



SOUTH NEW BRIGHTON, SOUTH OF BRIDGE STREET

Area	South New Brighton - south of Bridge Street
Issue	Risk of flooding and erosion south of Bridge St, including of South New Brighton Park.
Option	New bund close to the estuary edge with repair, replacement or infill of existing erosion management structures.
Plain English explanation	<p>A bund that's constructed close to the estuary edge, from south of Bridge Street to the boardwalk, with erosion management structures that are repaired, replaced or infilled, would provide the same or a greater level of flood management as other areas in Ihutai/Estuary and reduce the risk of further erosion in of the estuary edge. It would reduce the risk of flooding in South New Brighton Park and for houses and community facilities (campground, tennis club etc) that are in or near the park. There would be an opportunity to put a path along the top of it. This structure could be raised in the future with some modifications if required.</p> <p>However, because it would be a new structure on the landscape, it would make it more difficult to access the estuary edge in some locations. There would be no natural beach area and very little opportunity to plant on the bund.</p> <p>We would need to do further investigations to determine what method of erosion management would be best suited for where. It is likely the whole area would have a range of different forms of erosion management rather than having only one form. This option is likely to be more expensive than other options for this area and would require a number of consents (with a lot of uncertainty about whether those consents would be granted). As a consequence, it could take a long time to implement. The estimated total cost is approximately \$2.6-3.2 million.</p>
Description	<p>A bund would be constructed close to the estuary edge from south of Bridge St to the boardwalk. The bund would reduce the risk of flooding in South New Brighton Park, and subsequently houses and communities facilities in or near the park.</p> <p>The bunds' height would be no less than RL 11.4m which is the height of the Beachville Road sea wall and the Kibblewhite Street stopbank and is higher than the McCormacks Bay causeway (RL 11.2m).</p>



	<p>The bunds would need to be constructed to higher specifications than a bund further inland to be able to withstand wave impact. Because of the location close to the estuary edge options for planting on the bund would be limited. A shared path could be constructed on top but this may mean constructing a wider bund than required for flood management which would increase the cost. There would be sections that would be challenging to construct because of existing structures such as roads and carparks, or where access and views would be restricted because of the bunds.</p> <p>Where there have been damaged existing erosion management structures (reno mattresses, gabion baskets) these would be replaced, repaired, or filled in with other material (such as soil or rock) to lower the current risk based on the updated 2018 high tide statistics. They may be bigger and higher than what was there before, or a different method as appropriate. There may also be sections of beach re-nourishment included where this is more appropriate, and areas where no additional erosion management is required.</p>
Estimated Cost	Total cost approximately \$2.6-3.2 million (approximately \$2-2.5 million for the bund, and \$600,000 -700,000 for erosion repair).
Delivery Timing	More than 2 years to allow for investigations, design, impact assessments and consenting before construction could begin. Construction could take another 12 months, or could be staged depending on consent conditions.
Implementation Requirement	<p>No assessment or design work has been undertaken for a bund in this location. Erosion management concept plans have been prepared. Detailed investigations, design and costings would be required for the bund, and for erosion management which would also include deciding which structures need fixing or replacing and the method appropriate in each location.</p> <p>Construction times may be impacted by the need to avoid bird-nesting season, which runs from September to February.</p>
Consenting Requirements and Compliance with Statutory Documents	<p>This option would likely require non-complying resource consents from both Environment Canterbury and Christchurch City Council for works that are within the Coastal Marine Area, adjacent to Ihutai/Estuary and the area identified as Ngā Wai Coast (Te Ihutai).</p> <p>Because of the proximity to the estuary edge it may be challenging to obtain resource consents, although in some places the erosion</p>



	<p>management could be considered as a repair or maintenance of an existing structure.</p> <p>Any consent application would require detailed assessment of the effects on the natural environment and cultural values, and consideration of alternatives.</p> <p>This option is inconsistent with the South New Brighton Reserves Management Plan which directs stopbanks to be setback from the river and estuary edge and promotes natural erosion defences.</p> <p>Ihutai/Estuary is a Statutory Acknowledgement area and is of high significance to Ngāi Tahu. Ngāi Tahu notes that hard protection structures close to the estuary edge do not allow for natural processes and the option does not provide for the establishment of indigenous planting. During the consenting process engagement would be required with mana whenua and with the Te Ihutai Ahu Whenua Trust.</p>
<p>Considerations</p>	<p>This option does not allow for saltmarsh and other coastal habitats to migrate and change to respond to changes in water depths since the earthquakes. As a result, there is a higher potential impact on biodiversity and intertidal areas.</p> <p>Although reno mattresses can encourage beach development and reduce the risk of erosion, they can also have a negative effect on natural character, amenity value, species diversity, bird roosting and feeding areas, and intertidal habitat zones. Some options, such as applying loose cobbles may have less impact, and more opportunity to maintain habitat than raised reno mattresses and vertical walls.</p> <p>Because a bund on the estuary edge is more exposed to natural processes, there would be more ongoing maintenance requirements than for a setback bund.</p>
<p>Community Input</p>	<p>This option links to community options requesting protection or repair of the estuary edge, flood risk protection; and repair of the gabion baskets.</p>