

Terrestrial and marine environment

Beyond the artificially deepened shipping channels, Botany Bay is a unique area of considerable ecological significance due to (a) its location in a biogeographical overlap with conditions suitable for both warm climate and cool climate fauna, (b) the broad shallow water enabling the growth of substantial patches of seagrass which provide major sources of food and shelter, and (c) its adjoining isolated wetlands and sheltered beaches. A remarkable number of species of marine fauna and waterbirds have therefore been recorded in the area, including many officially listed as rare, endangered and vulnerable. Part of the Bay near Towra Point (within 1 km of the shipping channels) is protected under the Ramsar agreement as a wetland of international significance. The ecological values of this and the few other remaining habitat areas such as Penrhyn Estuary, Mollineaux Point and Silver Beach, have been increased through the destruction or severe disturbance of many other parts of the Bay by past development.

The EIS prepared for Sydney Ports Corporation has failed to inform readers and decision-makers of the above essential aspects of the marine environment of Botany Bay. Furthermore, it provides no satisfactory assessment of the ecological impacts of the proposal. The additional channel dredging, extensive pile-driving and structural work would result in seagrass removal, sediment mobilization, bed readjustment, disturbance of contaminated groundwater, the enclosing of Penrhyn Estuary and a greater frequency of large container ships entering the Bay. However, the ecological impacts of these are all virtually dismissed by the EIS with no scientific justification and no supporting evidence. The proponent apparently believes the impacts can be adequately compensated for by a vague and untested 'Ecological Plan' based on ideas used overseas for quite different ecosystems and conditions. We have no confidence at all in such a plan.

Hydrodynamics of Botany Bay

As much of the sediment forming the bed and shores of Botany Bay has been destabilized by past development, the proposed new dredging and increased shipping movements would undoubtedly result in some modification or readjustment of the existing bed and shores. We have been advised that the methodology for predicting such changes is unreliable unless it is based on highly detailed observations over a sufficient period of time to sample rare but critical weather conditions. Unfortunately, the mathematical modeling carried out for the EIS is not based on such observations but depends on limited data and arguable assumptions. It appears to be no more reliable than the hydrodynamic modelling carried out in the 1990s for the Sydney Airport Third Runway EIS which failed to predict significant erosion and deposition in the Bay following that development. We therefore assign little credibility to the assessment of hydrodynamic effects in the port expansion EIS and are concerned that more significant effects are possible with critical weather conditions. We believe the resulting changes in the Bay's remaining seagrass, wetlands and beaches could damage or destroy their considerable recreational, aesthetic and ecological values.

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