



21 JANUARY 2025

Shire of Esperance

28 JANUARY 2025

SUPPLEMENTARY ITEMS



16. URGENT BUSINESS APPROVED BY DECISION

Item: 16.1

Bandy Creek Boat Harbour Dredging and Sand Back Passing

Author/s	Mathew Walker	Director Asset Management
Authorisor/s	Shane Burge	Chief Executive Officer

File Ref: D25/1991

Applicant

Internal

Location/Address

Esperance Bay

Executive Summary

For Council to consider committing to the 2025 Bandy Creek Boat Harbour dredging and sand back passing.

Recommendation in Brief

That Council

1. Commit to sand back passing for the 2025 Department of Transport Bandy Creek Boat Harbour dredging campaign;
2. Include the additional \$135,000 required in the 2024/25 budget review;
3. Commit \$375,000 to the 2025/26 annual budget; and
4. Authorise the CEO to enter into a Memorandum of understanding for the sand back passing with the Department of Transport.

Background

Coastal erosion in the Esperance Bay has been a significant issue for many years. Since the construction of the Esperance Port in the 1960's it has been exacerbated; which has interrupted the longshore sediment transport. This has led to the Shire continually renourishing the erosion hotspot, located from the Esperance Jetty Headland to Goldfields Road, at a rate of 20,000m³ on average annually through imported sand from inland via tucks.

In 2018 the Shire engaged BMT to look at how to best manage the coastal erosions in the Esperance Bay. From this study an innovative option was proposed being a Coordinated Bandy Creek Boat Harbour dredging and sand back-passing. In essence the Shire place approximately 20,000m³ of sand at the erosion hotspot every year and the Department of Transport dredge approximately 60,000m³ from Bandy Creek Boat Harbour, located 3.5Km to the East, every two years and pump the dredged sand 1Km east of the Boat Harbour. Combining these two operations by pumping the excess sand from the dredging to erosion hotspot would offer significant savings overall.

Following this report, the Shire engaged BMT to progress the option and partnered with the Department of Transport to undertake a trial Coordinated Bandy Creek Boat Harbour dredging and sand back-passing in 2021. The trial utilised a temporary 3.5km pipeline and three booster pumps successfully transport 45,000m³ of dredged sand.

Given the success of the trial, the Shire applied for and received grants from the State's Hotspot Coastal Adaptation and Protection grants and Federal Coastal and Coastal and Estuarine Risk Mitigation Program

to fund the installation of a permanent slurry pipeline. At the October 2022 Special Council Meeting, Council resolved the following:

That Council

1. Enter into Hotspot Coastal Adaptation and Protection Major Project Fund 2022/23 Funding Agreement for the Esperance Bay - Castletown Sand Back-Passing Infrastructure; and
2. Request the CEO to negotiate a collaborative operational framework for the future operations of the Sand Back-Passing Infrastructure with the Department of Transport.

The pipeline construction was completed in December 2024. The Shire is also progressing a collaborative operational framework for the future operations of the Sand Back-Passing Infrastructure with DoT and plan to use the first campaign as the test for this framework. To this effect, the plan is to operate under a Memorandum of Understanding (MoU) for the first dredging campaign before entering into a longer-term agreement. DoT are currently drafting the MoU

The Department of Transport (DoT) have their next dredging campaign scheduled for Bandy Creek Boat Harbour in March 2025. They require the Shire to commit to the sand back passing costs by the end of January 2025 to enable the necessary contractual arrangements to be made.

DoT are proposing a 60,000 m³ dredging campaign, with 42,000m³ disposed the erosion hotspot, with the remaining 18,000m³ pumped to the east of Bandy Creek Boat Harbour. It is estimated it will take 13 weeks to pump the 42,000m³ including contingencies. The forecasted cost to pump the 42,000m³, required for the erosion hotspot, is \$720,000 above the contracted rates dredging rates, plus allow for a \$30,000 contingency for a total of \$750,000. The breakdown of these costs is provided in attachment A. The additional costs are due to the need for:

- Two additional booster pumps;
- An excavator;
- A Spotter; and
- Other associated costs.

To proceed with the project, DoT are requesting the Shire cover the estimated \$750,000 above the contracted rates, they will accept this being paid next financial year.

Officer's Comment

The Shire currently budget \$350,000 per year to undertake sand renourishment via trucks, for approximately 20,000m³ of sand placed, this equates to roughly \$17.50 per m³. The cost to pump and place 42,000m³ of sand for \$750,000 is estimated at \$17.86. Officer sort a grant of \$188,000 from the Coastal Adaptation and Protection program to assist with the costs to back pass the sand for 2024/25, however were unsuccessful.

If Council commit to the sand back passing, it is recommended Council split this over this financial year and next financial year. Currently the Shire has \$240,000 remaining in budget for sand renourishment and would require the Shire finding and additional \$135,000 this financial year and commit \$375,000 to next financial year's budget.

If council do not wish to proceed with the sand back passing, we will be required to continue trucking sand in for the next two years. This may be problematic, due to the current sand source at Wylie Bay Landfill, being limited due to the expiry of clearing permits.

Officers recommend Council commit to the sand back passing as the cost are about break even, it will set us up for formalising a collaborative operational framework for future campaigns and will avoid the need for trucking sand in for two years.

For future campaigns and as part of the Federal Costal and Coastal and Estuarine Risk Mitigation Program, the Shire is planning provide the two additional booster pumps, this will reduce the ongoing operational costs. Officers will also seek to build into the collaborative operational framework a contribution from the State so that we do need to apply for grant funding each campaign.

Consultation

Department of Transport
BMT

Financial Implications

The financial implications arising from this report are

- Additional \$135,000 required for the 2024/25 annual budget
- A forward commitment of \$375,000 in the 2025/26 annual budget.

It is recommended the additional \$135,000 be included in the budget review currently underway, with savings found from other projects.

Asset Management Implications

Nil

Statutory Implications

Nil

Policy Implications

Nil

Strategic Implications

Council Plan 2022 – 2032

Planet - Outcome 4. The natural environment is valued, protected and enjoyed

Objective 4.1. Sustainably care for, preserve and enhance natural habitats.

Priority Project 4.1.6. Evaluate the sand back-passing trial at Bandy Creek Boat Harbour to establish if this solution will help to manage beach erosion in Esperance Bay.

Environmental Considerations

Nil

Attachments

- A. Bandy Creek Boat Harbour - Dredging and Sand Back Passing - Cost Breakdown - *Confidential*

Officer's Recommendation

That Council

1. **Commit to sand back passing for the 2025 Department of Transport Bandy Creek Boat Harbour dredging campaign;**
2. **Include the additional \$135,000 required in the 2024/25 budget review;**
3. **Commit \$375,000 to the 2025/26 annual budget; and**
4. **Authorise the CEO to enter into a Memorandum of understanding for the sand back passing with the Department of Transport.**

Voting Requirement

Absolute Majority

17. MATTERS BEHIND CLOSED DOORS