

COASTAL INFRASTRUCTURE REPAIRS AND UPGRADES TO MARITIME ASSETS ON CROWN LAND – PLANNING FOR THE FUTURE

Background

Crown land in the coastal zone is of particular importance to the NSW community. Most open coast beaches are Crown Land, together with a multitude of reserves that provide public access to rivers, estuaries and harbour foreshores. The beds of most waterways are Crown Land, together with the sea bed to the three nautical mile limit (5.5km).

Regional maritime infrastructure under the responsibility of Crown Lands extends along the NSW coastline from Tweed Heads to Eden and includes 25 coastal harbours (outside the commercial Ports of Newcastle, Sydney, Botany Bay and Port Kembla), 21 trained river entrances (including breakwaters), 14 lighthouses and 8 hard rock quarries.

Profile of Maritime Assets

Many of the river entrance breakwaters were built some 100 years ago to provide improved access for coastal trading vessels.

From around the mid 1950s the NSW Government began developing a network of small coastal harbours along the NSW coast primarily to assist a growing commercial fishing industry and support the economy of regional areas.

Approximately 60% of the portfolio value comprises breakwaters and training walls and there are some 70 wharves and jetties.

Existing infrastructure is in need of repair due to age and the harsh marine environment.

This infrastructure has an estimated replacement value of over \$1.5 billion.

Coastal Infrastructure Program Objectives

The program objectives are:

- Provide for safe effective operation and enhanced public access.
- Respond to the demand for increased recreational and tourism opportunities.
- Contribute to regional economies through appropriate development.
- Achieve improved conservation outcomes on Crown and surrounding land.
- Implement management strategies that are financially and operationally sustainable.

Principles of Management

The principles of management underpinning the program include:

- Aim to ensure there is a network of ‘safe harbours’ at regular intervals along the entire length of the NSW coast.
- Critically assess the costs and benefits of maintenance and development proposals to prioritise effort to ensure optimal public value.

- Work with local government in the planning and development of key coastal sites to provide economic, recreational and environmental benefits.

Alignment with NSW 2021 Goals

The program is critically aligned to NSW 2021 Goals:

- 1. Improve the performance of the NSW Economy.
- 3. Drive economic growth in regional NSW
- 19. Invest in critical infrastructure.
- 28. Ensure NSW is ready to deal with major emergencies.

Alignment with Crown Lands Strategic Plan

The program is aligned to Crown Lands Strategic Plan actions:

- A1. Implement risk management strategy and total asset management (TAM) system for built assets responsibilities to deliver improved asset management outcomes.
- A2. Maintain and invest in Crown portfolio heritage assets.
- A4. Build and implement a contemporary coastal harbour management model.
- A5. Implement prioritised asset maintenance program for major maritime infrastructure to reflect safety, serviceability and functional needs.
- A14. Develop effective community and stakeholder relations in the use of Crown Lands.
- A29. Ensure Crown Lands interests are addressed in responding to climate change.

Benefits of the Program

The benefits of the program include:

- Provision of critical maritime infrastructure for coastal regional communities to support fishing, tourism, etc.
- Significant risk reduction to maritime facilities that have regional commercial as well as high community value, the commercial charter and fishing industries, public and recreational amenities, public and navigational safety and regional employment.
- Extended life of assets (by up to 50 years or more)
- Avoid the need to restrict access to a number of very popular tourist destinations and widely used maritime assets (primarily jetties, moorings, wharves, breakwaters and training walls).

Program Funding

Crown Lands has an approved Treasury allocation of \$48.311m covering works to be completed during the period 2011 to 2015 to address critical problems arising from aged maritime infrastructure.

Over the past 2 years some \$20m has been expended on major and minor work improvements, with a further \$28m planned over the next 2 years covering 2014 to 2015.

This level of funding equates to approximately 0.75% of asset value per annum.

This level of funding is low when compared with other port and maritime agencies which spend around 2% of asset value for maintenance pa.

Description of Works

The Coastal Infrastructure Program includes multiple individual projects. The program is divided into Major and Minor works:

- Major works include structural works to repair wharves and jetties, replacement of moorings, breakwater and training wall repairs as well as navigation dredging.
- Minor works include maintenance and replacement of port services, minor repairs to structures and facilities and works such as programmed replacement of fenders, bollards, road surfacing and the like.

Key Challenges

The key challenges of the program are:

- Ensuring that coastal infrastructure responds to changing economic and community demands (reduction in commercial fishing, increased tourism and enhanced public access) whilst recognising resource limitations and environmental influences (such as sea level rise).
- Maintaining infrastructure that is nearing the end of its useful life with limited funding streams.
- Using project management systems to prepare accurate financial forecasts and reports and ensure that projects are delivered effectively to meet time, cost and quality targets.
- Capitalising on potential opportunities for development of port areas.

Need for Program

The need for the program includes:

- Implementation of the proposed works is essential to the ongoing commercial activities of a wide range of commercial and tourist/recreational activities. Tourism in coastal regions is a \$7.7 billion industry involving some 27,000 businesses. Commercial fishing turnover exceeds \$90 million, with recreational fishing adding a further \$400 million.
- In many cases, the marine infrastructure assets of Crown Lands are the essential fabric around which local coastal communities have developed, and as such, they underpin this societal, tourism and fishing activity. Maintaining these assets is critical to the regional economies.
- If no additional expenditure is provided, this would entail continuing use of the infrastructure by commercial and recreational users until the assets become unserviceable.
- This would have further implications resulting in increased risks and loss of rental income for assets currently leased or licensed.

Planning for the Future

It is proposed to make a further submission to Treasury covering progressive repair over a ten year period (2015-25) staged according to areas of most need.

The first 4 years (2015-19) seeks an additional \$45m with the subsequent 6 years (2020-25) subject to more detail analysis and estimation. The program is based on a Total Asset Management System (TAMS). Projects have been scored and ranked in order of priority based on multi-criteria analysis. Criteria included:

- Condition of asset.
- Class of Port (Class 1 being of highest importance and Class 4 lowest) and degree of Safe Haven.
- Contribution to NSW 2021 Goals.
- Risk to users and the environment.
- Value in extending life of asset.
- Importance of asset to the community.
- Value to end users eg professional fishermen, charter and marina operators, recreational boaters, tourists, cruise ships etc.
- Value to direct customers eg government agencies and authorities, Councils, RMS, Water Police, NSW Fisheries, OEH, Customs etc.
- Capacity to meet changing needs of commerce, recreation and environmental changes such as sea level rise.
- Compatibility with existing or proposed strategic plans for immediate surrounds.

References

1. Crown Lands (2011), *Regional Marine Infrastructure, Risk Reduction / Industry Support, Treasury Business Case*.
2. Crown lands (2013), *Coastal Infrastructure Program (2015 to 2026) – Risk Assessment*.
3. Crown Lands (2013), *Coastal Infrastructure Program (2015 to 2026) – Project Rankings*.