

## Coastal Adaptation Decision Pathways Project (CAP)

The Sydney Coastal Councils Group (SCCG) “Assessment and Decision Frameworks for Sea Wall Structures” project aims to assist Local and State Governments to evaluate the robustness and condition of existing seawalls for coastal climate change protection and outline possible options for further upgrades. Templates will be developed for assessing suitability, monitoring and maintenance to determine investment strategies for coastal defences. The project is being delivered in partnership between the SCCG and the Australian Government’s Department of Climate Change and Energy Efficiency (DCCEE) with funding through the Coastal Adaptation Decisions Pathways Project (CAP) grant.

### Regional Needs

Sydney’s coastline, estuaries and waterways are facing increasing environmental, social and developmental challenges. The SCCG and its Member Councils have been, and will continue to be, pro-active in increasing awareness and insight regarding these challenges and by providing appropriate mechanisms to assist Local Government decision making in a changing climate. This project is being led by the SCCG.

The SCCG is represented by each of the 15 Local Government Authorities in Sydney that have coastal and / or estuarine boundaries: Botany Bay; Hornsby; Leichhardt; Manly; Mosman; North Sydney; Pittwater; Randwick; Rockdale; Sutherland; Sydney; Warringah; Waverley; Willoughby; and Woollahra. SCCG provides a coordinating body with an existing track record of research and coordination on related issues in this region.



**Figure 1:** Seawalls along Clontarf Beach, Sydney Harbour  
Individual seawalls with varying crest and toe heights constructed along a MHW property boundary. They include sloping and vertical structures constructed from brick, lightweight concrete blocks, concrete and stone. Photo Credit: Coastal Environment Pty Ltd, 2011.

### Key Project Outcomes

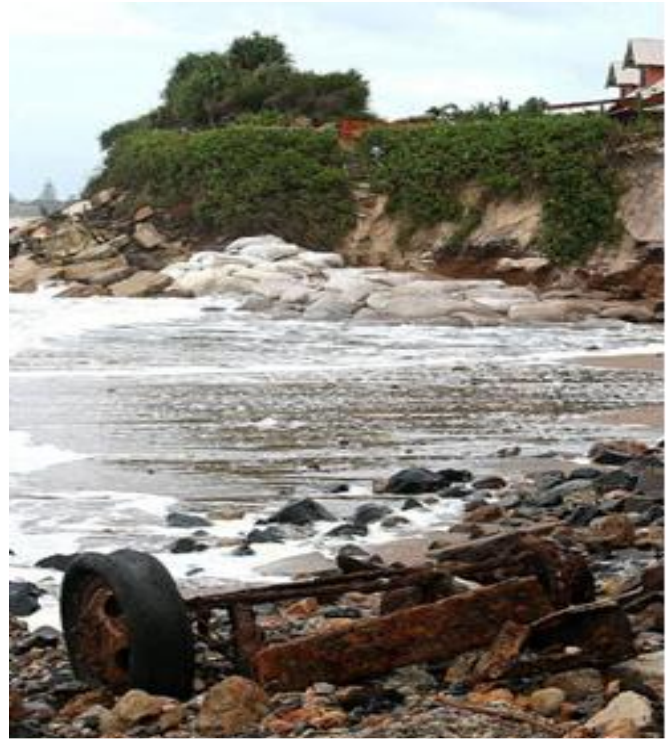
The key components of the “Assessment and Decision Frameworks for Sea Wall Structures” Project include:

- On-ground assessments of the effectiveness of structures at a number of locations, including but not limited to Sydney and the Gold Coast;
- Preliminary economic analysis of various decision pathways that may determine the future use of a protection strategy and its impact on coastal development options;
- Reporting of geotechnical issues and the impact of sea level rise (e.g. higher water tables behind the structure, higher average and extreme sea levels) on existing structures;
- Development of guidance material to assist Councils in deciding the effectiveness (or otherwise) of an existing structure for coastal protection;
- Guidance towards the development of a national standardised approach for upgrading existing seawalls to accommodate future sea level rise; and
- Preparation of technical papers for coastal management experts and managers.



## About the Project

Existing seawalls and protection structures exist at many locations where construction details are unknown and the capacity of the structures to withstand existing (or future) storm and inundation events is not well understood. Sea wall and asset owners and managers (usually Local Councils) are faced with determining development applications in areas protected by structures of unknown quality and origin (some approved and some not). Frequently there is conflict between the coastal managers and the community who have varying impressions of their effectiveness. The project will be overseen by a reference group comprising of expertise from local government, state government, universities with coastal management expertise and industry specialists. The project will develop guidelines to assist Local Government determine the condition of existing structures (using remote & innovative techniques as applicable); define the key design parameters; discuss the way these may change into the future; outline opportunities for upgrading existing structure as appropriate; and identify key triggers for upgrading/replacement. Outputs from the project are intended to be practical and of direct application by Local Government. This Project is scheduled to be completed in 2012.



**Figure 2:** Belongil Spit 2009. Seawalls may be constructed from a range of materials that are not always appropriate or effective.  
Photo credit: David Clark.

## Project Management

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## Project Partners



*Funding has been provided by the Australian Government represented by the Department of Climate Change and Energy Efficiency. The Coastal Adaptation Decision Pathways project is an Australian Government Initiative.*



**Australian Government**  
**Department of Climate Change  
and Energy Efficiency**