the port development philosophy, prioritisation of projects and a blueprint for the future port layout adopted for the PDP. It outlines a preferred development strategy for the redevelopment of the inner harbour and future port expansion works. It also identified the need to upgrade the access channel and re-organise road and rail infrastructure in order to achieve a more efficient port that will be sustainable in the future.

The Port Expansion Preliminary Engineering and Environment Study was undertaken to advance planning of the Port Expansion Project. The integrated engineering and environmental studies established a preferred layout by optimising environmental objectives with port and channel requirements.

The Port of Townsville Land Use Plan is a statutory document that outlines the strategic vision and strategic outcomes for the management of port land. It is guided and influenced by other statutory and non-statutory state, regional and local government planning instruments. The 2009 Draft Land Use Plan was prepared concurrently with this PDP and reflects the development vision outlined in this document.

The City-Port Strategic Plan is an updated version of earlier conceptual plan developed in close consultation with TCC to achieve an effective and sustainable interface between the port and the City of Townsville. Due to its close proximity to the CBD, it is vital that the port and city work together in their vision to successfully meet demands and growth in the region. The plan identifies the foreseeable challenges and sets goals for future development strategies without defining specific details on work to be undertaken.

The Townsville Economic Gateway (2008) was developed in an effort to conceptualise the connections between Townsville and its industries by showcasing the future vision of the Townsville CBD, the port and the TDSA. The report was developed in partnership with TCC, DIP and the Department of Tourism, Regional Development and Industry to highlight the nexus of trade and investment in the region and the city's future direction.

Strategic Outcomes

The PDP is guided by and is consistent with the same vision and strategic outcomes of the Townsville Land Use Plan. The key features of the PDP that support the strategic outcomes are outlined below.

| Land Use Plan Strategic Outcome | General Description | Key Features of PDP Supporting Strategic Outcomes |
|----------------------------------|--|--|
| Land Use Pattern | Core Port functions are maintained and protected by development which supports the current and future operational requirements of the port. | <p>The intent of the strategic statement is achieved through:</p> <ul style="list-style-type: none"> Grouping particular core port activities into zones and precincts which recognise similar land use characteristics and compatibility and infrastructure requirements of the activities. Protecting the viability of current and future uses and activities from the intrusion of incompatible land uses. Ensuring that any new development supports and does not conflict with the land use pattern identified through zoning and precincts in the Land Use Plan. |
| Natural Environment | Adverse impacts on the environment are avoided through the appropriate location, design and management of developments. | <p>The intent of the strategic statement is achieved through:</p> <ul style="list-style-type: none"> Continuing interaction with relevant Federal, State and Local authorities to protect the environmental values of adjacent areas to the Port of Townsville. Compliance with Federal and State legislation and relevant State Planning Policies (including, but not limited to <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>, <i>Environment Protection (Sea Dumping) Act 1981 (Cth)</i>, <i>Environmental Protection Act 1994 (Qld)</i>, <i>Coastal Protection and Management Act 1995(Qld)</i>, State Planning Policy 2/02 – Planning and Managing Development Involving Acid Sulphate Soils). The implementation of environmental management plans through the development process to ensure environmental quality is protected. The continual improvement of the Port's environmental policies and practices to minimise environmental impacts of growth. The review of developments, including expansions and major maintenance projects, to ensure they meet appropriate environmental criteria and minimise impacts on lands and waters under Port jurisdiction. The demonstration of sustainable development principles. |
| Economic Development | Development is undertaken in a sustainable manner that contributes to the ongoing economic growth of the Port of Townsville and enhances economic development of the community and region. | <p>The intent of the strategic statement is achieved through:</p> <ul style="list-style-type: none"> The grouping of compatible land uses to achieve synergies and economies to optimise existing and planned infrastructure. The Port's role as a key economic generator for the community and region is maintained and protected. Development increasing economic opportunities at the Port of Townsville and promoting the Port as a 'gateway' for trade throughout the world. Development optimises the utilisation of, and return on, Strategic Port Land. Development increases diversification and growth of trade through the Port of Townsville. The demonstration of sustainable development principles. |
| Community Identity and Diversity | Development recognises, and minimises impact on, the character amenity and heritage of the area. | <p>The intent of the strategic statement is achieved through:</p> <ul style="list-style-type: none"> Continued cooperation with Townsville City Council, relevant state authorities and adjacent residential and commercial communities to minimise adverse impacts. Measures that minimise amenity impacts from development on adjacent land uses (including, but not limited to, noise, light, odour, dust and stormwater). The provision and maintenance of buffers between Port facilities and adjacent urban uses. A high standard of design that incorporates good site layout, building design, landscaping and sustainability principles. The management, protection and conservation of indigenous cultural heritage management areas by traditional owners and other indigenous groups through cultural heritage management plans. Consultation and coordination with port users to ensure an integrated and holistic approach to achieving compliance with security and safety requirements for operations within the Port. |
| Infrastructure and Services | Development is sequenced and planned to minimise infrastructure costs without compromising the operational needs, or core functions, of the Port. | <p>The intent of the strategic statement is achieved through:</p> <ul style="list-style-type: none"> Ongoing strategic planning based on available data to provide for infrastructure needs for future development. Development is sited in locations that can economically provide and maintain essential infrastructure. Maximum utilisation of Port facilities. The value of existing and planned infrastructure is maximised by consolidating development in well serviced precincts and the ongoing maintenance of infrastructure. The preparation of plans to obtain fair/equitable contributions during the development process towards the provision of infrastructure. |
| Access and Mobility | Transport corridors are coordinated and interconnected to maximise accessibility and efficiency to, from and within the Port and are designed to ensure the efficient utilisation of existing and future land resources. | <p>The intent of the strategic statement is achieved through:</p> <ul style="list-style-type: none"> Ongoing cooperation with the Department of Transport and Main Roads and QR Limited (and other relevant authorities) to proactively plan and cater for a coordinated transport system that protects and enhances the operations of the Port. Minimising the social and environmental impacts associated with transport systems development and operation. The expansion and maintenance of the Port's internal road network. The integration of development with the future road and rail Eastern Access Corridor route from the Port, through the Townsville State Development Area to the Bruce Highway and Flinders Highway. |



The Port Today

Cargo Handling

The commercial port contains a wide range of mainly bulk cargo handling operations through nine (9) berths. A complex port layout has evolved over many years to serve a variety of users, interests and important economic functions. The cargo operations are characterised by the number of specialised facilities which are supported by rail transport which limits the flexibility to re-organise cargo operations without port expansion.

Opportunities exist to optimise the existing port layout, in conjunction with port expansion, to maximise the capacity of existing infrastructure and to satisfy the evolving needs of shipping and landside transportation. Changing cargo mixes and increasing cargo throughput are ongoing challenges for port development to be addressed by rationalising and consolidating facilities to increase flexibility.

Navigation

The dredged Sea and Platypus channels, located in Cleveland Bay, allow access for Panamax sized ships with some draft and tide limitations. Shipping benefits from minimal delays due to traffic and environmental conditions to access the sheltered inner harbour as well as Berth 12 (which is located seaward of the Eastern Breakwater).

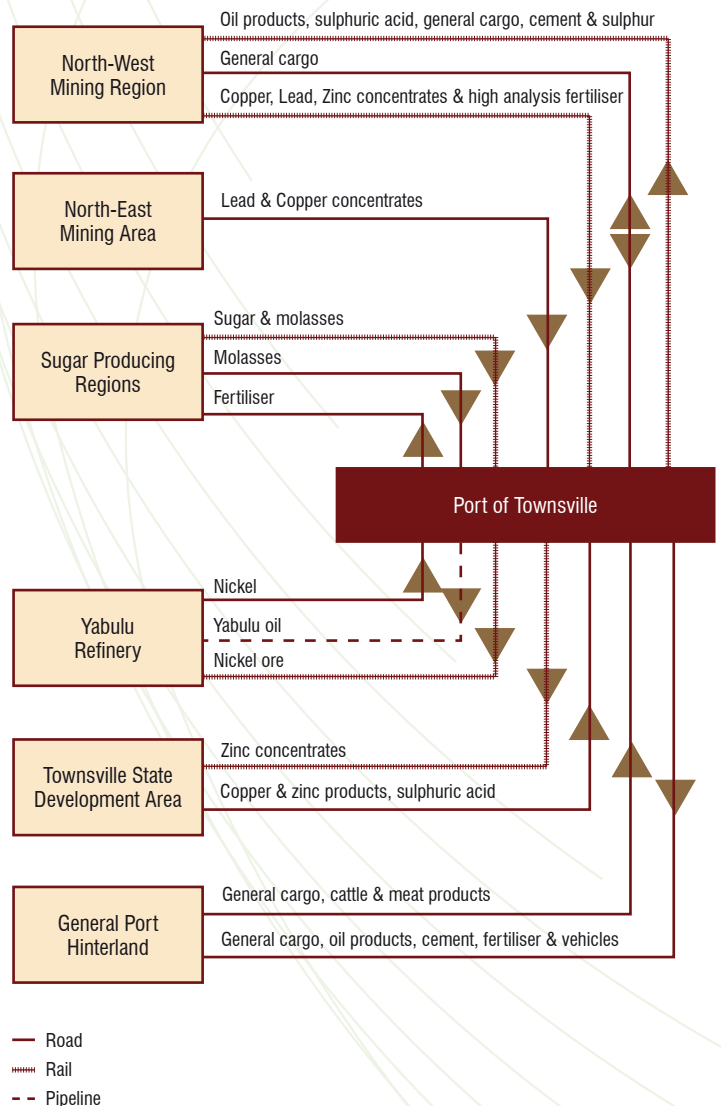
Rail and Road Port Access

The road and rail linkages to the port are in competition with the built urban environment of Townsville and currently pass through residential areas, placing pressure on the local networks. Accordingly, extensive planning and acquisition of land for the Eastern Access Corridor (EAC) has been completed to satisfy the longer term rail and road access requirements to reduce transport impacts on urban areas. The corridor will also provide an opportunity to link the port with pipeline and conveyor systems to the Townsville State Development Area (TSDA).

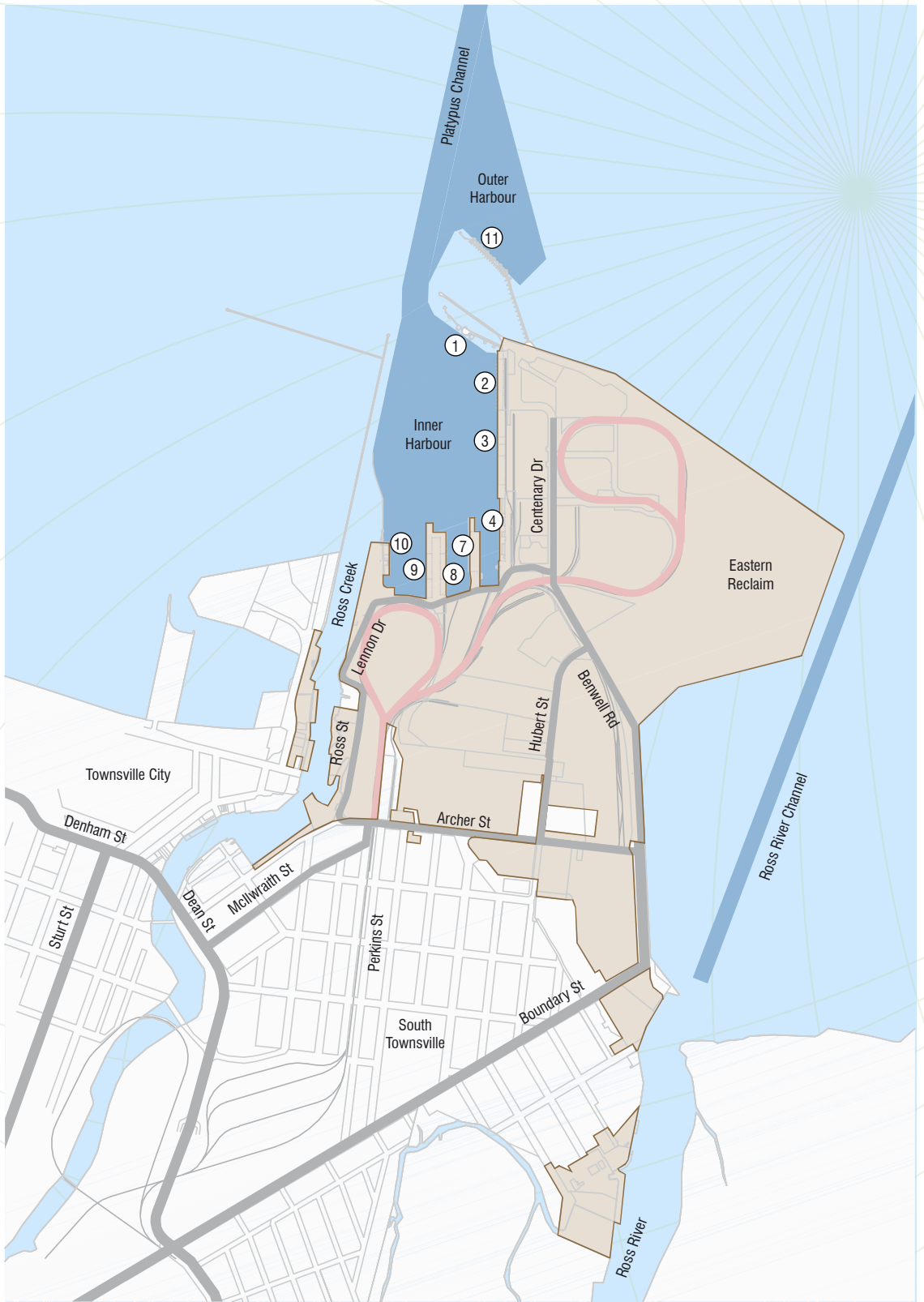
Road and Rail Layout

Rail operations play an important role in the Port of Townsville due to the high proportion of imported and exported dry bulk cargo. The land transport distance to the origins/destinations for most of these bulk commodities result in rail transport being a more cost effective and sustainable mode of transport. The future EAC and port expansion layout will pave the way for a staged program to re-align and enhance the rail and road networks. The chart below displays the current transportation modes for existing trades.

Main Transportation Modes for Existing Trades



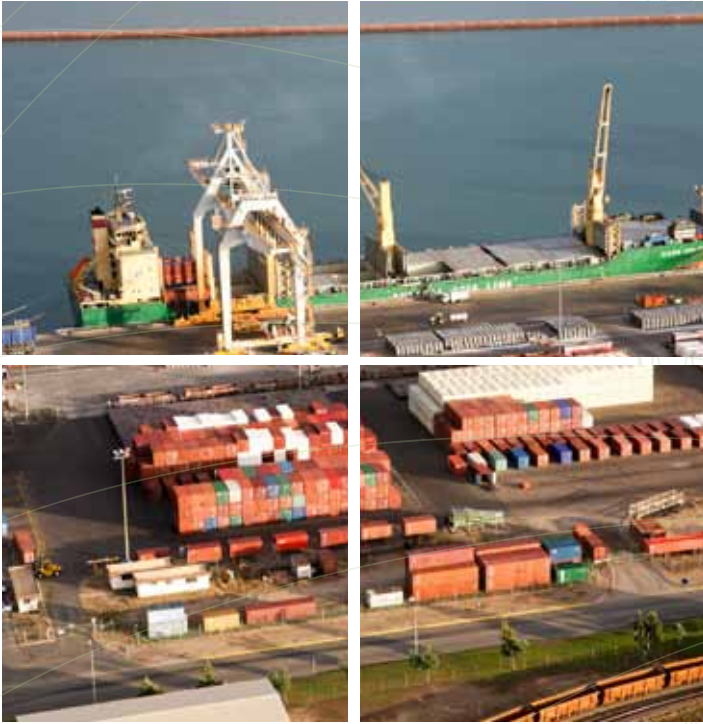
- Port Land
- Shipping Channels
- Existing Major Access Roads
- Existing Railway
- 1 Berth No.



Current Port Layout 2010

0 100 250 500m





As a gateway for international trade, POTL strives to facilitate efficient shipping and cargo handling operations to support the competitiveness of the regional economy.

POTL has anticipated the current and future requirements of the global market through its connections with port users. This knowledge enables POTL to plan ahead to readily accommodate new trade opportunities to best serve present and future port customers.

Port Development Drivers

Global Market

The trade handled through the Port of Townsville generally utilise ships that are readily available on the international shipping market. It is therefore advantageous to plan ahead for trends that are likely to shape international shipping operations and shipbuilding. There is an increasing tendency towards the production of standard ships across a wide range of trades that benefit from:

- Reduced ship costs
- Greater standardisation in ship marketing/chartering
- Uniformity in determining future port requirements (such as water depth and berth length).

The economies of scale from using ships of greater size (and thus cheaper freight rates) is a driving factor for all ship types, especially bulk vessels. The current limiting vessel size for Townsville is a Panamax ship which includes a large portion of the world's fleet due to restrictions to navigate the Panama Canal. Improvements to the Panama Canal are currently underway, and expected to be completed by about 2015, which lies in the medium term timeframe of the PDP.

From this period on, the maximum size of vessel that will be able to transit the canal will increase considerably (beam from 32 to 55 metres and a draft from 12 to 14.5 metres). This will lead to the evolution of a greater proportion of larger ships in the global fleet within the medium term time frame of the PDP and it is expected that Townsville will need to adapt to this trend to remain competitive.

It is expected that upgrades to the Sea and Platypus channels (widening and deepening) and development of suitably designed berths in the proposed new outer harbour will be required in future. Larger tugs will also be a prerequisite for manoeuvring the larger ships.

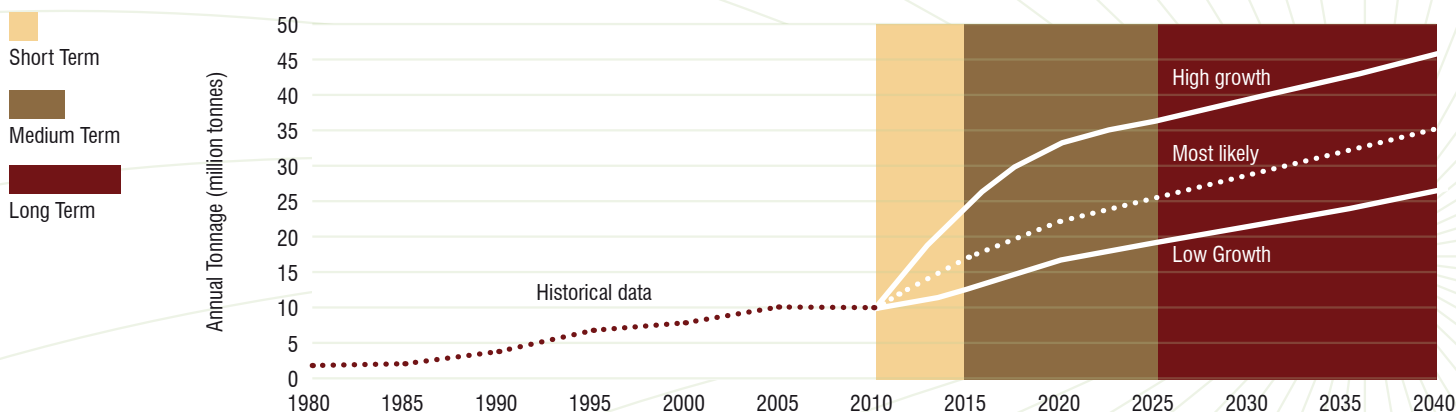
Townsville State Development Area

The TSDA is a 4,900 hectare land parcel located east of the Townsville CBD which was declared in late 2003 for heavy industrial development. The current rural use of the land will change as heavy industry establishes on the site.

A new eastern access to the port has been included in the Materials Transportation and Services Corridor Precinct under the development scheme and provides for port access to benefit existing and future industries including access for existing and future heavy vehicles from the Flinders and Bruce Highways. The TSDA and EAC will be catalysts for industrial development that will contribute to port trade.

Trade Forecast

The historical growth in cargo handling tonnages has averaged at 5.7% per annum, compounded since 1960, with the 2008/09 level reaching just under 10 million tonnes. The main contributors to the robust growth pattern have been agriculture, large-scale mining, resources processing and mineral refining industries.



Trade Forecast 2040

POTL conducts ongoing reviews of the economy and future trade prospects; the present forecasts suggest it will be shaped by:

- Continued growth in existing trades linked to the mining and industrial sectors and to the anticipated continued growth in the Townsville economy. Those with the greatest impact are mineral concentrates, metal products, cement, oil products and general cargo.
- New high throughput bulk trades are likely to be handled at Townsville associated with:
 - Export of phosphate rock and beneficiated products
 - Export of phosphate rock magnetite
 - Import of bulk liquids.

The adopted trade forecast for the PDP is illustrated in the chart above, the relevant tonnages described as 'most likely'. The 'high' and 'low' growth curves provide an indication of the fluctuation that could occur, given the sensitivity of the forecast tonnage because of high tonnage bulk exports commodities that make up the forecast.

Land Transportation

An assessment of the split between transport modes (rail, road and pipeline) undertaken as part of the Port Master Plan predicted that future land transport will be shaped by:

- The potential for road and rail transport to increase nearly three-fold over a 25-year period under a high growth forecast.
- The capacity of rail infrastructure within and outside the port will be under increasing pressure requiring ongoing development of the rail network.
- The EAC will become increasingly important for inland transportation by road and rail because of the impacts of present port access routes on residential areas.
- The opportunities for cargo to be transported between the port and the TDSA by conveyor and pipeline.

Land Requirements

The capacity assessment undertaken for the Port Master Plan outlined the need for the creation of additional port land to support the growth in trade. The land is necessary for cargo handling operations, cargo storage and transfer, land transportation and port related industry. While some of the future land requirements can be provided within the existing port land, additional land will need to be reclaimed to support an outer harbour.

The Preliminary Engineering and Environment Study for the port expansion has established a footprint for the outer harbour. It is sized and shaped to satisfy:

- the requirements of future port operations
- a new rail loop to enhance capacity and efficiency to promote rail as a preferred mode of land transport
- significant beneficial re-use of dredge material including a substantial dredge reserve to achieve a high standard of water quality discharge from the reclamation operation and reduce the need for offshore relocation of dredge material.



The Port Vision

Staged Approach

Through the master planning process, POTL has adopted a port development philosophy that supports a staged program that includes redevelopment of the inner harbour and an outer harbour expansion. Existing operations will be relocated over time to strive for an optimum port layout in the long term that will ultimately result in (with the exception of sugar):

- general cargo ship operations located in the inner harbour
- bulk liquid and dry bulk ship operations located in a new outer harbour seaward of the eastern breakwater.

In contrast, expanding the port incrementally into an outer harbour with minimum re-modelling of existing operations would result in mixed general cargo and bulk operations. Although this is a more cost effective solution initially, there would be compounding inefficiencies for operations in the medium term.

Rationalise and Optimise Inner Harbour

Redevelopment of the inner harbour is planned to be progressively implemented over the short, medium and long term with a focus on consolidating general cargo handling to achieve the benefit of improved berth utilisation and operational efficiencies. Furthermore the location of general cargo operations in the inner harbour will have a lower impact on the adjacent commercial, recreational and residential areas.



Delivering the Vision

Our Commitment

Sustainability

The Port of Townsville is located in the environmentally sensitive Great Barrier Reef Marine Heritage area. POTL understands shipping operations can impact on the environment which is why all port activities are carried out in an environmentally responsible manner.

POTL abides by its Environmental Policy at all times and is committed to sustainable development and operations through its certified Environmental Management System (ISO 14001:2004). The Port of Townsville Environmental Working Group, comprised of port users, members of the community and environmental representatives, is also involved in the port's environmental management processes.

The Townsville region is located within the Great Barrier Reef World Heritage Area, the Great Barrier Reef Marine Park, and the Queensland State Marine Park. The marine environment within the Townsville Region is of significance due to the presence of turtle nesting areas, dugong habitat, fish nurseries, seabird, wader and raptor habitats, seagrass and mangrove communities, and fringing reefs.

Declared dugong protection areas are located in Cleveland and Bowling Green Bays and around Magnetic Island. Bowling Green Bay is a major wetland area of significance to wading birds and is listed as a 'Wetland of International Importance' under the Ramsar Convention.

Ecological sensitivities are taken into account in all Port planning and development with appropriate investigations undertaken and control measures adopted to protect the regional ecological values for marine and inter-tidal species. POTL works closely with relevant authorities responsible for the management of the ecological areas to ensure that planning, management and operations are appropriate and that the environmental values of these areas are protected.

Community

The Port of Townsville lies close to the heart of the CBD within a growing urban environment. POTL is committed to maintaining and growing its relationship with the community and stakeholders through proactive engagement activities. POTL regularly undertakes surveys with its clientele and the community in which it operates to improve on current services and operations.

The Port Community Forum, which was established in 2005, also offers the public an opportunity to become involved in and comment on port related policies, development plans, management programs and ongoing operations that may impact on specific community interests.

Statutory Approvals

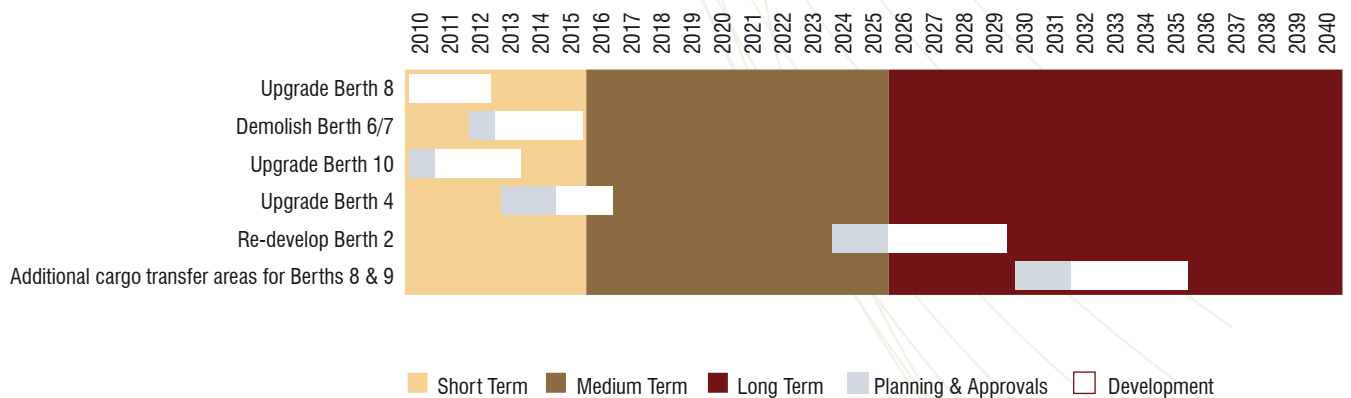
It is necessary to consider any future port development in the context of the required statutory approval processes and their timeframes. A range of statutory approvals will be required under relevant State and Commonwealth legislation prior to any of the proposed development taking place. Importantly, the statutory approval requirements are likely to vary significantly between the proposed port expansion works seaward of the eastern breakwater and other more minor works within the existing port footprint.

Each of the port infrastructure and service developments in this plan will be strategically delivered when funding is made available and as demand dictates over the next 30 years.

POTL appreciates that in order to achieve the best outcome for its customers, stakeholders and the region, it must invest in sustainable and ethically responsible practices.

Inner Harbour Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|--|--|--|
| <p>Upgrade Berth 8</p> <p>Upgrade the wharf structure and berth pocket to accommodate Panamax size ships. Installation of new ship loading equipment for dry-bulk operations.</p> | <ul style="list-style-type: none"> Requirement to relocate operations from Berth 7 which is at the end of its structural life. | <ul style="list-style-type: none"> Enables Berth 7 to be demolished. Improved flexibility of Berth 8. Improved cargo handling efficiencies, increasing capacity of the berth. |
| <p>Demolish Berth 6/7</p> <p>Demolish the aging Berth 6/7 finger pier to improve the ship manoeuvring area in the basins for Berths 4 & 8</p> | <ul style="list-style-type: none"> Structural deterioration of Berth 6/7, which is at the end of its structural life. To improve access by larger ships to Berths 4 and 8. | <ul style="list-style-type: none"> Eliminate shipping constraints due to berthing interactions associated with the narrow basins. |
| <p>Upgrade Berth 10</p> <p>Upgrade the wharf structure for mooring of larger ships and expand the backup area adjacent to the wharf for associated operations.</p> | <ul style="list-style-type: none"> Enable capability for larger Defence vessels. The demand for additional general cargo handling capacity. | <ul style="list-style-type: none"> Improved utilisation of the berth can be achieved as a shared facility with Defence shipping. General cargo handling capacity will be increased and operational efficiencies improved. |
| <p>Upgrade Berth 4</p> <p>Upgrade Berth 4 as a general cargo berth that has the same alignment as Berths 3 & 4, providing continuous quay line of 805m (Berths 2, 3 and 4). Develop Berth 4 terminal area as an efficient general cargo facility.</p> | <ul style="list-style-type: none"> Existing constraints for general cargo handling in the port, and growing demand for additional general cargo handling capacity. | <ul style="list-style-type: none"> The consolidation of Berths 2, 3 & 4 as general cargo facilities with a common wharf alignment will greatly improve efficiencies and berth utilisation. The road and rail access can be enhanced and rationalised for the consolidated facilities. |
| <p>Redevelop Berth 2</p> <p>Redevelop Berth 2 for general cargo operations. Relocation of bulk import operations to the Outer Harbour.</p> | <ul style="list-style-type: none"> To provide additional capacity for handling of general cargo. To relocate dry bulk operations to the Outer Harbour. | <ul style="list-style-type: none"> Consolidation of Berths 2, 3 & 4 as general cargo facilities with a common wharf alignment will greatly improve efficiency, flexibility and berth utilisation. Road and rail access can be enhanced and rationalised for the consolidated facilities. |
| <p>Additional Cargo Transfer Areas to Support Berths 8 & 9</p> <p>Expansion of general cargo storage and transfer areas by removing the Berth 8 shed and redeveloping land areas between Berths 4 & 8.</p> | <ul style="list-style-type: none"> To increase capacity and improve flexibility and efficiency of Berths 8 & 9 to handle general cargo. | <ul style="list-style-type: none"> Increase in cargo storage and transfer areas. Improved flexibility and efficiency of Berths 8 & 9. |





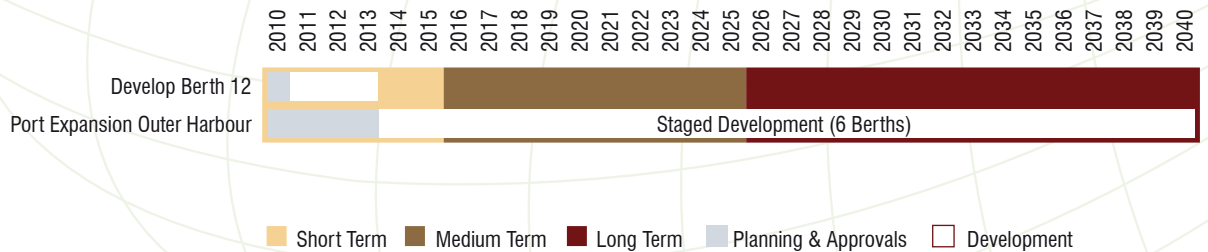
Port Expansion – Outer Harbour

The outer harbour is planned to handle mainly bulk cargoes in larger ships. This is a growing requirement for these cargoes to achieve shipping efficiencies. An opportunity for trains of up to 1.5 kilometres in length to serve the outer harbour will support more effective and sustainable land transportation for bulk commodities.

Existing high tonnage bulk trades are planned to be relocated to the outer harbour over time to facilitate the redevelopment of the inner harbour to serve mainly general cargo.

Outer Harbour Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|--|---|--|
| <p>Develop Berth 12</p> <p>Develop a new Berth 12 in the Outer Harbour.</p> | <ul style="list-style-type: none"> New dry bulk trades. | <ul style="list-style-type: none"> Provide additional port capacity for new trades Increased separation of bulk cargo handling from residential areas |
| <p>Port Expansion – Outer Harbour</p> <p>Progressive and staged development of a breakwater protected harbour, including development of new Berths 14 -19, land reclamation and landside infrastructure. Deepen and expand the Outer Harbour capable of accommodating Post Panamax ships.</p> | <ul style="list-style-type: none"> Insufficient capacity in the Inner Harbour to meet forecast future trade growth New bulk trades and relocation of existing bulk trades from the Inner Harbour. | <ul style="list-style-type: none"> Provide additional port capacity for new trades Relocation of existing bulk trades to the Outer Harbour will facilitate remodelling of the Inner Harbour Increased separation of bulk cargo handling from residential areas Capacity to receive dredge material |





Eastern Port Development

Eastern Reclamation Area

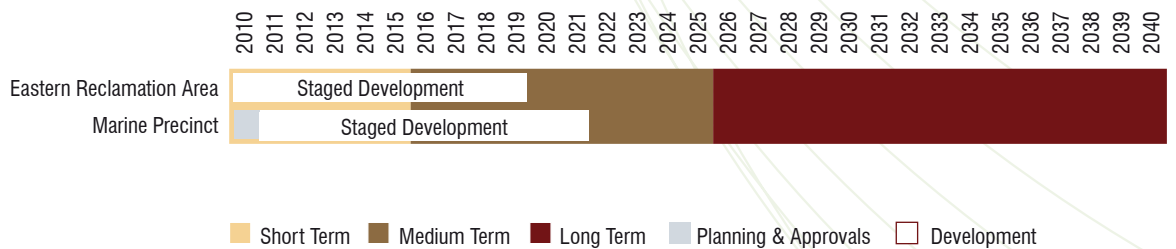
The Eastern Reclamation Area comprises of land reclaimed by beneficial re-use of dredge material from previous dredging campaigns. Rail, road and services will be constructed to serve the area and port industry. The initial development will be a bulk storage facility for export of dry bulk product through Berth 12. The remaining land area will be available for operations to serve either the inner or outer harbour berths.

Marine Precinct

The main driver for this development is to relocate commercial marine activities in the Ross River that are upstream of the proposed bridge for the EAC. The height restriction of the fixed bridge will limit navigation access for marine industries that are currently located upstream in Ross River. The new marine precinct will also provide an opportunity to consolidate other similar facilities and to provide opportunities for growth in the marine industries sector for Townsville.

Eastern Port Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|--|---|--|
| <p>Eastern Reclamation Area</p> <p>Preparation of the Eastern Reclamation Area (land, road, rail and civil services) for cargo storage and port related operations.</p> | <ul style="list-style-type: none"> The demand for cargo storage and commercial development to support an expanding port. | <ul style="list-style-type: none"> Establishment of land infrastructure for cargo storage and handling facilities to support increased trade. Effective use of port land will be achieved. |
| <p>Marine Precinct</p> <p>Develop a new Marine Precinct on the eastern side of port.</p> | <ul style="list-style-type: none"> A fixed low level bridge planned over the Ross River for the EAC will restrict access by upstream marine users. | <ul style="list-style-type: none"> Continuation of industrial and commercial marine activities in Townsville. Expansion of marine industry activities. Efficiencies in industrial and commercial marine operations. Improved environmental standards for industrial marine activities. Capacity to receive dredge material. |



Access and Mobility

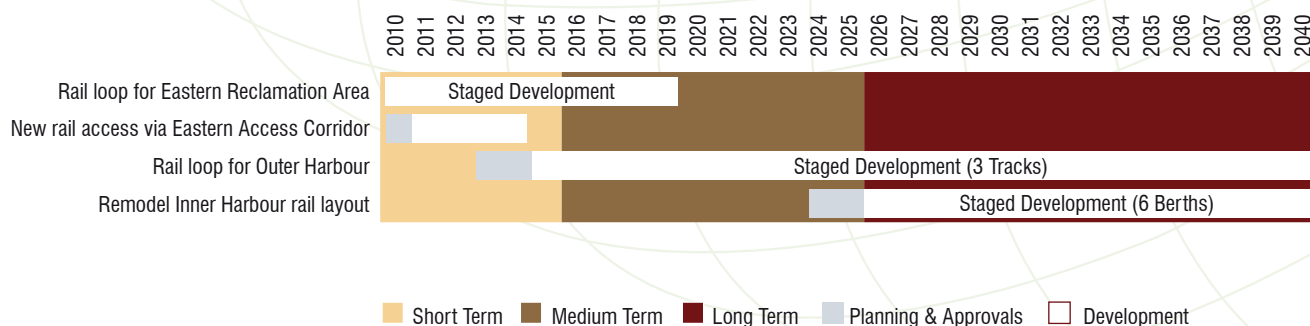
Rail

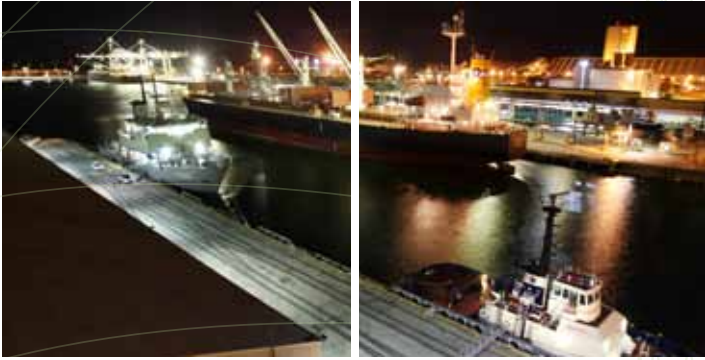
The future EAC and port expansion layout will pave the way for a staged program of development to re-align and enhance the rail layout in the port. The key benefits are:

- rationalisation and improved utilisation of infrastructure
- improved intermodal transfer
- development of multi-user rail facilities
- longer trains to improve rail efficiency.

Rail Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|--|---|---|
| <p>■ ■ Rail Loop for Eastern Reclamation Area</p> <p>Phased development of a rail loop (with up to 3 tracks). The initial rail loop is required to meet trade associated with new Berth 12 to be constructed in the Outer Harbour. Access to the first new loop will initially be through the existing rail infrastructure, with access to the first and subsequent new loops ultimately to be via the EAC.</p> | <ul style="list-style-type: none"> · Insufficient capacity on existing rail network to meet future cargo volumes. · New bulk trades. | <ul style="list-style-type: none"> · Increased rail capacity to meet future trade growth. · Efficient cargo receipt and dispatch to support whole-of-port efficiencies. · Opportunity to develop multi-user rail facilities within the loop which will further enhance efficient rail transport. · Rail layout will be aligned with the QR network plan. |
| <p>■ New Rail Access via EAC</p> <p>New rail access to the port via the EAC.</p> | <ul style="list-style-type: none"> · Insufficient capacity on existing rail network to accommodate anticipated future cargo transfers from Mt Isa and NW Queensland to the Port of Townsville. · Inefficiencies in the existing rail network. · Existing rail connections through urban areas. | <ul style="list-style-type: none"> · Reduce rail traffic on the existing route which impacts on residential and commercial areas. · Opportunity to remodel the existing rail network. · New rail access will provide an effective rail alignment to serve the future Outer Harbour rail operations. · The rail layout will be aligned with the QR network plan. |
| <p>■ ■ ■ Rail Loops for Outer Harbour</p> <p>Phased development of a rail loop (with up to 3 tracks) for the Outer Harbour Port Expansion and capable of accommodating train lengths up to 1.5km</p> | <ul style="list-style-type: none"> · New bulk trades and relocation of existing bulk trades to the Port Expansion Project in the Outer Harbour. · Requirement for efficient transport connectivity to the Outer Harbour. | <ul style="list-style-type: none"> · Increased rail capacity to meet future trade growth. · Efficient cargo receipt and dispatch to support whole-of-port efficiencies. · Opportunity to develop multi-user rail facilities within the loop which will further enhance efficient rail transport. · Rail layout will be aligned with the QR network plan. |
| <p>■ ■ Remodel Inner Harbour Rail Layout</p> <p>Remodel rail infrastructure in the Inner Harbour to suit general cargo operations and allow the primary rail access to the port via the EAC.</p> | <ul style="list-style-type: none"> · Increase in general cargo operations in the inner harbour. · Relocation of bulk trades from the Inner Harbour to the Outer Harbour. · Establishment of rail infrastructure to transport bulk cargoes to the Outer Harbour. | <ul style="list-style-type: none"> · Increased capacity of rail infrastructure through improved efficiencies. · Rationalise redundant infrastructure and release land for other port uses. · Rail layout will be aligned with the QR network plan. |



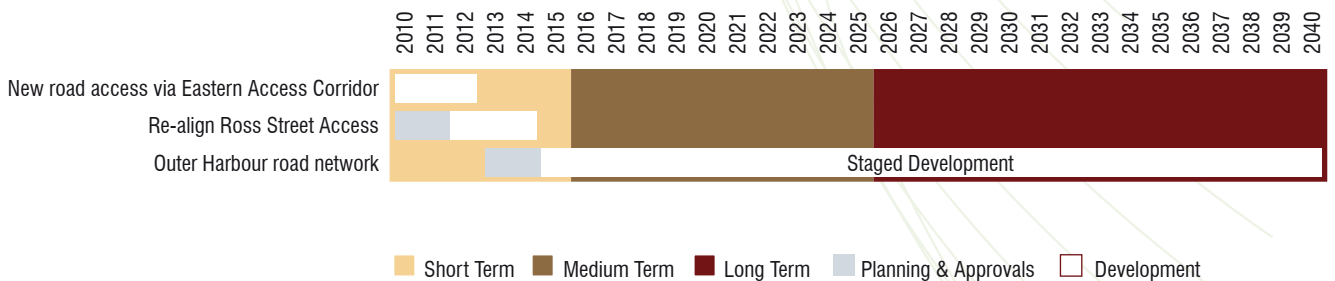


Road

The EAC is a significant short term development which will allow heavy vehicle traffic direct access to the port from the south and west. The EAC will separate port traffic from the residential traffic which will ultimately improve safety for users and increase efficiency while reducing the demand on the urban road network.

Road Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|--|---|---|
| <p>New Road Access via EAC Establish the EAC as the preferred road access route for road transport, and dedicated access route for road traffic from south and western regions to the port.</p> | <ul style="list-style-type: none"> Enhance access for port users. Reduce social impacts on urban areas. | <ul style="list-style-type: none"> Reduction in heavy vehicles from south and western regions through urban areas. Increased capacity for road transport of products to the port. |
| <p>Re-align Ross Street Access Re-alignment of current Ross Street access to the port to a new road adjacent to the Perkins Street rail corridor.</p> | <ul style="list-style-type: none"> Improve secondary road access to the port. Reduce impacts on urban areas. Relocation of industrial uses on waterfront land in Ross Creek. | <ul style="list-style-type: none"> Improved road access to the port. Opportunity to redevelop Ross Creek City-Port Interface areas to improve amenity, improve public access to the waterfront and support commercial, tourism and recreation opportunities. Protection of current and future port operations. |
| <p>Outer Harbour Road Network Phased development of the road network for the Outer Harbour staged to meet demand.</p> | <ul style="list-style-type: none"> Outer Harbour development. Increased cargo volumes | <ul style="list-style-type: none"> The road layout will be aligned to suit the preferred road access route via the EAC. Layout suitable for access by B-Double trucks and road trains. |



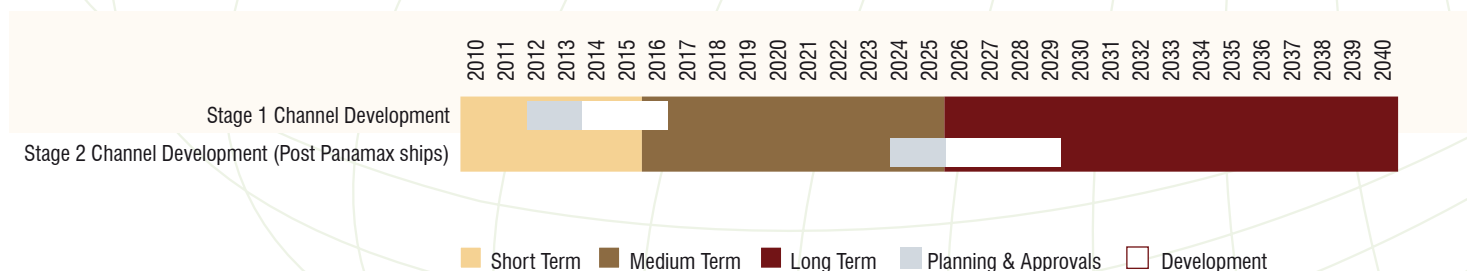


Navigation

Channel upgrades are planned to take place as part of the port development to align with global shipping trends. Two stages of channel development are envisaged.

Channel Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|---|---|--|
| <p>Stage 1 Channel Development Upgrade the Sea and Platypus channels by deepening (and localised widening) to improve navigation and increase service levels for Panamax ships.</p> | <ul style="list-style-type: none"> Increased trade using deep drafted Panamax ships. To improve access to Inner Harbour. | <ul style="list-style-type: none"> Improved navigation and capacity of the port to accept increased ship sizes, thereby making the Port of Townsville attractive for major new projects/trades. Improved berth utilisation and reduction in ship delays. |
| <p>Stage 2 Channel Development Upgrade the Sea and Platypus channels by widening and deepening for Post Panamax ships.</p> | <ul style="list-style-type: none"> The future demand for Post Panamax shipping to use the port which will be largely due to high throughput bulk trades. | <ul style="list-style-type: none"> Improved navigation and capacity of the port to accept increased ship sizes making the Port of Townsville attractive for major new projects/trades. Improved berth utilisation and reduction in ship delays. |



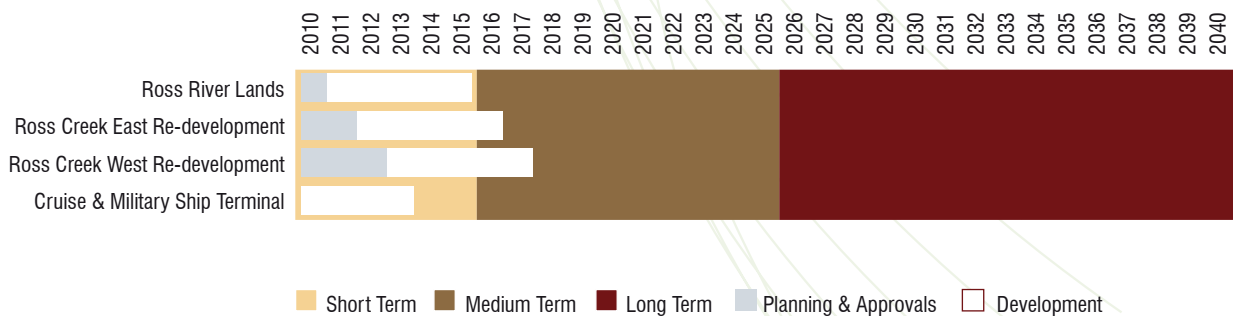
Community Identity and Diversity

Key initiatives incorporated into the plan include waterfront developments on the east and west of Ross Creek on the west bank of the Ross River.

These projects will help ensure compatible uses exist in the interface areas of the port and city to ensure that both can continue to grow effectively while minimising negative impacts on each other. The associated projects will also generate premium commercial activity for waterfront lands that have previously been unused, or that are being used for operations that are no longer appropriate.

City-Port Developments & Timeframe

| Project and Description | Key Drivers | Benefits / Opportunities |
|--|---|--|
| <p>Ross River Lands Redevelopment of waterfront lands in Ross River as industrial and commercial marine activities are relocated and consolidated in a new facility downstream of the new bridge to be constructed across Ross River.</p> | <ul style="list-style-type: none"> A fixed low level bridge planned over the Ross River for the Eastern Access Corridor will restrict access by upstream marine users. | <ul style="list-style-type: none"> Opportunity to redevelop Ross River City-Port Interface areas to improve amenity, improve public access to the waterfront and encourage compatible development opportunities. Protection of current and future port operations. Relocation of commercial and industrial marine activities to a new marine precinct. |
| <p>Ross Creek East Redevelopment Redevelopment of waterfront lands in Ross Creek East as industrial and commercial marine activities are relocated and consolidated in a new facility in Ross River.</p> | <ul style="list-style-type: none"> Relocation of commercial and industrial marine activities to a new marine precinct. Improve amenity of area to ensure compatibility between urban/commercial/tourism activities and port operations. Improve commercial use of lands. | <ul style="list-style-type: none"> Opportunity to redevelop Ross Creek City-Port Interface areas to improve amenity, improve public access to the waterfront and encourage commercial, tourism and recreation opportunities. Protection of current and future port operations. |
| <p>Ross Creek West Redevelopment Redevelopment of waterfront lands in Ross Creek to optimise commercial use of the land and improve public access to the waterfront whilst ensuring protection of current and future port operations.</p> | <ul style="list-style-type: none"> Improve commercial use of lands. Improve amenity of area to ensure compatibility between urban/commercial/tourism activities and port operations. | <ul style="list-style-type: none"> Opportunity to redevelop Ross Creek City-Port Interface areas to improve amenity, improve public access to the waterfront and encourage commercial, tourism and recreation opportunities. Protection of current and future port operations. Relocation of public boating facilities to dedicated facilities with improved access and capacity. |
| <p>Cruise & Military Ship Terminal New dedicated cruise and military ship terminal on the Western Breakwater.</p> | <ul style="list-style-type: none"> Growth in cruise and military shipping. Inadequate capacity of existing port infrastructure to meet future cruise and recreational military shipping | <ul style="list-style-type: none"> Alleviate lack of capacity of Inner Harbour from current cruise and recreational military shipping. Dedicated facility to attract and grow tourism with economic benefits for the City and Region. Opportunities for alternative uses of the berth when not required for cruise or military shipping. |

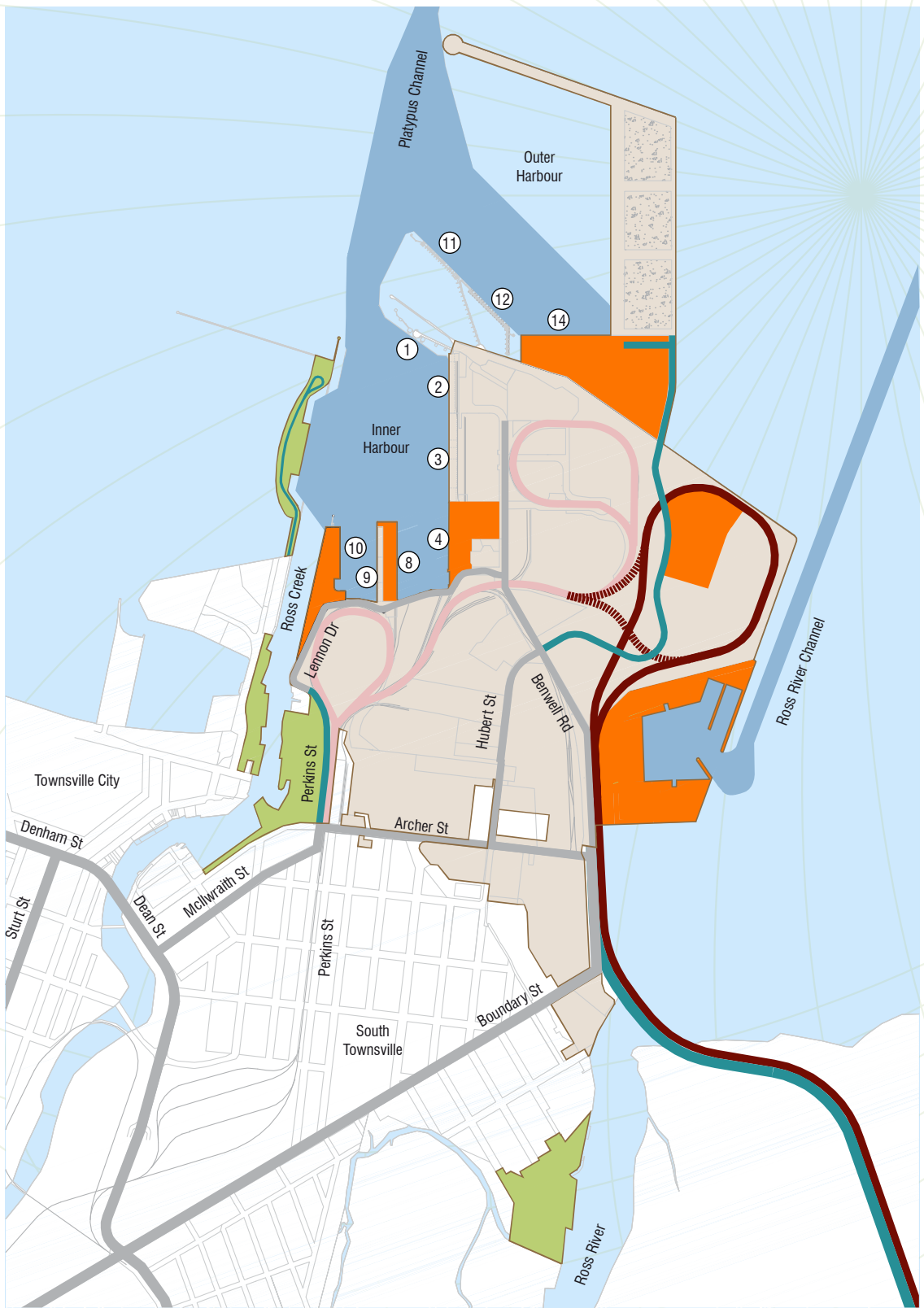


Cape Cleveland

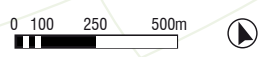
Presently there is no identifiable need to develop port infrastructure at Cape Cleveland within the PDP planning horizon. The justification to develop a new port at this location will require new large volume trades requiring deep water access for Post-Panamax or cape sized ships. Furthermore, beyond the planning horizon, increasing urban development could be a consideration for potential port sites such as Cape Cleveland.

POTL regards future port development at Cape Cleveland as strategic in the long term due to the scarcity of potential deep water access sites in the region. Planning for such infrastructure will require extensive investigations to determine suitability (environmental, social, connectivity etc.) and feasibility assessments in order to determine the commercial viability of such developments.

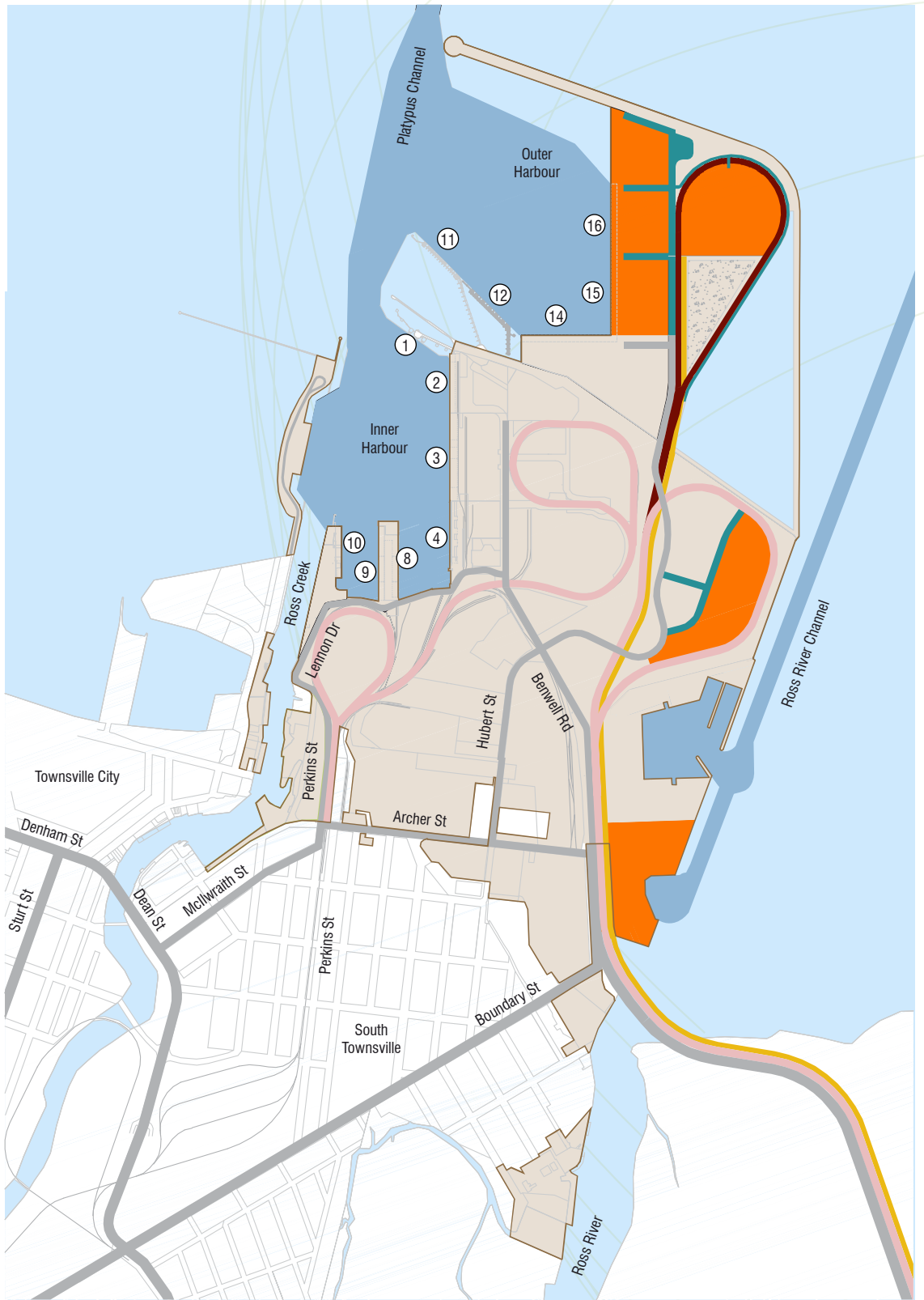
-  Port Land
-  Port Developments
-  City-Port Interface Projects
-  Shipping Channels
-  New Major Access Roads
-  Existing Major Access Roads
-  New Railway
-  Temporary Railway
-  Existing Railway
-  Berth No.



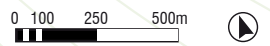
Short Term Port Vision 2010-2015











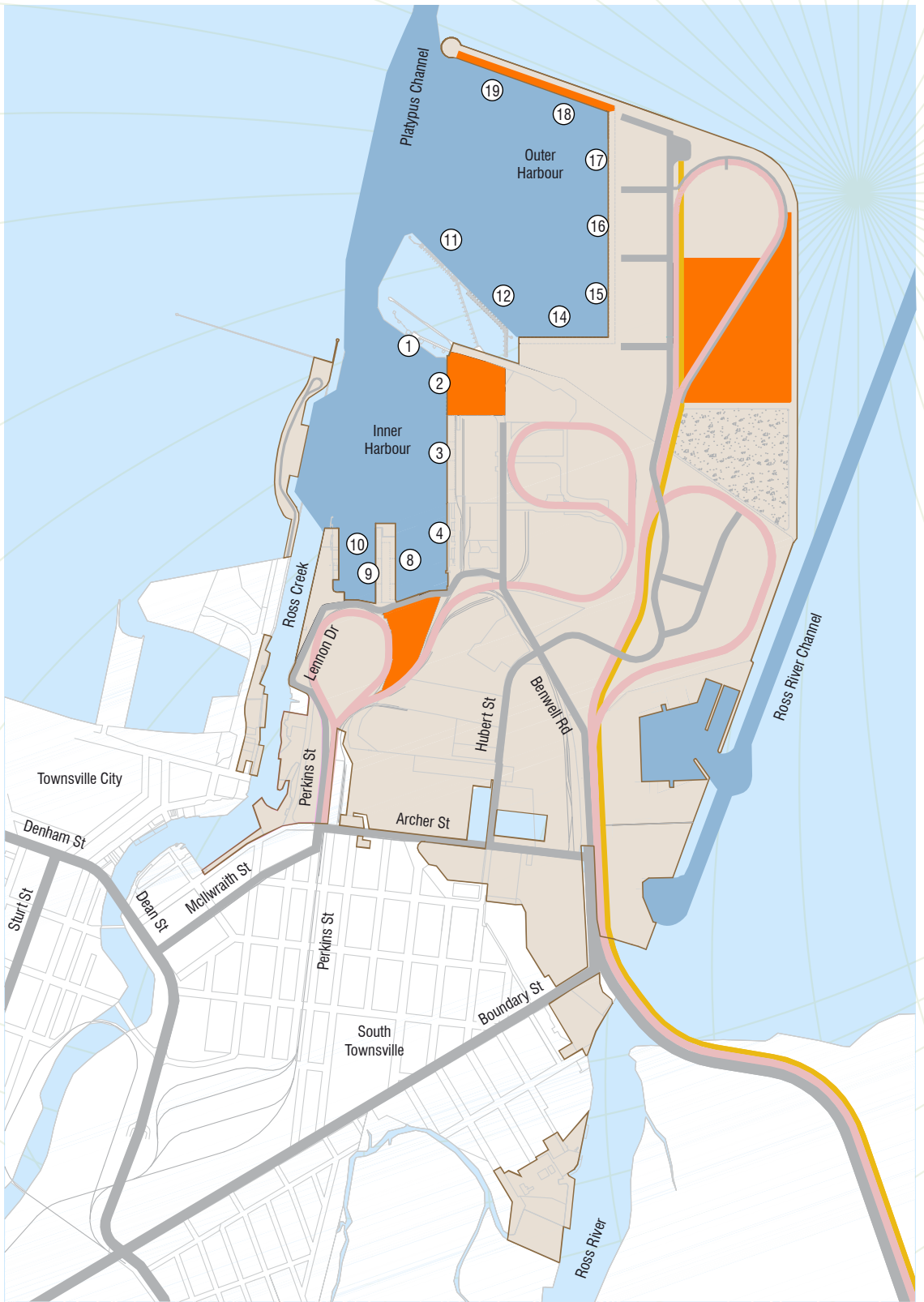
- Port Land
- Port Developments
- Shipping Channels
- New Major Access Roads
- Existing Major Access Roads
- Services Corridor
- New Railway
- Existing Railway
- Berth No.



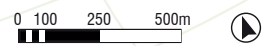
Medium Term Port Vision 2015-2025



-  Port Land
-  Port Developments
-  Shipping Channels
-  Existing Major Access Roads
-  Services Corridor
-  New Railway
-  Existing Railway
-  Berth No.



Long Term Port Vision 2025-2040





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