

COASTAL EROSION MANAGEMENT MANUAL

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F ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

F.1 INTRODUCTION

An assessment of any actual or potential effects that an activity may have on the environment, and the ways in which any adverse effects may be mitigated is not only a statutory requirement (section 88 of the RMA) but is one of the keys to achieving sustainable management. In this section further information is provided on the preparation of an AEE.

F.1.1 DEFINITION OF ENVIRONMENT AND EFFECTS

The RMA broadly defines the key terms "environment" and "effects".

"Environment" is defined to include the natural, the built and the social environment, and the way these interact. It also includes "amenity values" which are the particular qualities of an area that contribute to people's appreciation of it. The "social" environment covers such things as people's way of life (i.e how they live, work, play and interact with one another), their cultures and traditions (such as shared beliefs and values), and characteristics of the community (e.g. the different social groups, facilities and services).

The term "effect" includes:

- any positive or adverse effect;
- any temporary or permanent effect;
- any past, present, or future effect;
- any cumulative effect which arises over time or in combination with other effects - regardless of the scale, intensity, duration, or frequency of the effect; and also includes
- any potential effect of high probability; and
- any potential effect of low probability which has a high potential impact.

The effects to be considered are those directly concerned with the natural and physical resources and their environment.

When preparing an AEE it may be useful to distinguish between different types of effects. Actual effects are those which are certain to occur. Potential effects include changes in conditions which make an effect more likely to occur.

There is also a distinction between direct and indirect effects. Direct effects are caused by a specific activity and occur at the same location. Indirect effects are caused by an activity but usually occur either later in time or at another location.

F.1.2 THE LEVEL OF DETAIL REQUIRED IN AN AEE

The level of detail required depends on the scale and nature of the proposal, and in such detail as corresponds with the scale and significance of the actual or potential effects on the environment that the activity may have. A resource consent applicant's AEE for a proposed activity is an important part of the basis on which the Auckland Regional Council will assess the application and determine if consent will be granted and what conditions will apply. It is the applicant's duty to make sure that all the information concerning the effects of the activity are made available to the consent authority. The ARC independently determines the adequacy and accuracy of the assessment. If an AEE is deficient the ARC may request further information from the applicant or commission a report.

It is the ARC's responsibility to ensure that the AEE is adequate before it proceeds to consider whether or not the application should be publicly notified.

F.1.3 PREPARATION OF AN AEE

A useful structure of an AEE for a coastal erosion management proposal is:

Introduction	Outlines the objectives of the AEE, briefly summarises the background history, and identifies the proposed project.
Description of Existing Environment	Describes the environmental context, and the relative importance of factors.
Project Description	Summarises the project design, including a preliminary assessment where alternative options were considered.
Consultation Process	Outlines the consultation process and identifies the interested and affected parties. Includes a summary of the issues and concerns raised in this process.
Assessment of Effects on the Environment	Identifies actual and potential effects on the environment of the proposed activity.
Mitigation and Monitoring	Identifies and outlines the proposed mitigation measures and monitoring programme.
Conclusion	Summarises the report and concludes on what basis, if any, consent should be granted to the proposal.

F.1.4 STATUTORY GUIDANCE

Statutory documents that provide a great deal of guidance about matters to be included in assessing the environmental effects of a proposal include:

- the Proposed Regional Plan: Coastal (PRP:C);
- the Auckland Regional Policy Statement (RPS);
- the New Zealand Coastal Policy Statement (NZCPS);
- the Conservation Management Strategy; and
- District Plans.

F.1.5 ASSESSING THE ADEQUACY OF AEE'S

Adequate detail must be included in AEE's to:

- enable the consent authority to determine whether the effects are minor and if the application should be notified;
- identify affected and interested parties who should be consulted or notified;
- enable those who might wish to make submissions to be able to assess the effects of the proposal on the environment and on their interests;
- base a decision on the application on, and if granted to determine what conditions are appropriate.

Local authorities have to judge the significance of environmental effects in terms of the following:

- compliance with established environmental standards;
- magnitude, area affected, frequency and duration of anticipated effects, and whether these are cumulative or not;
- the use and value which society has assigned to the receiving environment;
- resilience of environment (as an ecosystem) to cope with change; and
- confidence in the prediction of effects.

F.1.6 BENEFITS OF PREPARING A FULL AND ACCURATE AEE

- Identifies ways to enhance the beneficial environmental effects of a proposal.
- Enables the potential adverse environmental effects of a proposal to be avoided, remedied or mitigated.
- When prepared early in the decision-making process identified issues can be taken into account in the design, approval and management of the proposal.

- Unforeseen costs due to environmental problems arising at a later date will be avoided.
- If the assessment is carried out with some input from the consent authority and the public the chances are that major problems can be overcome and major concerns dealt with before formal consents are sought.
- Is likely to require less processing time, and hence cost less to process the resource consent application.
- May enable the resource consent application to be processed on a non-notified basis, consequently a decision on the resource consent will be made quicker and at less cost than a notified application.
- A decision on a resource consent application which is based on a full and accurate AEE is more likely to stand up to scrutiny and may be less likely to result in objections or appeals.

F.1.7 COSTS OF NOT PREPARING AN AEE PROPERLY

All potential adverse effects of a proposal may not be identified leading to:

- potential costs of re-design parts of the project;
- further information requested by consent authority;
- higher project costs due to unforeseen expenditure to avoid, remedy, or mitigate adverse effects;
- risk of serious objections to proposal leading to lengthy delays in obtaining resource consent;
- require more processing time, and hence more cost to process resource consent application; and/or
- application declined.

F.2 CONSULTATION

The Fourth Schedule of the RMA requires an applicant to identify those persons interested in or affected by a proposal, the consultation undertaken and any response to the views of those consulted. An applicant who fails to adequately consult at an early stage runs the risk of being required to remedy the situation before the application proceeds.

Consultation will not always result in an agreed or negotiated position, nor does consultation mean reaching a consensus. It will however help focus of the preparation of the assessment of environmental effects, and potentially save money and time by identifying those matters of most concern to people.

F.2.1 WHAT IS CONSULTATION

Consultation is a two-way process that includes:

- the statement of a proposal not yet finally decided upon;
- listening to what others have to say and considering responses;
- the provision of sufficient information to the consulted party so that they can make intelligent, informed and useful decisions/responses;
- the allocation of sufficient time for the consideration of the information provided, and the participation of the consulted party in the process; and
- genuine consideration of the advice received.

The party consulting is entitled to have a working plan already in mind.

Consultation is not:

- merely telling or presenting; or
- the same as negotiation, although a result of consultation may be an agreement to negotiate.

If there has been genuine consultation you should be able to demonstrate:

- you have engaged in meaningful consultation;
- there are no areas of misunderstanding resulting from poor communication;
- areas of agreement are clearly identified; and
- areas of outstanding concern are also identified.

The leading case on consultation generally is *Wellington International Airport Ltd v. Air NZ (1991)* (Court of Appeal).

F.2.2 HOW TO CONSULT

There are no universal requirements as to the form consultation must take. The consultation process may involve:

- meeting(s) with those persons interested in or affected by the proposal;
- writing to those persons interested in or affected by the proposal, and sending information outlining the proposal, its location, and why the proposal is desired/necessary; and
- a follow-up letter and/or a phone call.

There is also no universal requirement as to the duration required for consultation to be adequate. Consultation could range from one telephone call to a number of formal meetings.

F.2.3 WHO SHOULD BE CONSULTED?

The answer to the question of 'who to consult' is dependent on the circumstances of a particular situation, however the parties to be consulted will generally include:

- adjacent property owners/occupiers;
- Tangata Whenua;
- regulatory agencies – regional and territorial council's;
- Department of Conservation;
- interest groups, e.g. Royal Forest & Bird Protection Society;
- local community groups, Manukau Harbour Protection Society; and
- the public, depending on the actual and potential effects on the environment.

F.2.4 CONSULTATION IN THE CONTEXT OF NOTIFICATION OF RESOURCE CONSENT APPLICATIONS

Section 93 of the RMA states a consent authority must send notice of every resource consent application to a number of specified persons and bodies, including:

- persons who in the opinion of the consent authority are likely to be directly affected by the application, including adjacent property owners and occupiers of land, where appropriate; and
- local authorities, iwi authorities and other persons or authorities as the consent authority considers appropriate -

unless the application does not need to be notified in terms of section 94 (the exceptions to notification). There is a difference in consulting with interested groups as part of the assessment of environmental effects and in getting consents from affected parties for a non-notified application. Nevertheless the lack of consultation is a significant issue in deciding whether an application should be processed on a notified or non-notified basis.

The Ministry for the Environment's publication *To Notify or Not to Notify - A Good Practice Guide* (1997) discusses the question of whether an application needs to be notified.

F.3 EFFECTS TO BE CONSIDERED

F.3.1 THE PRESERVATION OF THE NATURAL CHARACTER OF THE COASTAL ENVIRONMENT

The preservation of the natural character of the coastal environment, wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development is afforded particular recognition - as a matter of national importance - in the RMA. Whilst the RMA does not provide a definition of 'natural character' or 'inappropriate', there is an evolving body of case law which assists our understanding of these concepts and provides guidance for the assessing the environmental effects of proposed activities.

Natural character is derived from a range of qualities and features which have and are being created by nature, as distinct from being constructed by human activity. The primary components of which are vegetation, ecology, landform, coastal process, and aesthetic aspects. While in practice we tend to focus on appearances, the preservation of natural character is fundamentally concerned with sustaining the processes that underlie visual expression.

Major modification of the components of natural character obviously detracts from the natural character of a place, hence the requirement to assess the appropriateness of any proposed activity. Absolute protection is not to be given to the coastal environment, rather a 'design with nature' approach, where the proposed activity is designed in response to the natural characteristics of the site is. Clearly some development can be designed to reduce the adverse effects on the natural character of the coastal environment, however in other circumstances no amount of mitigation will be sufficient. The key concept is the need to keep any development within the capacity of the environment into which it is proposed to be introduced.

Case law has determined that unmodified coastal environments (those free from the imposition of human structures) retain the highest degree of natural character and therefore have highest priority for absolute protection and preservation. Modified coastal environments are recognised as having diminished natural character, not warranting the same amount of preservation as predominantly natural environments. The introduction of wholly cultural elements such as buildings and engineering structures shifts the balance towards a predominance of built or cultural character.

F.3.2 HERITAGE

Heritage involves aspects of both the natural and cultural environment which have been inherited from the past, define the present and will be handed on to future generations. Heritage is a dynamic resource which changes spatially and over time as natural systems evolve and humans impact on the environment. Thus the natural and cultural resources of the region are inextricably linked.

F.3.2.1. NATURAL HERITAGE

Natural heritage includes:

- indigenous flora and fauna;
- terrestrial, marine and freshwater ecosystems and habitats;
- landforms and geological features;
- soils, and
- the natural character of the coastline.

Some of these resources have been highly modified and depleted, yet they contain heritage that is of local, national and international significance.

a) The Values of Natural Areas

The natural areas of Auckland Region contain native plants and animals, which form ecosystems such as forests, freshwater wetlands, coastal estuaries, and regenerating scrub. The values of these natural areas are part of "biodiversity", another word for the variety of life on earth. Biodiversity includes all plants and animals, and micro organisms. It even includes the genes from which life is made. The values of natural areas are also part of our past, our present and our future (our heritage) and for this reason they are sometimes called natural heritage values.

Natural areas are constantly changing, partly because of natural processes, but also because of the impacts of humans on the environment. They are being damaged by vegetation clearance and habitat destruction, fragmentation of areas of forest and wetland into small pieces, pests, pollution, predation, over-harvesting, grazing, and by some developments.

b) Who's Responsibility to Manage?

Many different agencies have responsibilities for protecting the heritage values of natural areas. The main agencies include the Auckland Regional Council, the Department of Conservation (DOC), and local councils.

Protecting native vegetation and wildlife is good for the environment and is good for the community in general - it is called sustainable management for future generations. But the individual benefits of protecting natural areas, especially on your own land, are sometimes harder to identify.

All natural heritage areas are important and worth looking after. The Protected Natural Areas Programme is a national programme of field surveys set up to find out the values of New Zealand's native vegetation, wildlife and natural landscapes. The key aim of the Protected Natural Areas Programme is to protect a whole range of ecosystems that represent the diversity and original character of New Zealand.

Three Protected Natural Area surveys have been completed in the Auckland Region - in the Waitakere Ecological District, the Rodney Ecological District, and in the Hunua Ecological District. The survey of the Tamaki Ecological District is underway, and due for completion in 2000.

In each district, hundreds of natural areas are surveyed and the values of the sites

recorded. The most valuable of these sites were then identified as Recommended Areas for Protection. From the Protected Natural Areas programme report for your area it can be determined if the site of your proposal has been identified for protection.

As our heritage and the diversity of life (vegetation and wildlife) is contained in these natural ecosystems, it is important that we protect those remaining. Although some areas have been set aside as reserves low land sites are still under-represented in the Protected Natural Area Network. Future protection of these sites will benefit landowners and the entire community, now and in the future.

There are many simple ways to avoid harming and to protect precious natural areas which also helps prevent erosion, such as by:

- retaining native bush, wetlands and scrub, especially in sensitive areas;
- fencing bush and wetlands to prevent stock grazing (even an electric fence will do!);
- using the same track when walking to the CMA through the bush (to reduce trampling);
- removing/destroying animal and plant pests (get a possum trap);
- planting new trees to create new bush, or to restore regenerating forest;
- using local seed sources when planting;
- protecting riparian areas (river banks and the coastal edge); and
- retiring unproductive or eroding land by planting native trees.

c) Determining Whether to Protect a Natural Area

These things are important in deciding if a natural area is significant:

- **Representativeness:** How a site represents the original natural character of a district.
- **Diversity and pattern:** The number and type of species and communities and their distribution.
- **Rarity and Special Features:** Whether a site contains threatened species or an unusual feature.
- **Naturalness:** How similar this site would be to a site undamaged by humans or pests.
- **Long Term Viability:** The likelihood that a site will continue to exist in the long term.
- **Size and Shape of an Area:** Whether a site is big enough to support the ecosystems within it.
- **Buffering:** Whether a site is protected from surrounding landuses.
- **Wildlife Habitat Values:** e.g. a wetland for birds.
- **Important Natural Landforms:** e.g. a volcanic cone.

F.3.2.2. CULTURAL HERITAGE

Cultural heritage is the knowledge, activities, and remnants of people and communities. It is linked with natural heritage and includes:

- historic sites;
- place names;
- historic places and areas;
- waahi tapu and wahi tapu areas;
- taonga;
- buildings;
- objects;
- artifacts;
- natural features of cultural and historical significance;
- historical associations; and
- people and institutions.

Cultural heritage is dynamic, changing over time as human activities impact on the environment. It is the product of successive migrations, reoccupation's and conquests, and forms a series of layers over the landscape. Cultural heritage can be viewed as a public, local, tribal, or personal resource. It is inherited from the past, enjoyed and protected in the present, to be handed on to future generations.

a) Why is Cultural Heritage Important?

Cultural heritage is central to our identity. It links people with places and helps define our place in history. It enables us to understand cultural differences. It also has educational and recreational values, and is important for our social and economic well being. Our cultural heritage is found nowhere else in the world.

Despite of the value cultural heritage resources have for us they have been depleted and continue to be under threat from development. A report commissioned by the ARC to gain an understanding of the state and condition of the region's archaeological resource found that almost 80% of the recorded archaeological sites have been damaged and that 70% are still at risk of continued destruction, concluding that the condition of the archaeological resource of the Auckland region is poor and is deteriorating at an increasing rate. This archaeological heritage is a fragile and non-renewable resource and continuing destructive activities are threatening its existence.

b) Which Historic Places are Important?

There is no comprehensive evaluation of the state of the region's cultural heritage. However, the ARC has researched and evaluated the historic places and areas located within the coastal environment, and has developed a schedule of significant sites for preservation and protection. Local authorities are also promoting the protection and preservation of historic places through their District Plans.

c) Evaluating The Effects Of A Proposal In Terms Of The Cultural Heritage Resource

The Historic Places Act 1993 (section 23) and the RPS (Chapter 6) provide direction for assessing the significance of cultural heritage resources. Local authorities (city and district councils) also use criteria from their district plans and past planning schemes to provide them with some guidance.

There are 13 criteria to consider in any assessment, as given in Table F.1.

1. Historical	<i>"The extent to which the place reflects important or representative of Auckland or New Zealand's history."</i>
2. Tangata Whenua	<i>"The importance of the place to Tangata Whenua."</i>
3. Community Association	<i>"The community association with or public esteem for the place."</i>
4. Commemorative	<i>"The commemorative value of the place."</i>
5. Symbolic	<i>"The symbolic value of the place."</i>
6. Educational	<i>"The potential of the place for public education."</i>
7. Archaeological	<i>"The potential of the place to provide knowledge of Auckland or New Zealand's history."</i>
8. Scientific	<i>"The potential of the place to provide knowledge of Auckland or New Zealand's history."</i>
9. Technological	<i>"The technical accomplishment or value of the place."</i>
10. Architectural	<i>"The design of the place."</i>
11. Context	<i>"The extent to which the place forms part of a wider historical and cultural complex or historical and cultural landscape."</i>
12. Rarity	<i>"The frequency with which the historic place can be found."</i>
13. Integrity	<i>"What is the integrity of the place?"</i>

Notes:

1. A place may be assessed as being significant under any one of the above criteria;
2. Any type of historic place can be assessed using these criteria;
3. All archaeological sites, historic areas, buildings, places, objects, structures, trees, archaeological sites (etc.) should be assessed under each set of criteria; and
4. Although all these criteria are inter-related, the historical criteria are considered first because these values link with all the others.

Table F.2*F.3.2.3. HERITAGE ORDERS*

Things that can be protected include:

- any place of special interest, character, intrinsic or amenity value or visual appeal;
- any place of special value to Tangata Whenua for spiritual, cultural or historical reasons;
- any place of special cultural, architectural, historical, scientific, ecological or other interest; and
- land around that place as reasonably necessary to ensure the protection and reasonable enjoyment of the place.

Heritage orders are included in district plans and no person, without the written consent of the named heritage protection authority may do anything that would wholly or partly nullify the effect of the heritage order, including:

- any disturbance or excavation of the land or any of the other uses described in Section 9 of the Act;
- any change in character, intensity or scale of use of the land; and
- any subdivision.

a) Responsibility for Heritage Protection

Heritage Protection Authorities include Ministers of the Crown, local authorities acting on their own behalf or that of an Iwi authority, the NZ Historic Places Trust or any body corporate approved by the Minister for the Environment as a Heritage Protection Authority.

Agencies with heritage responsibilities in the region include:

- Tangata Whenua;
- NZ Historic Places Trust;
- the Auckland Regional Council;
- territorial authorities;
- Department of Conservation;
- NZ Archaeological Association;
- historical societies; and
- QE II Trust.

This poses difficulties for regulators and developers alike in dealing with such a large number of bodies and an incomplete information base when assessing effects of earthworks and similar activities.

Many of the region's significant natural and cultural heritage resources, both known and undiscovered, are on private land. Consequently, regulation through the consent process and wider education both play a major role in giving effect to RPS policies.

This places a large burden of responsibility on all people involved in the selection, design, maintenance, and regulation of coastal erosion management measures to ensure that cultural and heritage matters are adequately addressed.

Most importantly, land owners, developers, consultants, contractors and regulators need to know that:

- any site pre-dating 1900 is an archaeological site;
- regardless of whether any archaeological site is registered, it is protected under Section 10 of the Historic Places Act 1993; and
- any modification, damage or destruction to an archaeological site must be authorised by the NZ Historic Places Trust.

F.3.3 MAORI VALUES

The coastal environment of the Auckland region is rich in Maori values. All of the coastal marine area has characteristics of special spiritual, historical, and cultural significance to Tangata Whenua. The use, development and protection of the coastal environment and its associated resources is therefore an important issue for Maori.

The coastal environment and associated resources comprise some of the most important taonga to Maori. The term taonga generally refers to something highly prized and treasured that contributes to Maori intellectual, physical or spiritual well-being. Taonga may be tangible, such as a particular water resource; or intangible, such as te reo Maori - the Maori language.

The values of Tangata Whenua towards the coastal marine area and associated resources, and the expression of such values in tribal tikanga and institutions, were confirmed and guaranteed by Te Tiriti o Waitangi signed in 1840. The Crown's subsequent presumptive ownership, management and control of the coastal marine area and associated ancestral taonga is a significant issue to Tangata Whenua. Treaty rights and obligations need to be taken into account in the management of the coastal marine area.

It is the long-standing relationships of Maori with particular resources which establish them as Tangata Whenua of an area (Tangata means people and Whenua means land). These relationships arise from both mana whenua - customary authority - and from long-standing use or occupation traced back through whakapapa, or genealogy: the family tree.

F.3.3.1. *WHAT DOES THE RESOURCE MANAGEMENT ACT SAY ABOUT TANGATA WHENUA?*

The Act states that all persons exercising powers and functions under the Act must:

- recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, as a matter of

national importance (S.6(e)).

An example of how this provision could be met would be altering a proposal to avoid damaging a site identified by Tangata Whenua as being significant during consultation about the proposal.

- have particular regard to Kaitiakitanga (Section 7(a)).

This provision could be met by including a site within any reserve proposed by a subdivision and providing for Tangata Whenua to have continued access to the reserve so as to maintain their Kaitiaki or guardian role

- take into account the principles of the Treaty of Waitangi (Section 8).

The previous two examples demonstrate possibilities for taking into account the Treaty principle of active protection. Further principles recognised generally as relevant to resource management issues include full consultation and acting in good faith.

F.3.3.2. WHO ARE THE TANGATA WHENUA OF THE AUCKLAND REGION?

The Auckland region has seen successive migrations, occupations, intermarriages and conquests, resulting in overlapping boundaries of closely related tribes. Iwi and hapu with ancestral ties within the Auckland region are generally of Ngati Wai, Ngati Whatua, Kawerau, Waikato or Hauraki tribes.

Tangata Whenua of Auckland are those Maori who trace their whakapapa to this region and who continue to hold Mana Whenua or customary authority over Auckland's natural and physical resources.

The Tangata Whenua groups who the ARC has a relationship with and formally recognise as representatives of Tangata Whenua for resource management purposes include:

- Ngati Wai Trust Board;
- Te Hao o Ngati Whatua;
- Te Rito o Ngati Whatua;
- Ngati Whatua ki Orakei;
- Te Kawerau a Maki Trust;
- Huakina Development Trust;
- Awaroa Environment (Ngaati Te Ata);
- Ngai Tai ki Tamaki Tribal Trust;
- Hauraki Maori Trust Board; and
- Ngati Paoa Whanau Trust.

Whilst these are the main representatives at the broad level, consultation will invariably be necessary at a local level, e.g. with hapu, Marae. The aforementioned groups will provide direction in regard to who should be consulted at the local level.

F.3.3.3. WHAT ARE THE RESOURCE MANAGEMENT CONCERNS OF TANGATA WHENUA

Many activities have the potential to adversely affect the relationship of Maori and their culture and traditions with their ancestral water, sites, waahi tapu and other taonga in the coastal marine area. Only Tangata Whenua or their representatives have the right to determine matters of resource management significance to them. Therefore to identify issues of special interest to Tangata Whenua, you will need to consult them directly.

In the Auckland region, these concerns are diverse, but generally include:

- providing for their relationships with ancestral taonga;
- direct and effective involvement in the sustainable management of ancestral taonga;
- recognition of the Treaty of Waitangi;
- damage to or destruction or modification of ancestral sites;
- ancestral sites such as waahi tapu (sacred sites) or urupa (burial grounds);
- ongoing management and access to ancestral sites;
- extraction of sand and shingle from river beds or the coast;
- erosion, or sedimentation affecting waterways;
- fish, seafood and traditional food sources;
- quality of the coastal environment; and
- reclamation's or structures in coastal areas.

F.3.3.4. HOW TO DETERMINE WHETHER A PROPOSAL WILL POTENTIALLY AFFECT TANGATA WHENUA

Active protection of Maori interests requires positive action. It also requires access to sufficient information of an adequate quality to be in a position to fully consider the effects on these interests. As a general rule you should initiate consultation with the Iwi authority for the area concerned, who can advise if a particular Hapu (subtribe) or Whanau (family) need to be approached. Auckland's complex tribal history means you may have to consult with a number of Iwi authorities in the same area.

The duty to consult with Tangata Whenua arises from two main sources in the RMA:

- express or implied obligations imposed by particular provisions of the RMA such as sections 6(e), 7(a) and 8; and
- as a recognised principle of the Treaty of Waitangi which by virtue of section 8 shall be taken into account.

The RMA expressly contemplates consultation in the preparation of assessments of environmental effects as part of the information accompanying applications for resource consents.

The ARC and TAs will, in consultation with Tangata Whenua, identify and list in regional and district plans some sites and areas of significance to Tangata Whenua, and such plans shall include provisions which afford appropriate levels of protection to the items listed.

If you do not know who the Tangata Whenua are in the locality of your interest or want to make sure you are consulting with the right representative, contact the ARC.

F.3.4 VISUAL IMPACT

Visual impacts result from natural or induced changes in the components, character or quality of landscape. Usually these are the result of vegetation or landform modification or the introduction of new structures, activities or facilities into the landscape. The process of change itself, that is the construction process, also carries with it its own visual impacts as distinct from those generated by the completed development.

Visual "effects" are somewhat different from many other environmental factors because their assessment requires information on *perceptions* as well as on *resources*. Because visual experience is a combination of physical stimulus and psychological response, some aspects of visual impacts are undeniably subjective. To understand and assess the visual effects of a project, it is necessary to understand the project and its context, as well as the probable response of the people who will see it.

Thus a distinction can be made between determining the visual impact of a proposal, that is the change to the view or landscape which can be largely measured or described in an objective manner, and the visual effects that a change in landscape character or quality has, on the viewing audience involved.

The visual effects generated by any particular proposal may be perceived by people as:

- positive (beneficial), contributing to the visual character and quality of the environment;
- negative (adverse), detracting from existing character and quality of the environment; or
- neutral (benign) with essentially no effect on existing character or quality of the environment.

The visual assessment process is generally organised into the following eight steps:

1. Define the visual characteristics of the project.
2. Define the receiving visual environment of the project.
3. Determine the visibility of the project.
4. Define the viewing audience, their type, location and number.
5. Analyse representative views of the project in its setting.
6. Provide simulations, e.g photomontages of the project, if necessary.
7. Evaluate the visual impacts of the project.

8. Predict the level of visual effects on the viewing audience.

F.3.4.1. LANDSCAPE ASSESSMENTS MADE OF THE AUCKLAND REGION

Areas of the coastline of the Auckland Region that have been assessed as being regionally significant or outstanding landscapes and are shown on the PRP:C Plan Maps. The areas accorded such status display a composition of natural and/or human-made features and elements which are highly valued and which sets them apart from the regional landscape in general. The features and elements that contribute to such value may range from vegetation and topography, together embodied in areas such as the western shoreline of the Waitakere Ranges, to the nature of a coastal edge, such as the spectacularly rugged shoreline of northern Great Barrier Island. Contributing human-made elements may include the distinctive pattern of individual structures such as the Auckland Harbour Bridge, or the mix of coastal cliffs, vegetation, houses, roadway and beaches that compromise the Tamaki Drive waterfront.

In many instances those landscapes which are more highly valued also have a strong sense of identity and place, which helps to distinguish them and Auckland, from the rest of New Zealand and from landscapes elsewhere in the World. The remnant signs of pa sites on volcanic cones such as North Head, represent an important and highly valued amalgam of both the natural and human-made which also contribute very significantly to Auckland's identity.

Those areas which are identified as being outstanding tend to capture a sense of Auckland's unique identity and display both elements and a general composition that ensures a high level of visual impact (in a positive sense) and memorability. In general such landscapes are highly susceptible to modification. Those areas identified as being regionally significant tend to be valued because their character and appearance is dominated by specific elements or features (perhaps only one) and patterns that recur within them. In such areas the 'parts' tend to assume more importance, rather than the whole. Within such landscapes, development has to be managed to ensure that the key elements which contribute to landscape value are not degraded or disturbed.

F.3.4.2. COVERAGE OF LANDSCAPE ASSESSMENT STUDIES

The classification of landscape within the Auckland Region used in both the Auckland RPS and the PRP:C is based on various landscape assessment studies commissioned by the Auckland Regional Council. Information on the landscape values of those areas of coastline outside the metropolitan limits and other urban areas has been obtained from the 1984 study *An Assessment of the Auckland Region's Landscape* carried out by the Planning Department of the Auckland Regional Authority.

The areas covered by the 1984 landscape assessment study are:

- Rodney District:
 - north east coastline from Waiwera north
 - Tasman Sea coastline
 - Whole of the Kaipara Harbour coastline

- Waitakere City:
 - Manukau Harbour coastline, west of Big Muddy Creek
 - Tasman Sea coastline
- Franklin District:
 - Manukau Harbour coastline
 - Tasman Sea coastline
 - Firth of Thames coastline

In 1994, the Auckland Regional Council commissioned further landscape assessment work covering the coastlines of Great Barrier and Waiheke Islands and the coastline of the Hauraki Gulf, Waitemata and Manukau Harbours within the metropolitan limits. Subsequent studies have been carried out by Rodney District Council and Manukau City Council relating to the landscape values of the rural coastlines of their districts. Where this information is available, this has replaced the ratings derived from the 1984 Regional Landscape Assessment Study.

The areas covered by landscape assessments carried out by the ARC or territorial authorities from 1994 onwards are:

- Eastern coastline from Waiwera to southern boundary of Manukau City on the Hauraki Gulf/Firth of Thames coastline, including the Waitemata Harbour;
- Manukau Harbour from Taumatarea Point (Big Muddy Creek), east and south to Hingaia Bridge;
- Coastline of Kawau Island;
- Coastline of Waiheke Island; and
- Coastline of Great Barrier Island.

It should be noted however that there have been no landscape assessments of the coastlines of the remaining islands of the Hauraki Gulf which are similar to those outlined above. Hence the lack of any notation of landscape values on those islands should not be construed as an indication that they do not have landscapes which could be classified as regionally significant or outstanding, but merely that a landscape assessment has not been undertaken.

F.3.4.3. EXPLANATION OF LANDSCAPE ASSESSMENT METHODOLOGY

Throughout the 1980s and 1990s landscape assessment in the Auckland Region has been based around interpretation of the value attached to different landscapes and their vulnerability to modification or change. However, the techniques used to explore these facets of the landscape have steadily evolved. The following is a summary of the main techniques employed and the key elements within each:

F.3.4.4. 1984 LANDSCAPE ASSESSMENT

a) Landscape Quality Ratings

These are based around preference studies of the regional community's attitudes to different types of landscape.

b) Landscape Sensitivity Ratings

These are based on the physical measurement of characteristics that would affect a landscape's ability to visually integrate or assimilate development and change, and include consideration of:

- land use diversity and type;
- slope;
- vegetation cover;
- vegetation diversity and type;
- topographic diversity and type; and
- site recoverability potential.

F.3.4.5. 1994 LANDSCAPE ASSESSMENT

a) Landscape Value Ratings

These are based around expert assessment of the value of landscape units (in the field) using key criteria drawn from extensive research into perception of landscape. They address:

- **Aesthetic Value (Scenic qualities)** -using the following criteria:
 - Vividness: How immediately impressive and memorable is the landscape as a result of its visual distinctiveness, diversity or other factors - both compositional and geo-physical?
 - Complexity / Diversity: To what extent does the unit have a richness and interest about it arising from the diversity of elements within it -without that diversity leading to discontinuity?
 - Cohesion: Is there a continuity of key statements/patterns/themes/accents that give the landscape both character and a sense of unity?
 - Legibility: To what extent is it possible to develop a clear mental picture of the

unit's landscape because of the clear definition of features and patterns within it that emphasise its 3-dimensional structure (layering) and identifiable landmarks (points of focus and reference)?

- Mystery: Does the landscape's spatial structure and array of elements promote a sense of sequence and 'enticement' through the unit's space: the promise of 'more to unfold around the next bend' - just beyond the landscape that is immediately visible?
- **Heritage Value (natural character and human-made influences):** To what extent does the unit reveal and convey a distinctive sense of identity because of:
 - endemic associations: arising from natural elements in the landscape that contribute to the character and sense of place of the locality and the Region, e.g. the islands of the Hauraki Gulf, remnant Kauri forest;
 - cultural associations: arising from man-made landscape elements that are distinctive and valued because of their association with both Maori and Pakeha cultures e.g. old pa sites, historic structures; and
 - rarity/scarcity: to what extent is the unit or key elements within it rare and unique at the regional level?

b) Landscape Vulnerability Ratings

These are based on field analysis of the key factors that affect a landscape's ability to visually integrate or assimilate development and change. They address:

- **Land Use:** How 'developed' is the existing landscape - from areas that are primarily native and natural to those which are highly developed and urbanised?
- **Vegetation Cover and Type:** How extensive and varied is existing vegetation cover - from no cover and mono-cultural dominance to a high level of vegetated cover and diverse species?
- **Topographic Type and Diversity:** Does the unit's terrain assist or limit viewing because of its character and the viewing angles that would typically arise between vantage areas and locations subject to modification - from the simplicity and openness of a plain or shallow ridgeline to incised foothills with a high level of visual containment?
- **Exposure/Visibility:** How visually exposed is the unit/sub-unit/view to the likes of:
 - residential areas;
 - areas of recreational use and tourism activity;
 - public transport routes and tourist routes; and
 - commercial areas.

Both the 1984 and 1994 studies have resulted in landscape units being rated on a 1 to 7 scale - from Low (Rating "1") to High (Rating "7"). In the case of the 1984 study, ratings

remain separated under the *Landscape Quality* and *Landscape Sensitivity* headings. In order to fully appreciate the value of any landscape and its capacity to absorb new development or change – within areas that remain exclusively covered by the 1984 assessment – reference should be made to both sets of ratings. The assessments undertaken from 1994 onwards provide just one overall ratings - again on a 1 to 7 scale (Low to High) under the title *sensitivity*. This rating captures both the value found in any landscape and its ability to accommodate development and change.

F.3.4.6. LANDSCAPE ASSESSMENT REPORTS

The following landscape assessment reports form the technical basis for the identification of regionally significant and outstanding landscapes.

- An Assessment of the Auckland Region's Landscape (Auckland Regional Authority, 1984.);
- Great Barrier Island Coastal Landscape Assessment (LA4 Landscape Architects, 1994a);
- Waiheke Island Coastal Landscape Assessment (LA4 Landscape Architects, 1994b);
- Auckland Urban Area Coastal Landscape Assessment (LA4 Landscape Architects, 1994c);
- Northern Rodney District Strategy Study: Visual and Landscape Assessment (LA4 Landscape Architects, 1993); and
- South East Manukau Visual Assessment (LA4 Landscape Architects, (Undated)).

.Copies are available for inspection at the offices of the Auckland Regional Council. Copies of the 1994 landscape reports commissioned by the ARC are also available at the offices of relevant territorial authorities.

F.3.5 USES MADE OF AREA

The use made of an eroding coastline will have a significant impact on the effect and appropriateness of any particular erosion management technique. In general, the potential effect of structural options will tend to be relatively significant in less developed situations such as undeveloped beaches, rural coastlines, along relatively isolated cliffs and estuaries in their natural state. These effects will be due to the inconsistency of the structure with the predominately natural setting and forms of such places, which tend to arise from nature. Such works are more likely to be considered inappropriate since they may fail to preserve the natural character of the coastal environment, as well as any physical effects on coastal processes they may have.

Auckland has many highly developed coastlines where residential and urban development has been established close to the coastline. The uses of these areas include private homes, commercial and industrial premises, transport networks and public open spaces. Much of this coastline is subject to coastal erosion processes which may be hazardous to these assets and structures. Areas of public open space, while not always valued from an economic point of view, may have significant amenity values which, depending on circumstances, justifies their protection from coastal erosion. The appropriateness of any coastal protection option in these cases will depend on the effects of the option, but also on the relative level of development of the adjacent coastline, the degree to which the resources are able to be sustainably reduced, relocated or reproduced elsewhere, and the social and economic cost of non-protection.

The use made or areas adjacent to an eroding coast will also have an effect on the appropriateness of coastal protection measures. It is likely that the potential effects of a well designed and constructed seawall built in an area which has predominantly been protected by other seawalls, will be minimal. However, that is not likely to be the case if that structure is proposed to be built on a beach with either no coastal protection measures, or non-structural options. The appropriateness of coastal protection measures is therefore critically affected by the level and type of surrounding development, and the relative impact that the protection measure will have on the scale and character of development in that area.

F.4 MONITORING

Monitoring involves ongoing checking, to determine if changes occur, and whether they are acceptable. If the potential scale and effects of a proposal are such that monitoring is likely to be required then the AEE should include a description of how the effects will be monitored and by whom.

F.4.1 WHAT TO MONITOR

In order to monitor changes, it is necessary to determine a state against which changes can be compared, i.e. a base line. It is also necessary to be able to measure/determine changes - whether they are insignificant, positive, negative, cumulative, catastrophic, or unexpected.

It is not possible to measure every single aspect of the coastal environment. Thus, particularly relevant or significant and observable aspects are usually chosen and their status determined, using identified variables, e.g. changes in beach profiles, health of marine organisms. The base line chosen depends on the aspect of the environment to be measured and an assessment of the likely causes of change. Base lines may be set in a variety of ways, such as:

- the actual status at some point in time is determined/measured and departures from that point recorded;

- an "ideal state" is determined and progress towards or away from that state measured; and
- some future state which is likely to arise if no action were taken or no development occurred is predicted, and changes measured against this hypothetical scenario.

The effect of the proposal on the environment is assessed by comparing the measurement of indicators over a period of time. Monitoring the environmental effects, enables the consent holder to avoid, remedy or mitigate any adverse effects the proposal may have on the environment, and provides information for other resource management decisions.

F.4.2 REQUIREMENTS OF A MONITORING PROGRAMME

Planning of any monitoring programme should include consideration of:

- techniques used must be repeatable and tolerant of slight operator or procedural variations;
- the interpretation of the measurements should follow a clearly defined specification, as it will inevitably be done by staff unfamiliar with many of the original design assumptions, particularly in the later stages;
- yield repeatable results that can be interpreted and compared unambiguously with those of previous surveys; and
- the measurement and working methods must be well considered and simple to operate.

The frequency of monitoring should be predetermined in relation to the risk associated with particular failure mechanisms, structural elements, foundation conditions, exposure conditions and design criteria, and of the sensitivity/value of the environment. The frequency may be different for different types of monitoring, but in general will need to be of sufficient duration to assess seasonal and cyclic and extreme events. The threshold for extreme event monitoring should be set in relation to the design specifications, e.g. the design wave climate and associated return periods, and the damage response characteristics of the structure.