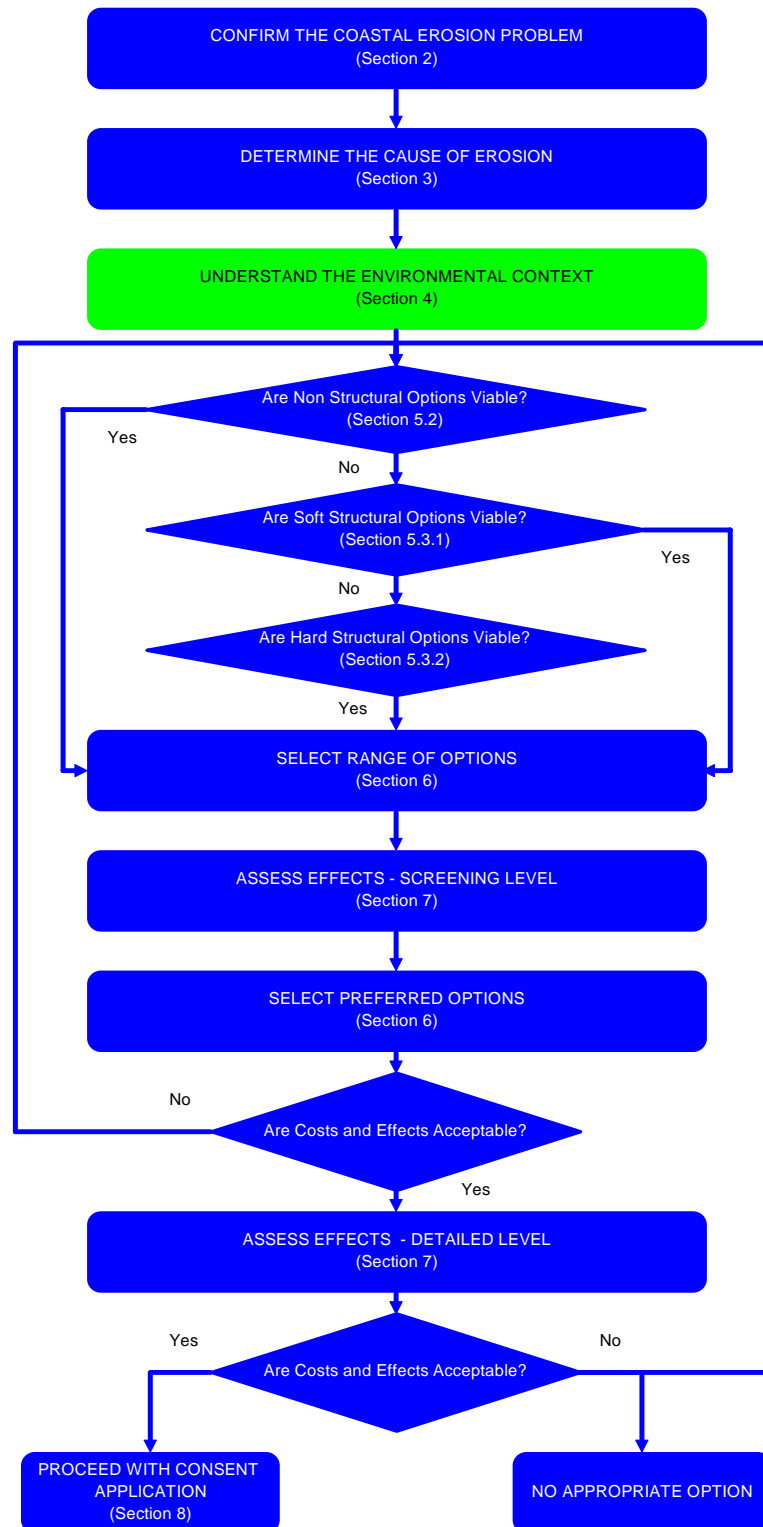


COASTAL EROSION MANAGEMENT MANUAL



SECTION 4 - UNDERSTAND THE ENVIRONMENTAL CONTEXT

EXPECTED OUTCOME OF THIS SECTION:

TO UNDERSTAND THE CONTEXT OF YOUR PROBLEM.

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4. UNDERSTAND THE ENVIRONMENTAL CONTEXT

Where the coast is eroding the fundamental management problem is how to manage the natural and physical resources of the coastal environment in a way which enables people and communities to provide for their social, economic and cultural well-being, and which preserves and protects the natural character from inappropriate subdivision, use and development. To identify an appropriate response to a coastal erosion management issue an understanding of the environmental context of the site is required.

This section provides guidance on how to identify the environmental context of a site.

*Refer Section A,
What to Look for on
a Site.*

The environmental context of a site is largely developed through site inspections (including visits to similar sites in the vicinity) and desk top studies (e.g. consideration of previous studies and policy documents).

4.1 REGIONAL CONTEXT

Environmental context should be considered on a site specific basis and on a regional level. On a regional level, the context of Auckland's coast can be established by considering four elements:

- factors of particular value;
- the physical processes that affect the site;
- the level of development; and
- existing erosion management works.

*Refer Section C,
Coastal Processes
and Environment*

4.1.1 AREAS OF VALUE

*Refer Section F.3,
Effects to be
Considered.*

The following are key values found within the coastal environment that need to be examined to establish the environmental context of a site. It is important that these values are protected and that actual and potential adverse effects on the values, due to coastal erosion management, are avoided, remedied or mitigated.

- **Natural Character** - the natural character of an area is derived from natural elements and features (as opposed to those derived from human activities) including the dynamic functioning of the physical coastal processes, the presence of indigenous vegetation along the coastal margin, and unmodified coastal landforms (e.g. cliffs and beaches). Much of the original character of the Auckland region's coastal environment has been modified by human activity, nonetheless it has retained significant natural character and elements of natural character which remain are worthy of recognition and protection.

- **Landscape** - the visual and scenic qualities of coastal landscapes contribute to amenity, recreational, and tourism values, and thereby enhance the social and economic wellbeing of the community. Landscapes are not only important for their scenic qualities but also as representative examples of the landscape heritage of the Region.
- **Natural features and ecosystems** - significant landforms and geological sites are defined as natural features. They record and are formed by past and present geological and geomorphological processes and give the coastal environment of the Auckland region its unique physical form and identity. They are also of visual importance, being key elements in the coastal landscape, and contribute to the recreational and amenity values of the coast.

The range of habitats created by the combinations of environmental gradients and physical forms support a rich array of terrestrial and marine species. The continued health of coastal ecosystems is a fundamental prerequisite for maintaining the life-supporting capacity and the quality of the coastal environment. This in turn contributes to the use and enjoyment of the coastal environment, thus providing for the cultural, social, and economic well-being of people and communities.

- **Nga Take Takutai Tuturu Mo Tangata Whenua** (Coastal matters of significance to Tangata Whenua) - the coastal marine area and associated resources comprise some of the most important taonga to Maori. The wellbeing of the coastal marine area and associated resources, and the ability to use, develop and protect such resources according to Maori culture and traditions is fundamental to all aspects of Maori wellbeing. Accordingly it is recognised by Tangata Whenua that all of the coastal marine area has characteristics of special spiritual, historical, and cultural significance to them.
- **Public access** - New Zealand is distinguished by the fact that most of the coastal marine area is land of the Crown, and generally available for free public use and enjoyment. Access to the coast is important to the local, regional and national communities, for a variety of cultural, recreational, educational, scientific and commercial reasons. While structures or activities along the landward margin of the coast often enhances access they may also result in obstruction or loss of access to, within, or along the coast.
- **Cultural heritage** - the Auckland region has attracted settlement for many centuries. Throughout this period the coastal environment has been extensively modified by cultural influences, making cultural heritage an important element in the character of the Auckland coastal environment. Many cultural heritage sites, buildings, places or areas in the coastal environment are under threat of being compromised or lost through increasing pressure for subdivision, use and development.
- **Land Use** - areas which are highly used by the community (e.g. for infrastructure, recreational purposes).

Values of these types are largely identified in Regional and District plans and policy documents. For example the Auckland Regional Policy Statement (RPS) identifies areas

of Significant Natural Heritage, Areas of Special Value and Regionally Significant Landscapes. The Auckland Regional Plan: Coastal also identifies Regionally Significant and Outstanding Landscapes, as well as Coastal Protection Areas, Tangata Whenua Management Areas and Areas of Significant Conservation Value. Cultural values, particularly those associated with tangata whenua, are not extensively documented and specific consultation is normally required.

4.1.2 LEVEL OF DEVELOPMENT

Existing development and potential future development of an area is significant in determining the appropriate coastal erosion management technique, as is the extent of land between the coastline and that development, and the rate of erosion. For example, structural options will be less appropriate in areas of low development and high natural character but may be more appropriate in developed areas where the environment is already extensively modified.

Regional and District plans, and other policy documents give useful information on existing and future development. Future development is also discussed in some detail in the Auckland Region Growth Forum (ARC, 1999).

4.1.3 EXISTING COASTAL EROSION MANAGEMENT WORKS

Coastal erosion management has been undertaken in the Auckland region for many decades, primarily utilising coastline armouring devices, e.g. seawalls and groynes. Whilst consistency in approach is a guiding principle, i.e. so as not to end up with an 'ad hoc' appearance, the mere presence of existing structures is not sufficient reason to avoid the undertaking of a proper assessment of the problem - identifying that erosion is occurring, determining the causes of erosion, establishing the environmental context, determining an appropriate response to the problem. Such practice is required to ensure that our coastal environment is sustainably managed.

4.2 LOCAL CONTEXT

Regional context does not always translate down to a site specific or local context, therefore it is necessary to also consider the erosion problem in the local context. The same matters as considered in developing the regional context are to be considered, the difference being the significance at the local level is established.

4.3 APPLYING ENVIRONMENTAL CONTEXT

Establishing the environmental context is fundamental to the consideration of the appropriateness of any coastal erosion management response. It is the basis of assessing the actual or potential effects on the environment of a potential activity, and for identifying and evaluating the various options for coastal erosion management, e.g. gives an understanding of the physical limitations or constraints imposed by other resources and values.