

REPORT

KAPITI COAST DISTRICT
COUNCIL

Methodology for Coastal Set Back
Determination

Report prepared for:
KAPITI COAST DISTRICT COUNCIL

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Executive summary

Kapiti Coast District Council (KCDC) is committed to the sustainable management of the coastal environment. The operative District Plan is the principal means by which Council seeks to ensure the sustainable management of the natural and physical resources of the District, including the coastal environment. The District Plan has a number of existing building/ development set back provisions, predominantly provided to protect the special natural character of the coastal area and provide for a high quality of amenity in those built-up areas in close proximity the coast.

While coastal hazard risk has been incorporated into those set back provisions, this was based on the coastal storm events of the 1970's. This needs to be reviewed and updated to account for changes to the coastal environment and improved knowledge of coastal hazards information, including climate change.

The District's Coastal Strategy was adopted in December 2006 to outline a broad approach on how to achieve the community's vision to protect and enhance the coastal environment. Amongst other matters, coastal hazard risk was identified as requiring assessment in order to protect and enhance the coastal environment.

As part of that process, KCDC commissioned Coastal Systems (NZ) Ltd to undertake an assessment of potential coastal hazards along the Kapiti District's coast. With that work complete, the next step is to determine the most appropriate methodology for the transfer of the coastal hazards assessment into a building/ development set back provision.

Given the coastal environment and land use, this report recommends that the most appropriate methodology is to apply a clear-cut single set back line to the Kapiti District's coastline. A single set back line can support the KCDC's current approach to coastal management which includes:

- the restriction of new structures and intensification of settlement within a coastal hazard set back line along the coast;
- the maintenance and repair of seawalls constructed to protect public roads; and
- restrictions on further extension of the urban area and rural residential development into the undeveloped coastal 'zone', which is seen as an unacceptable risk.

Based on the Coastal Systems (NZ) Ltd report, the most applicable and practical scenario to base the set back line on is the seawalls repair scenario with a 50-year prediction period.

This report is structured to build on the background information already commissioned by KCDC with a view to informing any future community and landowner discussion on the merits of a set back line approach.

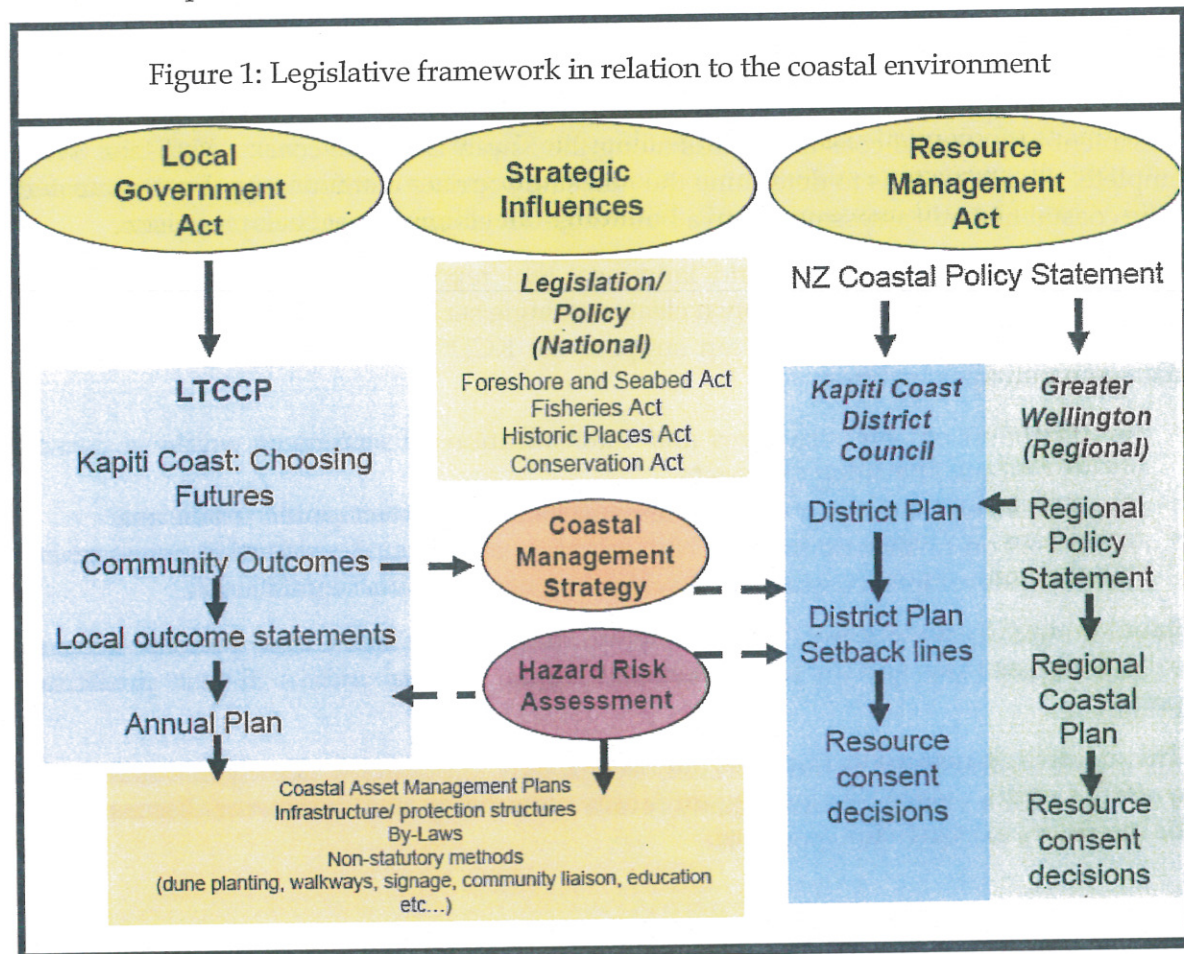
1 Introduction

Kapiti Coast District Council (KCDC) has engaged Tonkin & Taylor Ltd to prepare this report to determine the most appropriate planning methodology to create set back provisions along the coastal environment that take into account potential coastal hazards and natural character considerations.

This report follows on from the Coastal Strategy, adopted by KCDC in December 2006 to guide management of the coast for the next 20 years. The Strategy seeks to ensure that the community's vision to restore and enhance the wild and natural feel of the coast is achieved as well as addressing hazard management issues.

The scope of this report is to build on the existing provisions of the District Plan and the coastal hazard assessment work of Coastal Systems (NZ) Ltd to provide a sound methodology to determine workable set back provisions that can account for existing and future development of the coastal environment.

Figure 1 below shows the legislative framework relevant to the coastal environment and indicates the position of setback lines in relation to the planning process.



2 Kapiti Coast District Plan

The operative District Plan is the principal means by which Council seeks to ensure the sustainable management of the natural and physical resources of the district, including the coastal environment.

2.1 Zoning and planning features

Kapiti District's coastline stretches for approximately 40 kilometres from Paekakariki in the south to just beyond Otaki in the north. The majority of the land abutting the coastline is zoned either Rural or Residential (residential areas from south to north are Paekakariki, Raumati South, Raumati Beach, Paraparaumu Beach, Wakanāe Beach, Peka Peka, Te Horo Beach, Otaki Beach). In general, the Rural zone separates these built up areas, although there is a continual built-up area along the coastal stretch of Raumati South to Waikanae.

There are several Open Space zoned areas along the coast, the largest of these being the Queen Elizabeth Park (638ha). There are three commercial zoned areas in close proximity to the coast, a small site in Paekakariki close to Campbell Park and the Raumati Beach and Paraparaumu Beach commercial areas. There are two River Corridor zones marking the river mouths of the Waikanae and Otaki Rivers.

There are several other planning provisions along the coast. The most prominent of these are the Outstanding Landscape area that runs along the entire stretch of the coastline and the ecological areas which include the river mouths of the Waikanae and Otaki Rivers. It is considered these 'planning overlay provisions' can continue to function without significant change due to the review of the building/ development set back line.

2.2 Existing set back provisions

The District Plan currently uses set back lines as a way to manage the impact of development on the coast. These set backs are considered to provide for amenity and natural character.

In the Rural Zone, new or relocated buildings on land within 100 metres of the seaward title boundary or the Esplanade Reserve or seaward toe of the foredune or vegetation line, where this is within the Esplanade Reserve, or title on new lots created after 1 September 1995 is a Prohibited Activity pursuant to Rule D.2.1.5(ii).

In the Residential Zone, the following coastal building line restrictions apply under the permitted activity standards for yards (D.1.2.1 yards (iii):

- Waikanae, Te Horo Beach - 7.5 metres from the seaward title boundary.
- Peka Peka - 70.0 metres from the seaward edge of the existing Esplanade Reserve.
- Paraparaumu, Raumati, Paekakariki - 20 metres as shown on Paraparaumu Urban Zone Maps 1, 2, 6, 7, 11, 16, 21 and 26 and Paekakariki Urban Zone Maps 1-3.

The District Plan also uses a 30 metre relocatable area in urban areas south of Waikanae.

A 50 metre wide Esplanade Reserve in the Rural Zone and 20 metres in all other zones, measured from the line of the Mean High Water Spring Tide (MHWS), is required along the coast when subdivision occurs.

3 Coastal hazards

The Kapiti Coast District is subject to natural coastal erosion and accretion processes which are exacerbated in some areas where coastal walls and structures have been built. The KCDC's strategic response for hazards is to continue to protect existing structures on the coast such as seawalls while maintaining the natural character of the coast, preferably through planting native species and soft engineering.

KCDC recently commissioned Coastal Systems (NZ) Ltd to undertake an assessment of potential coastal hazards along the Kapiti District's coast. In terms of coastal environment, Coastal Systems (NZ) Ltd summarised the following features of the Kapiti District's coast:

- The northern section of coast (Waikanae to Otaki) tends to consist of wide, accreting sandy beaches backed by dunes and isolated settlements. The exception being the mixed sand-gravel beaches and lack of foredune to the south of the Otaki River;
- The central region (Paraparaumu) consists of an accreting cusped foreland with sandy beaches backed by dunes and concentrated settlement.
- The southern sections of coast (Raumati to Paekakariki) have narrower beaches which, in their natural state, have erosive tendencies. They are backed by higher sand dunes, which, with the exception of Queen Elizabeth Park and a small area at south Paekakariki, have been densely settled.
- The coastal environment is also characterised by a range of engineering structures. These structures were established over the past 50 yrs to control erosion, and, in most cases, continue to influence the present coastal processes. In particular, the structures consist of groynes to control river and stream mouths (e.g. Waikanae River, and the Wharemauku Stream), and seawalls along the Raumati and Paekakariki coasts. Privately constructed walls of varying quality are also present in places.

The environment generally consists of three broad sections of coast (north, central and south) with more intricate circumstances occurring within them (including the effects of structures such as seawalls).

The assessment determined coastal hazard distances with a 50-100 year planning horizon. The following three scenarios were tested:

- ***Seawalls hold***, where the seawalls maintain integrity and remain fully functional;
- ***Seawalls repair***, where the seawalls fail locally but are quickly repaired; and
- ***Seawall removal***, where widespread failure occurs and the remnants are then removed.

In our opinion, the most applicable and practical scenario for the Kapiti District's coast is seawalls repair with a 50-year prediction period. Seawall repair is consistent with Council's current approach to coastal management. The seawall hold scenario could place an unrealistic monitoring and maintenance burden with the potential for failures. Seawall removal is unlikely to be considered a practicable option in the short to medium term.

4 Implementation of set back line

Given the coastal environment and land use, it is considered the most appropriate methodology is to apply a clear-cut single set back line to the Kapiti District's coastline. A single set back line can support the KCDC's current approach to coastal management which includes the:

- restriction of new structures or intensification of settlement within a coastal hazard set back line along the coast;
- maintenance of seawalls constructed to protect public roads and avoidance of construction of other seawalls or works to protect settlements;
- restrictions on further extension of the urban area and low density rural residential, into the undeveloped coastal 'zone', which is seen as an unacceptable risk.

Based on the Coastal Systems (NZ) Ltd report, and having regard to the Council's Coastal Management Strategy, the most applicable and practical scenario to base the set back line on is the seawalls repair scenario with a 50-year prediction period. The following sections recommend how the set back line should be implemented for the rural area, the urban area and the other areas in between.

4.1 Rural areas

The rural zone is already well protected in the operative District Plan with the 100-metre set back provision provided by Rule D.2.1.5(ii). Natural character values and the protection of coastal and rural landscape amenity are the principal driving forces behind set back provisions in this zone. In all areas for the Rural zone, it is likely that the hazard risk area will fall short of the 100-metre set back provision provided by Rule D.2.1.5(ii). Given that the proposed set back line is to account for all aspects of coastal management including natural character (rather than a pure coastal hazards risk set back) it is recommended the existing 100-metre set back line be maintained in the rural zone and reinforced by the delineation of a clear set back line on the District planning maps.

4.2 Urban areas

The urban areas (Residential zone and the two identified Commercial zones) currently have a variety of set back provisions in the operative District Plan. Coastal hazards protection and protecting the amenity values of both the coastal landscape and the urban form are the principal driving forces behind building/ development set back provisions in this zone.

We recommend the set back line is formed from the most landward line based on an overlay of the existing provisions with the coastal hazard provisions derived by Coastal Systems NZ Ltd for the seawall repair scenario.

There may be situations where the coastal hazard provisions are more seaward than the existing controls. In these situations the more landward lines are considered preferable due to amenity and natural character.

4.3 Open space areas

The Open space areas relevant to the coast have no specific set back requirements similar to those provisions for rural or urban zones, although the esplanade reserve requirements for subdivision provides an indirect set back line.

We recommend Council applies Coastal Systems NZ Ltd's coastal hazard provision for the seawall repair scenario in these areas.

Specific consultation should be undertaken with the Greater Wellington Regional Council, the owners of Queen Elizabeth Park which occupies a significant stretch of coastline.

4.4 River mouths

The coastal hazards assessment prepared by Coastal Systems (NZ) Ltd did not specifically account for river mouths (River Corridor zone). The hazard analysis for the streams and river mouths is expected later in the year. It is expected that the same or similar planning methodology as recommended in this report will apply to these areas.

5 Next steps

The set back line method should continue to be used in the District Plan. The next step is consider how best to implement that approach into the District Plan.

A key component of that process is to undertake consultation with interested and affected parties at an early stage, comprehensively explaining the rationale for the approach and how the set back line shall apply to existing and future developments. A sufficient level of detail will be required to inform this process. However at this early stage the set back line should be presented as indicative only.

Following on from consultation, more detailed work should be undertaken to apply the set back line systematically and consistently along the coast. Site specific delineation of the set back line may be required in areas to account for unique circumstances such as landscape features, geology, urban development and particular coastal processes.

The next step is to determine how the set back line should be integrated within the existing planning framework of the KCDC. This process should include drafting potential District Plan changes and considering whether existing building/ development set back provisions should remain (for example the 30m relocatable area may have a case for removal) or be integrated into the proposed single set back line.

A Section 32 analysis will be required to support the proposed plan change. Section 32 of the Resource Management Act will require an evaluation of the efficiency and effectiveness of the proposed building/ development setback method, taking into account the benefits, costs, alternatives and risks.

If a clear-cut single line is supported, making the activity status of new development and subdivision non-complying seaward of that line and permitted (subject to permitted activity standards) landward of that line is recommended.

An indicative diagram is provided in Appendix A to illustrate how the setback line may work in relation to the existing District Plan setback lines.

6 Applicability

This report has been prepared for the benefit of Kapiti Coast District Council with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

TONKIN & TAYLOR LTD

Environmental and Engineering Consultants

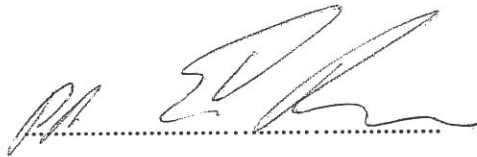
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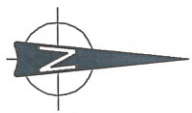

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Richard Reinen-Hamill

Project Coordinator

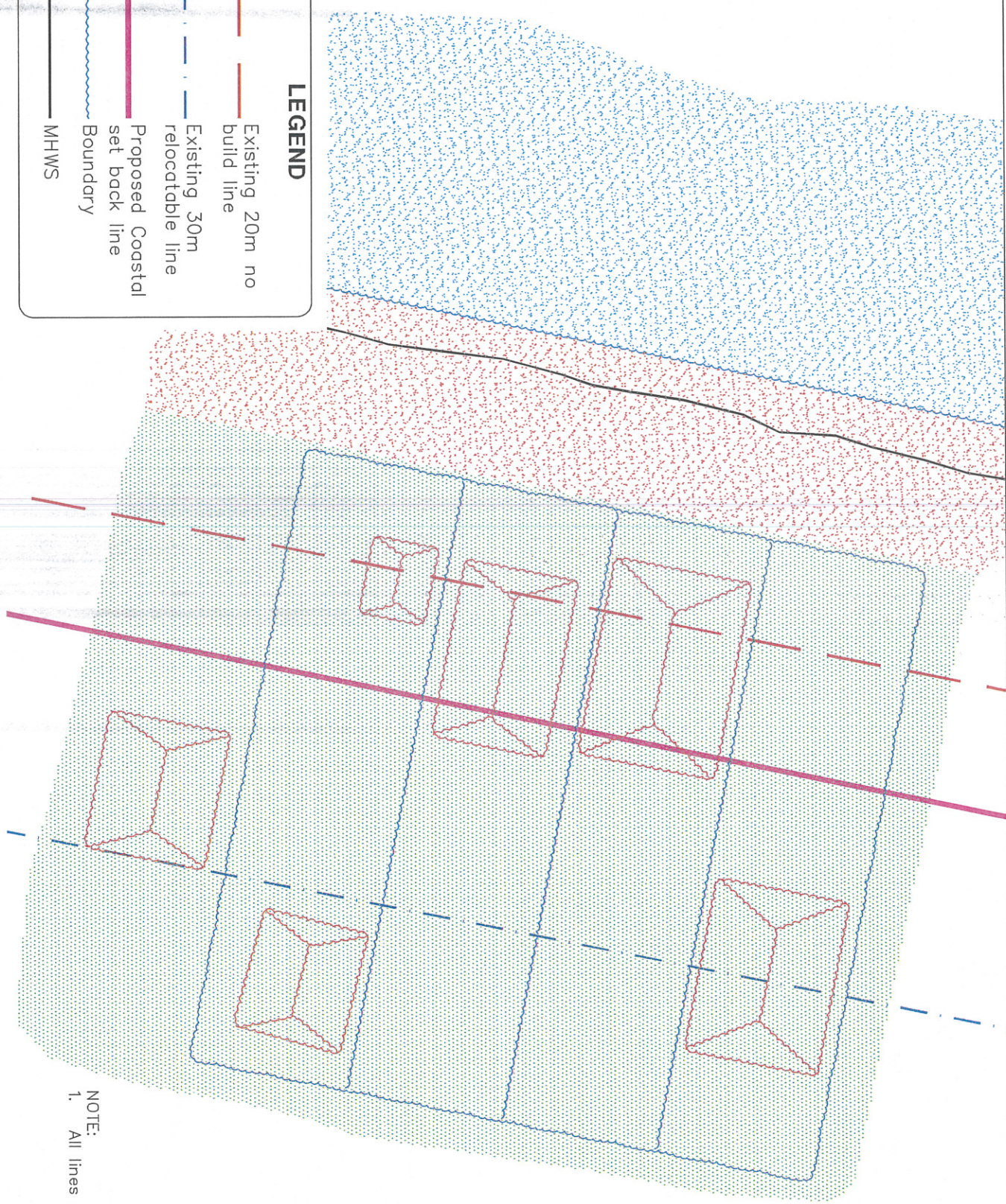
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Appendix A: Indicative Coastal Setback Diagram



LEGEND

- Existing 20m no build line
- Existing 30m relocatable line
- Proposed Coastal set back line
- Boundary
- MHWS



NOTE:
1. All lines are indicative