

Main Beach Shoreline Project



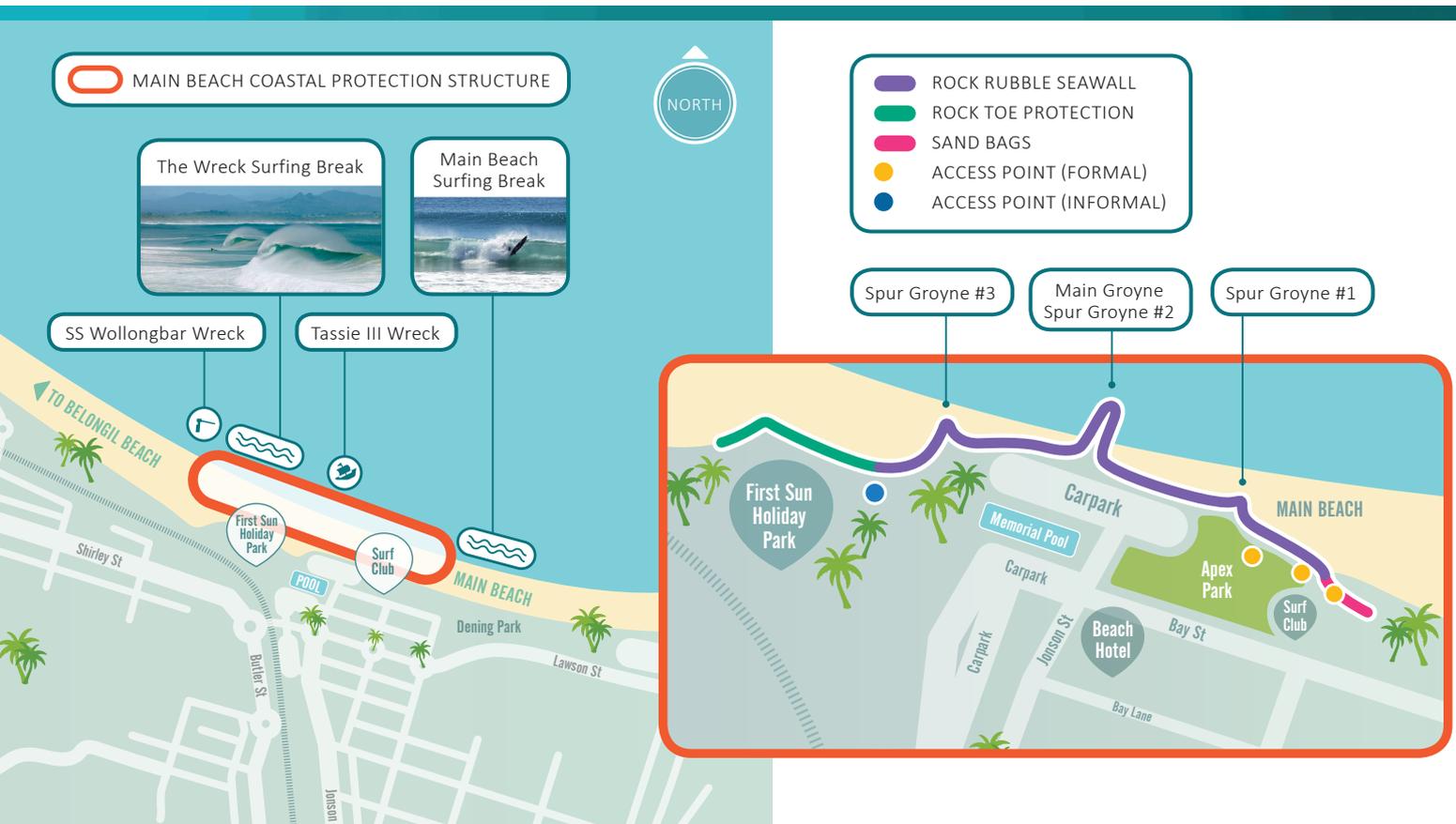
The existing coastal protection structure between the First Sun Holiday Park and the Byron Bay Surf Life Saving Club at Main Beach, Byron Bay, was designed to protect the town centre from the threat of coastal erosion. First constructed in the 1960s the structure is degraded and needs improvement. Council has commenced the Main Beach Shoreline Project to enhance the town's coastal protection while improving public safety and amenity so that everyone can enjoy Byron's iconic Main Beach into the future.

Council has engaged Bluecoast Consulting Engineers to deliver the first stage of the Main Beach Shoreline Project. This first stage is focused on finding options and solutions for modification of the structure that will give the best possible outcomes for Main Beach and adjacent coastlines in line with the following project objectives:

1. To provide adequate protection to the Byron Bay town centre against current and future coastal hazards.
2. To mitigate adverse current and future risks from coastal hazards, taking into account the effects of climate change.
3. To mitigate impacts on coastal processes (e.g. down-drift effects) through reduction of the project footprint.
4. To improve the structural integrity of the structure.
5. To improve public safety around the structure.
6. To enhance recreational amenity, public access and use of the foreshore around the structure.

Council will be working with stakeholders and keeping the local community informed throughout this project.

For updates visit Council's website: www.byron.nsw.gov.au/main-beach-shoreline-project.



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Project phases

A rigorous four-phase approach will be undertaken by a project team of world-class professionals who will assess and analyse the most cost effective options for modification of the structure to find the best solution.

Phase 1

Baseline Understanding

A comprehensive review of all relevant previous studies, data sets and the current condition of the coastal structures will be completed to provide a baseline understanding for the project including the community and cultural values of the area. The team will monitor shoreline change as well as local waves, currents and sea levels and simulate waves that occurred over the last 30 years. This will help understand the underlying coastal processes driving increasing erosion and flooding risk. Combining this information will highlight the opportunities and constraints of the proposed modification of the coastal structure.

Phase 2

Development of Concept Design Options

This phase will determine a set of suitable concept designs that offer a range of viable solutions.

A standardised assessment will be undertaken that considers the positive and negative aspects of each option using a wide range of criteria - including coastal protection, the natural environment, community values, ecology and economics. Key stakeholders will be invited to be part of the evaluation process, which in collaboration with the specialist team will select a few of the most suitable options to take forward for detailed assessment.

Phase 3

Detailed Assessments of Modification Options

By applying robust coastal science, including advanced computer modelling, the performance of the selected options will be predicted. To ensure confidence in the predicted outcomes a multiple lines of evidence approach will be adopted combining science, real data and engineering.

The project team includes local architects to build on the learnings from the Byron Bay Town Centre Masterplan as well as construction experts that will bring value to developing the construction methodology and costs.

Phase 4

Evaluation and Determination of Preferred Option

A second-pass evaluation will then inform the selection of the preferred modification option for the existing coastal structures. Following engagement with the wider community, economists, the engineering team and a subject matter expert panel, a preferred concept design will be selected. A detailed cost benefit assessment will be undertaken to help inform the final investment decision by Council.

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