



Regional Policy Statement for the Wellington Region

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Resource Management Act 1991

Approval of the *Regional Policy Statement for the Wellington Region*

THE WELLINGTON REGIONAL COUNCIL HEREBY CERTIFIES that it has approved the *Regional Policy Statement for the Wellington Region* by resolution on 13 December 1994.

The *Regional Policy Statement for the Wellington Region* will become operative on the 15th day of May 1995.

The COMMON SEAL of the)
WELLINGTON REGIONAL COUNCIL)
was affixed in the presence of:)
.....)
.....)
.....)
.....)
S A MACASKILL.....)
Chairperson)
.....)
.....)
.....)
.....)
H J STONE)
General Manager)

Chairperson's Foreword

I am very pleased to present this Regional Policy Statement for the Wellington Region.

It is an important document which will help shape our Region. It has been prepared by the Wellington Regional Council for the Wellington Region.

Many individuals and organisations in the Region, by giving their time and offering ideas, have helped the Council prepare this Statement. Thank you all for your assistance.

New Zealanders are proud of their environment. We have been lucky in escaping so many of the environmental problems which other parts of the world are currently facing. Even so, in providing for our social and economic well-being, we have sometimes damaged our environment. Now is the time to take stock before it is too late.

Under the Resource Management Act 1991, all regional councils must prepare a regional policy statement for their region. The concept underlying these policy statements is "sustainable management". This means managing the resources in the Wellington Region in a way which provides for the needs of future generations, as well as for the needs of our generation.

This doesn't mean that we have to stand still — but we need to think about the effects of what we are doing and try to avoid or reduce any damage we may be causing. We need to use our resources more sensibly, especially those which are in limited supply or highly valued. This may mean devising alternative ways of doing things.

Sustainable management is not an anti-development concept. Development can and should take place. Indeed, sound resource management policies and sound economic policies go hand in hand. By managing New Zealand's resources in a sustainable fashion we can provide a firm framework for economic development.

What we do with our Region today will influence the sort of Region our children's children and their children will inherit in the future. We are merely caretakers who have a responsibility to leave our Region in a way which will enable future generations to meet their needs.

The Regional Policy Statement for the Wellington Region will help us carry out this important task.

STUART MACASKILL
Chairperson

Contents

	Page
User Guide	i
Part I : A Regional Policy Statement for the Wellington Region	
Chapter 1 : Introduction	1
1.1 The Structure of this Document	1
1.2 What is a Regional Policy Statement?	2
1.3 The Policy and Planning Framework	4
1.4 The Regional Policy Statement and the Wellington Regional Council's Annual Plan	6
1.5 The Regional Policy Statement and Territorial Authorities	7
1.6 The Consultation Process	7
1.7 The Relationship of the Wellington Regional Council with Iwi Authorities	9
Chapter 2 : The Wellington Region	11
2.1 Our Region: A Resourceful Approach	11
2.2 Maori in the Wellington Region: Nga korero onamata o Te Upoko o te Ika me te Wairarapa	15
2.3 Our Region : Demographic and Socioeconomic Characteristics	16
2.4 The Significant Resource Management Issues in the Wellington Region	18
2.5 A Vision for the Future	22
2.6 An Iwi Vision for the Future	23
2.7 Implementing These Visions	24
Chapter 3 : The Philosophical and Organisational Approach	25
3.1 Introduction	25
3.2 Guiding Principles and Underlying Assumptions	26
3.3 Tiakina te Mauri Ora: The Protection of "Mauri"	31
Part II : Managing Our Resources	
Chapter 4 : The Iwi Environmental Management System	38
4.1 Introduction	38
4.2 Issues	38
4.3 Objectives	39
4.4 Policies	39

	Page	
4.5	Methods	41
4.6	Anticipated Environmental Results	44
Chapter 5 : Fresh Water		46
5.1	Introduction	46
5.2	Issues	47
5.3	Objectives	52
5.4	Policies	53
5.5	Methods	68
5.6	Anticipated Environmental Results	88
Chapter 6 : Soil and Minerals		90
6.1	Introduction	90
6.2	Issues	92
6.3	Objectives	97
6.4	Policies	99
6.5	Methods	104
6.6	Anticipated Environmental Results	113
Chapter 7 : The Coastal Environment		114
7.1	Introduction	114
7.2	Issues	115
7.3	Objectives	118
7.4	Policies	121
7.5	Methods	130
7.6	Anticipated Environmental Results	133
Chapter 8 : Air		134
8.1	Introduction	134
8.2	Issues	135
8.3	Objectives	138
8.4	Policies	140
8.5	Methods	144
8.6	Anticipated Environmental Results	151
Chapter 9 : Ecosystems		152
9.1	Introduction	152
9.2	Issues	154
9.3	Objectives	156
9.4	Policies	159
9.5	Methods	164

	Page
9.6 Anticipated Environmental Results	172
Chapter 10 : Landscape and Heritage	174
10.1 Introduction	174
10.2 Issues	178
10.3 Objectives	180
10.4 Policies	183
10.5 Methods	186
10.6 Anticipated Environmental Results	192
Chapter 11 : Natural Hazards	193
11.1 Introduction	193
11.2 Issues	194
11.3 Objective	196
11.4 Policies	196
11.5 Methods	199
11.6 Anticipated Environmental Results	204
11.7 Responsibilities	205
Chapter 12 : Energy	206
12.1 Introduction	206
12.2 Issues	207
12.3 Objectives	208
12.4 Policies	211
12.5 Methods	214
12.6 Anticipated Environmental Results	221
Chapter 13 : Waste Management and Hazardous Substances	222
13.1 Introduction	222
13.2 Issues	223
13.3 Objectives	225
13.4 Policies	227
13.5 Methods	234
13.6 Anticipated Environmental Results	243
13.7 Responsibilities	244
Chapter 14 : The Built Environment and Transportation	246
14.1 Introduction	246
14.2 Issues	249
14.3 Objectives	252
14.4 Policies	254

		Page
14.5	Methods	257
14.6	Anticipated Environmental Results	262

Part III : Implementing the Regional Policy Statement

Chapter 15 : Implementation Processes		263
15.1	Introduction	263
15.2	Consultation	263
15.3	Cross Boundary Issues	264
15.4	Resource Consents	264
15.5	Regional Plans	265
15.6	Working Co-operatively	266
15.7	Monitoring and Review of the Regional Policy Statement	267

List of Figures

1	Framework for Resource Management in the Wellington Region	4
2	The Wellington Region	Preceding 11
3	The Coastal Environment	116

List of Tables

1	Resident Population : Wellington Region, 1991	17
2	Ethnic Composition : Wellington Region, 1991	17
3	Industrial Structure : Wellington Region, 1991	18
4	Water Bodies of Regional Significance for their Natural Features, Indigenous Vegetation or Habitats of Indigenous Aquatic Fauna	61
5	Water Bodies of Regional Significance for their Landscape and Scenic Qualities	61
6	Water Bodies of Regional Significance for their Landforms and Geological Characteristics	61
7	Water Bodies of Regional Significance for their Heritage, Recreational or Other Amenity Values	61
8	Sites of National or Regional Significance for Indigenous Vegetation or Significant Habitats for Indigenous Fauna	123
9	Landscapes and Seascapes of National or Regional Significance	124
10	Outstanding Natural Features, Landforms and Sites of Historical Importance	124
11	Responsibilities for the Control of the Use of Land for the Avoidance or Mitigation of Natural Hazards	205

	Page
12	Responsibilities for the Control of the Use of Land for the Prevention or Mitigation of Adverse Effects of Hazardous Substances
	244
	Bibliography
	269
	Appendix
	Definitions

User Guide

User Guide

The User Guide is intended to assist the reader in finding relevant information about subjects of interest. Many of the subjects identified in the Guide cut across several chapters in the Regional Policy Statement. The Guide thus also serves a useful role in helping provide an integrated approach to the management of the Region's natural and physical resources.

For each subject area, relevant chapters are identified, along with detailed reference to issues, objectives, policies, methods and environmental results that relate to the subject area.

Subject	Relevant Part of Statement
Access	<p>Chapter 5, Fresh Water, Issue 9; Policy 16; Methods 53-55; Environmental Result 17.</p> <p>Chapter 7, Coastal Environment, Issue 2; Objective 2; Policy 4; Environmental Result 2.</p>
Agrichemicals	<p>Chapter 5, Fresh Water, Issue 1; Policies 4-8, 10-12 and 14; Methods 17-18, 20-24, 26-33, 45 and 48.</p> <p>Chapter 6, Soil and Minerals, Issues 11 and 13; Policy 6; Methods 20-21.</p> <p>Chapter 8, Air, Issue 9; Policies 6 and 10; Methods 7, 10 and 14.</p> <p>Chapter 13, Waste, Issue 10; Policy 14; Methods 22-23.</p>
Agricultural activities	<p>Chapter 2, The Wellington Region, Sections 2.1 and 2.4-2.5.</p> <p>Chapter 5, Fresh Water, Issues 1, 3 and 10; Policies 1-8, 10-14, and 16; Methods 7-8, 10-11, 14, 16-17, 24, 26-33, 38-42, 45-46, 48-49, 53-54.</p> <p>Chapter 6, Soil and Minerals, Issues 1, 4, 6-7 and 11-14; Objectives 1-6; Policies 1-3, 6-7 and 9; Methods 1-3, 8, 11, 20-24 and 32-35; Environmental Results 1-5.</p> <p>Chapter 8, Air, Issues 4 and 9; Policies 6 and 8-12; Methods 7-10 and 14.</p> <p>Chapter 9, Ecosystems, Issues 4, 6 and 8; Policy 9; Methods 7, 9 and 17.</p>

	Chapter 12, Energy , Policies 1-4.
	Chapter 13, Waste , Issue 10; Policies 2, 4-7 and 14.
Air — discharges to	Chapter 8, Air , Issues 3-7 and 9; Policies 6-7; Methods 7-10.
	Chapter 9, Ecosystems , Policy 4.
	Chapter 12, Energy , Objective 3; Policy 7; Method 6.
	Chapter 13, Waste , Issue 7; Policies 7-8.
	Chapter 14, Built Environment and Transportation , Issues 6 and 10; Objective 2; Policy 3; Method 4.
Air quality	Chapter 8, Air .
	Chapter 9, Ecosystems , Policy 4.
	Chapter 12, Energy , Objective 3; Policy 7; Methods 6 and 8.
Amenity values	Defined in Definitions .
	Chapter 5, Fresh Water , Issues 3, 5 and 8; Policies 1, 4-11, 14 and 16; Methods 3, 6, 18, 38-42 and 53-54.
	Chapter 7, Coastal Environment , Policies 1, 2 and 4.
	Chapter 8, Air , Issues 3 and 4; Objective 3; Policies 4 and 11-12; Method 14; Environmental Result 3.
	Chapter 10, Landscape and Heritage , Issues 6-8; Policies 4 and 8; Environmental Result 3.
	Chapter 12, Energy , Objective 3.
	Chapter 14, Built Environment and Transportation , Issues 12-13; Objective 3; Policy 8; Method 6; Environmental Result 4.
Biodiversity	Defined in Definitions .
	Chapter 2, The Wellington Region , Sections 2.4 and 2.5.
	Chapter 3, The Philosophical and Organisational Approach , Section 3.2.1.
	Chapter 5, Fresh Water , Issues 7-8; Policies 10-12 and 14.

	Chapter 6, Soil and Minerals , Issue 11.
	Chapter 7, Coastal Environment , Issue 5; Objective 1; Policies 1-3.
	Chapter 9, Ecosystems , Issues 3 and 9; Objectives 1-5; Policies 4-5 and 9-10; Environmental Result 2.
Catchment management	Chapter 6, Soil and Minerals , Issue 13; Objective 3; Policies 4 and 7; Methods 14-16 and 24.
Civil defence	Chapter 11, Natural Hazards , Policy 2; Methods 11 and 12.
Clean production	Defined in Definitions and discussed in Chapter 8 Air , Policies 6-7; Methods 7-10.
	Chapter 13, Waste , Issues 3 and 5; Objectives 1 and 2; Policies 2 and 4-5; Methods 5-8 and 19.
Climate change	Chapter 7, Coastal Environment , Issue 6; Policy 2.
	Chapter 8, Air , Issue 2; Objective 4; Policies 8-9; Methods 11-12; Environmental Result 4.
	Chapter 11, Natural Hazards , Issue 5; Policy 2; Methods 4 and 6.
	Chapter 12, Energy , Objective 3; Policy 7; Method 6.
Coast - natural character	Chapter 2, The Wellington Region , Section 2.4.
	Chapter 7, Coastal Environment , Issue 1; Objective 1; Policies 1-3; Environmental Result 1.
	Chapter 9, Ecosystems , Objectives 1-5; Policies 4-10.
Coastal development	Chapter 7, Coastal Environment , Issues 1, 3 and 5; Objective 1; Policies 1-4 and 6; Methods 1-3; Environmental Result 1.
	Chapter 10, Landscape and Heritage , Issue 1.
	Chapter 11, Natural Hazards , Issue 4; Policies 2-5; Method 4.
	Chapter 14, Built Environment and Transportation , Issue 3.
Coastal water quality	"Coastal water" defined in Definitions .

	Chapter 5, Fresh Water , Issues 1 and 5; Policies 5-6; Method 24.
	Chapter 7, Coastal Environment , Issue 4; Objective 3; Policy 5; Environmental Result 3.
	Chapter 13, Waste , Policy 10.
Consultation processes	Chapter 1, Introduction , Section 1.6.
	Chapter 4, Iwi , Policy 2; Methods 4, 8 and 11; Environmental Result 2.
	Chapter 15, Implementation Processes , Section 15.2.
Contaminated sites	Chapter 6, Soil and Minerals , Issue 11; Policies 3 and 6; Methods 20-23.
	Chapter 13, Waste , Issues 1 and 8; Policy 13; Methods 20-21.
Domestic waste/pollution issues	Chapter 2, The Wellington Region , Section 2.4.
	Chapter 8, Air , Issues 4 and 7; Policy 6; Methods 7 and 10.
	Chapter 13, Waste , generally
	Chapter 14, Built Environment and Transportation , Issue 10.
Drought	Chapter 6, Soil and Minerals , Issue 6.
	Chapter 11, Natural Hazards , Method 5.
Earthquakes	Chapter 11, Natural Hazards , Issues 1, 2 and 6; Policies 1-5.
Ecosystems	Defined in Definitions and discussed in Chapter 9 Ecosystems .
Ecosystems on private land	Chapter 9, Ecosystems , Issue 6; Methods 15 and 17.
	Chapter 10, Landscape and Heritage , Method 5.
Ecosystems - protection	Chapter 2, The Wellington Region , Section 2.4.
	Chapter 5, Fresh Water , Issue 7; Objective 3; Policies 1, 4-12, and 14; Methods 3-4, 6, 30-33, 37-42, and 45-50; Environmental Results 5 and 13-15.

Chapter 7, **Coastal Environment**, Issues 1 and 4; Objective 1; Policy 1; Environmental Result 1.

Chapter 8, **Air**, Objective 3; Policy 10; Environmental Result 3.

Chapter 9, **Ecosystems**, Issues 5-7; Objective 5; Policies 5 and 7-9; Methods 10 and 12-19; Environmental Result 3.

Chapter 12, **Energy**, Issue 5, Objective 3; Policy 8.

Ecosystems - research

Chapter 7, **Coastal Environment**, Issue 5; Policy 2.

Chapter 9, **Ecosystems**, Issue 9; Policies 1-2; Methods 1-2, 4 and 6.

Ecosystems - restoration

Chapter 7, **Coastal Environment**, Objective 1; Policy 3; Environmental Result 1.

Chapter 9, **Ecosystems**, Issue 4; Objectives 2 and 4-5; Policies 5-6; Methods 10-11, 14 and 17.

Ecosystems - rural

Chapter 9, **Ecosystems**, Issues 4, 6 and 8; Objective 2; Policies 6-7 and 9-10; Methods 12 and 16-19.

Ecosystems - urban

Chapter 9, **Ecosystems**, Issue 4; Objective 2; Policies 6-7; Methods 12 and 16.

Chapter 14, **Built Environment and Transportation**, Issue 9; Objective 3; Policy 8; Method 6; Environmental Result 5.

Endangered or rare species

Chapter 9, **Ecosystems**, Issues 3, 5 and 8; Objectives 3-5; Policies 4-5, 7-8 and 10; Methods 11-14; Environmental Result 3.

Energy efficiency

Chapter 2, **The Wellington Region**, Section 2.4.

Chapter 8, **Air**, Methods 10 and 12.

Chapter 12, **Energy**, Issues 1 and 4; Objective 1; Policies 1-3 and 6; Methods 1-3, 5 and 8; Environmental Result 2.

Chapter 14, **Built Environment and Transportation**, Issues 2-5; Objective 1; Policies 2-3; Methods 2-3; Environmental Results 1 and 3.

Energy sources	Chapter 8, Air , Policy 7; Methods 10 and 12. Chapter 12, Energy , Issues 1 and 3; Objective 2; Policies 4-6; Methods 4-5 and 8; Environmental Results 3 and 4. Chapter 13, Waste , Issue 12; Policy 3; Environmental Result 1. Chapter 14, Built Environment and Transportation , Issue 10; Policy 3; Method 3; Environmental Result 3.
Energy - generation from waste	Chapter 12, Energy , Policy 6. Chapter 13, Waste , Issue 12; Objective 2; Policies 2-3 and 6.
Erosion - coastal	Chapter 7, Coastal Environment , Issue 5. Chapter 11, Natural Hazards , Issues 4 and 5; Policies 3 and 5; Methods 4 and 9.
Erosion - rivers	Chapter 6, Soil and Minerals , Issues 3, 8 and 13; Policies 4 and 5; Methods 14-19.
Erosion - soil	Chapter 6, Soil and Minerals , Issues 1-7, 10 and 13; Objectives 1-5; Policies 1, 2, 3, 7 and 8; Methods 1-11 and 24-31; Environmental Results 2, 3, 4 and 6.
Fire	Chapter 6, Soil and Minerals , Issue 1. Chapter 11, Natural Hazards , Method 5.
Flooding	Chapter 5, Fresh Water , Issue 6; Policies 8 and 9. Chapter 6, Soil and Minerals , Issues 2, 8 and 13; Objective 4; Policies 4, 5 and 8; Methods 14-19 and 26; Environmental Result 4. Chapter 11, Natural Hazards , Issues 2 and 5-6; Policies 1-5; Methods 1 and 7-15.
Forestry	Chapter 5, Fresh Water , Policy 7. Chapter 6, Soil and Minerals , Issue 7; Policy 7; Methods 1, 4-7 and 24-28. Chapter 8, Air , Issues 4 and 9.

	Chapter 10, Landscape and Heritage , Issues 2-3.
Greenhouse gases	Defined in Definitions . Chapter 8, Air , Issue 2; Objectives 3 and 4; Policy 9; Methods 11-12; Environmental Result 4. Chapter 12, Energy , Objectives 2-3; Policy 7. Chapter 13, Waste , Policy 6. Chapter 14, Built Environment and Transportation , Issue 6; Policy 3.
Groundwater	Chapter 5, Fresh Water , Issues 1, 3-5 and 10; Policy 3; Methods 13-16; Environmental Result 4.
Hazardous substances	Defined in Definitions . Chapter 7, Coastal Environment , Issue 6; Policy 6. Chapter 9, Ecosystems , Policy 4; Method 9. Chapter 13, Waste , Issue 11; Objective 4; Policies 11-14; Methods 15-19; Environmental Result 4; Section 13.7
Hazardous wastes	Chapter 13, Waste , Issues 7-11; Objectives 1-4; Methods 17-19.
Heritage values	Chapter 2, The Wellington Region , Section 2.5. Chapter 5, Fresh Water , Issues 3 and 8; Policy 10; Method 38. Chapter 7, Coastal Environment , Objective 1; Policies 1 and 2. Chapter 9, Ecosystems , Issue 5; Objective 5; Policy 5; Methods 10-17. Chapter 10, Landscape and Heritage , Section 10.1; Issue 8; Objective 3; Policies 5 and 6; Methods 7-13 and 18; Environmental Result 2. Chapter 14, Built Environment and Transportation , Issues 12-13; Objective 3; Policy 8; Method 6.
Indigenous flora and fauna	"Indigenous" defined in Definitions .

Chapter 5, **Fresh Water**, Issues 3, 7 and 8; Policies 10-12, and 14; Methods 38-42 and 45-50.

Chapter 7, **Coastal Environment**, Issues 1 and 4-5; Policies 1-2.

Chapter 9, **Ecosystems**, Issues 3 and 5-8; Objectives 3-5; Policies 4-10; Methods 12-20; Environmental Results 1 and 3.

Chapter 10, **Landscape and Heritage**, Issues 4-5; Policy 8.

Chapter 14, **Built Environment and Transportation**, Method 6.

Indigenous forests

Chapter 9, **Ecosystems**, Issues 1 and 6-8; Objectives 2-5; Policies 5-8 and 10.

Infrastructure

Chapter 2, **The Wellington Region**, Section 2.5.

Chapter 5, **Fresh Water**, Issue 6; Policy 9.

Chapter 7, **Coastal Environment**, Policy 2.

Chapter 10, **Landscape and Heritage**, Issues 2, 5 and 6; Objectives 1-3, Policies 1-2 and 4-6.

Chapter 11, **Natural Hazards**, Method 13.

Chapter 12, **Energy**, Issue 5; Objectives 1 and 3; Policies 1-3 and 6-9, Methods 4 and 6; Environmental Result 5.

Chapter 14, **Built Environment and Transportation**, Section 14.1; Issues 2 and 4-9; Objectives 1-2; Policies 2-7; Methods 3-5; Environmental Result 2.

Integrated management

Chapter 3, **Philosophical and Organisational Approach**, Section 3.2.2.

Intrinsic values

Defined in **Definitions**.

Chapter 5, **Fresh Water**, Issues 3-4 and 8; Objectives 1-3; Policies 1, 4-5, 8-10, 14 and 16; Methods 3-4, 6, 39; Environmental Result 13.

Chapter 7, **Coastal Environment**, Objective 1; Policy 1.

Chapter 9, **Ecosystems**, Section 9.1; Policy 3.

	Chapter 10, Landscape and Heritage , Policy 4.
Iwi development	Chapter 2, The Wellington Region , Section 2.6. Chapter 4, Iwi , Objective 4; Policies 1 and 8. Chapter 7, Coastal Environment , Issue 7; Objective 4; Policy 7; Environmental Result 5.
Iwi Management Plans	Chapter 4, Iwi , Policy 7; Method 14; Environmental Result 1. Chapter 13, Waste , Method 4.
Kaitiakitanga	Defined in Definitions . Chapter 2, The Wellington Region , Section 2.6. Chapter 3, Philosophical and Organisational Approach , Section 3.3.3. Chapter 4, Iwi , Objective 3; Policies 1, 3 and 6; Methods 5, 8, 9 and 11-14; Environmental Results 3 and 5. Chapter 5, Fresh Water , Issue 2; Policy 13; Methods 43-44 and 49; Environmental Result 6. Chapter 9, Ecosystems , Policy 3; Methods 3, 5 and 15.
Lakes	Defined in Definitions . Chapter 5, Fresh Water , Issues 6-9; Policies 8-12, 14 and 16; Methods 30-55.
Land clearance	Chapter 5, Fresh Water , Issues 1 and 7; Policies 7-8; Methods 24, 26, 30-33, 41-42, 45, 48 and 50. Chapter 6, Soil and Minerals , Issues 1, 2, 5, 7 and 13; Policies 7-8; Methods 1-10, 12-13 and 24-31. Chapter 10, Landscape and Heritage , Issues 2-3.
Land - discharges to	Chapter 6, Soil and Minerals , Issues 11 and 13; Objective 5; Policies 3 and 6; Methods 20-23. Chapter 8, Air , Issue 8. Chapter 9 Ecosystems , Policy 4.

	Chapter 13, Waste , generally, Issue 7.
Land drainage	Chapter 6, Soil and Minerals , Issue 6; Objective 1; Policy 1.
Landfills	Defined in Definitions .
	Chapter 5, Fresh Water , Policy 6.
	Chapter 8, Air , Issue 8; Policy 6.
	Chapter 12, Energy , Policy 6.
	Chapter 13, Waste , Issues 7-9; Objective 3; Policies 7-9; Methods 9-13.
Landscape values	Chapter 2, The Wellington Region , Sections 2.4-2.5.
	Chapter 5, Fresh Water , Policy 10.
	Chapter 7, Coastal Environment , Issue 1; Objective 1; Policies 1-2.
	Chapter 10, Landscape and Heritage , generally; Objective 2; Policies 1-4 and 8; Methods 1-6 and 14-19.
	Chapter 14, Built Environment and Transportation , Issues 9 and 12-13; Policy 8; Method 6; Environmental Result 5.
Landslides, landslips and slumps	Chapter 6, Soil and Minerals , Issue 5; Objective 4; Policy 8; Methods 1 and 26-31.
	Chapter 11, Natural Hazards , Issues 1 and 4; Methods 2, 3 and 8.
Legislative framework	Chapter 1, Introduction , Sections 1.2, 1.3 and 1.7.
	Chapter 15, Implementation Processes , Sections 15.3-15.5 and 15.7.
Manufacturing activities	Chapter 5, Fresh Water , Issues 1, 3 and 10; Policies 1-4, 6-7, and 10-15; Methods 1-2, 4, 7, 9, 11-12, 14-17, 20, 22-24, 26-33, 36-43, 46, 48 and 50-51.
	Chapter 8, Air , Issue 5; Policies 5-6 and 8-12; Methods 4, 6-10 and 13-14.
	Chapter 9, Ecosystems , Policy 4; Method 4.

Chapter 12, **Energy**, Issues 1, 3 and 5; Objectives 1-3; Policies 1-4 and 7-9; Methods 3 and 5-6.

Chapter 13, **Waste**, Policies 2, 4-7 and 11-12.

Mauri

Defined in **Definitions**.

Chapter 2, **Introduction**, Section 2.6.

Chapter 3, **Philosophical and Organisational Approach**, Section 3.3.

Chapter 4, **Iwi**, Sections 4.1-4.2.

Chapter 5, **Fresh Water**, Issue 2.

Mining and quarrying

"Mineral" and "mining" defined in **Definitions**.

Chapter 5, **Fresh Water**, Issues 1 and 6; Policies 1-6 and 8-12; Methods 1-2, 7, 9, 13-17, 20, 22-24, 26-46 and 51.

Chapter 6, **Soil and Minerals**, Issues 8-10 and 15; Objective 7; Policies 2, 5 and 10; Methods 4, 11-13, 17-19 and 36.

Chapter 7, **Coastal Environment**, Issue 1.

Chapter 8, **Air**, Issue 4; Policies 5-6 and 10-11; Methods 7-10 and 14.

Chapter 9, **Ecosystems**, Policy 4; Method 4.

Chapter 10, **Landscape and Heritage**, Issue 2; Policies 1-4 and 8.

Chapter 12, **Energy**, Section 12.1.

Chapter 13, **Waste**, Policies 2 and 4-7.

Monitoring

Chapter 3, **Philosophical and Organisational Approach**, Section 3.2.6.

Chapter 15, **Implementation Processes**, Section 15.7.

Motor vehicle emissions

Chapter 8, **Air**, Issues 2 and 6; Policy 7; Methods 10 and 12.

Chapter 12, **Energy**, Objective 3; Policies 5 and 7-9.

Chapter 14, **Built Environment and Transportation**, Issue 6; Policy 3; Methods 3 and 4.

Natural hazards	Defined in Definitions and discussed in Chapter 11, Natural Hazards . Chapter 2, The Wellington Region , Sections 2.4 and 2.5. Chapter 5, Fresh Water , Issue 6. Chapter 6, Soil and Minerals , Issues 1 and 4-6; Objectives 3 and 4; Policy 8; Methods 26-31. Chapter 7 Coastal Environment , Issue 6; Policies 2 and 6. Chapter 13, Waste Management , Issue 11.
Odours	Chapter 8, Air , Issue 3; Policy 12; Method 14.
Ozone depletion	"Ozone layer" defined in Definitions . Chapter 8, Air , Issue 2; Policy 9; Methods 11 and 13; Environmental Result 5.
Parks, reserves and open space	Chapter 7, Coastal Environment , Policy 2. Chapter 9, Ecosystems , Methods 4 and 18-20. Chapter 10, Landscape and Heritage , Issues 6 and 7; Policy 8; Methods 6 and 14. Chapter 14, Built Environment and Transportation , Issue 12.
Pesticides	See Agrichemicals.
Pests - plants and animals	Chapter 6, Soil and Minerals , Issues 1 and 11. Chapter 8, Air , Issue 9. Chapter 9, Ecosystems , Issues 2, 5 and 8; Policy 4; Methods 7-9. Chapter 10, Landscape and Heritage , Issue 2.
Public facilities	Chapter 14, Built Environment and Transportation , Issue 4; Objective 2; Policy 7; Method 5.

Recreation

Chapter 5, **Fresh Water**, Issues 3, 8 and 9; Objective 3; Policies 1, 4, 5, 8, 10, 14 and 16; Methods 2-4, 18, 21, 38-39 and 53-55.

Chapter 7, **Coastal Environment**, Issues 1-3; Objectives 1-2; Policies 1, 2 and 4.

Chapter 10, **Landscape and Heritage**, Issues 2 and 7; Objective 4; Policies 7-8; Methods 14-19.

Chapter 14, **Built Environment and Transportation**; Issue 4; Policy 7.

Recycling

Chapter 13, **Waste**, Issue 4; Objective 2; Policies 2 and 6; Method 8.

Regional plans

Defined in **Definitions**.

Chapter 1, **Introduction**, Section 1.3.

Chapter 4, **Iwi**, Method 9.

Chapter 5, **Fresh Water**, Policies 6 and 16; Methods 2, 15, 17, 18, 25, 34 and 47.

Chapter 6, **Soil and Minerals**, Methods 1, 11, 17-18 and 20.

Chapter 7, **Coastal Environment**, Method 1.

Chapter 8, **Air**, Methods 1-2, 6-7 and 14.

Chapter 9, **Ecosystems**, Methods 1, 6 and 12.

Chapter 10, **Landscape and Heritage**, Methods 1, 6, 8-9 and 15.

Chapter 11, **Natural Hazards**, Method 14.

Chapter 13, **Waste**, Methods 1, 5 and 9.

Chapter 15, **Implementation Processes**, Section 15.5.

Revegetation

Chapter 5, **Fresh Water**, Policy 8; Method 31.

Chapter 6, **Soil and Minerals**, Methods 5 and 7-8.

Chapter 9, **Ecosystems**, Policy 10; Method 20.

Riparian management

"Riparian land" defined in **Definitions**.

	Chapter 5, Fresh Water , Policies 8, 12 and 14; Methods 24, 30-33, 48 and 54; Environmental Result 16.
	Chapter 6, Soil and Minerals , Issue 3.
	Chapter 9, Ecosystems , Methods 17 and 18.
Rivers - works	Chapter 5, Fresh Water , Issue 6; Policy 1, and 8-14; Methods 34-37, 44-46 and 48; Environmental Result 12.
Septic tanks	Chapter 5, Fresh Water , Issue 1; Policies 3-7 and 15; Methods 17-18, 20-21, 23-24, 26-29 and 48.
Sewage	Chapter 5, Fresh Water , Issues 1-2 and 7; Policies 4-6, 10-11 and 13-15; Methods 17-21, 23-29, 38-43, 45-46 and 51.
	Chapter 7, Coastal Environment , Issue 4; Objective 3; Policies 1-3, 5 and 7; Environmental Result 3.
	Chapter 9, Ecosystems , Issue 2; Policy 4.
	Chapter 13, Waste , Issue 6; Objective 3; Policy 10; Methods 9 and 11.
	Chapter 14, Built Environment and Transportation , Issue 10; Policy 6; Method 4.
Soil conservation	Defined in Definitions and discussed in Chapter 6, Soil and Minerals , Objectives 1-6; Policies 1-3 and 6-9; Methods 1-13 and 24-35;
	Chapter 9, Ecosystems , Policy 4.
Soil quality	Chapter 6, Soil and Minerals , Issues 10, 12 and 14; Objectives 1 and 6; Policies 1-3 and 6-9; Methods 1-13 and 20-35; Environmental Results 1-2.
	Chapter 13, Waste , Environmental Result 3.
Spills (e.g., oil spills)	Chapter 7 Coastal Environment , Issue 6; Objective 3; Policy 6.
	Chapter 13, Waste , Policy 12; Methods 15-17 and 19.
Stormwater	Chapter 5, Fresh Water , Issue 1; Policies 4-6 and 16; Methods 22-29.

Subdivision	<p>Chapter 5, Fresh Water, Issue 1; Policies 4-6 and 16; Methods 26, 30, 32-33 and 53-55.</p> <p>Chapter 6, Soil and Minerals, Issues 2 and 4; Policies 9 and 10.</p> <p>Chapter 7, Coastal Environment, Issues 1 and 3-5; Objective 1; Policies 1-5; Environmental Result 1.</p> <p>Chapter 10, Landscape and Heritage, Issues 2-3; Policies 2 and 5-6.</p> <p>Chapter 11, Natural Hazards, Issue 4; Policy 2; Environmental Result 2.</p> <p>Chapter 12, Energy, Policy 3.</p> <p>Chapter 14, Built Environment and Transportation, Issues 2-3 and 5; Objectives 1 and 2; Policies 2-3 and 6-8; Methods 2-6.</p>
Taonga	<p>Defined in Definitions.</p> <p>Chapter 3, Philosophical and Organisational Approach, Section 3.3.4.</p> <p>Chapter 4, Iwi, Policy 4; Method 9.</p> <p>Chapter 5, Fresh Water, Issue 2.</p> <p>Chapter 8, Air, Section 8.1.</p>
Taonga raranga	<p>Defined in Definitions.</p> <p>Chapter 7, Coastal Environment, Issue 7; Policy 7.</p>
Tauranga waka	<p>Defined in Definitions.</p> <p>Chapter 3, Philosophical and Organisational Approach, Section 3.3.4.</p> <p>Chapter 7, Coastal Environment, Issue 7; Policy 7.</p>
Transport fuels	<p>Chapter 2, The Wellington Region, Section 2.4.</p> <p>Chapter 8, Air, Issue 6; Policy 7; Method 10.</p> <p>Chapter 12, Energy, Issues 3-5; Objectives 2-3; Policy 5; Method 4.</p>

	Chapter 14, Built Environment and Transportation , Issue 6; Policies 2-3; Method 3; Environmental Result 3.
Transport infrastructure	Chapter 12, Energy , Method 4. Chapter 14, Built Environment and Transportation , Section 14.1, Issues 2-9; Objectives 1-2; Policies 2-7; Methods 3-5; Environmental Result 2.
Transport modes	Chapter 8, Air , Issue 6; Methods 10 and 12. Chapter 12, Energy , Policy 3; Methods 2 and 4. Chapter 14, Built Environment and Transportation , Issues 5-6; Policy 3; Method 3.
Treaty of Waitangi	Defined in Definitions . Chapter 1, Introduction Section 1.7. Chapter 2, The Wellington Region , Section 2.6. Chapter 3, Philosophical and Organisational Approach , Section 3.3.5. Chapter 4, Iwi , Objective 2; Policies 1-8; Methods 1-15; Environmental Results 1-5.
Trout	Chapter 5, Fresh Water , Issues 3, 7 and 8; Policies 4-12. Chapter 6, Soil and Minerals ; Issues 7, 8 and 11; Objective 5; Policies 1, 5 and 6; Methods 1-10, 17-19.
Tsunami	Defined in Definitions . Chapter 7, Coastal Environment , Issue 6; Policy 6. Chapter 11, Natural Hazards , Section 11.1; Methods 2 and 5.
Urban development	Chapter 2, The Wellington Region , Section 2.4. Chapter 7, Coastal Environment , Issue 1; Policies 1-3. Chapter 10, Landscape and Heritage , Issues 2 and 5; Policies 1-2 and 5-6.

	Chapter 11, Natural Hazards , Policies 1-4; Method 3, 10 and 15; Environmental Results 2-3.
	Chapter 12, Energy , Policy 3.
	Chapter 14, Built Environment and Transportation .
Waahi tapu	Defined in Definitions .
	Chapter 3, Philosophical and Organisational Approach , Section 3.3.4.
	Chapter 4, Iwi , Policy 4; Methods 7-9.
	Chapter 5, Fresh Water , Policy 13; Method 43.
	Chapter 7, Coastal Environment , Issue 7; Policy 7.
	Chapter 10, Landscape and Heritage , Issue 3.
Waste management	Chapter 2, The Wellington Region , Sections 2.4-2.5.
	Chapter 6, Soil and Minerals , Issue 11; Policy 6.
	Chapter 8, Air , Issue 8; Methods 7-10 and 14.
	Chapter 9, Ecosystems , Policy 4.
	Chapter 13, Waste .
	Chapter 14, Built Environment and Transportation , Issue 10.
Waste minimisation	Chapter 12, Energy Policies 1-3.
	Chapter 13, Waste , Objectives 1 and 2; Policies 2 and 5-6; Methods 5-8; Environmental Result 1.
Wastes - agricultural	Chapter 5, Fresh Water , Issue 1; Policies 6-8; Methods 22, 26-33
	Chapter 6, Soil and Minerals , Issue 11; Policy 6; Methods 20-23.
	Chapter 13, Waste , Issue 10; Policy 14; Methods 22-23.
Water abstraction	Chapter 5, Fresh Water , Issues 3-5 and 10; Objective 1; Policies 1-4 and 15; Methods 1-16, 46 and 51; Environmental Result 4.

	Chapter 9, Ecosystems , Policy 4.
Water - discharges into	Chapter 5, Fresh Water , Issues 1 and 3; Policies 5-7 and 13-15; Methods 17-31, 33, 44-46 and 51; Environmental Result 9.
	Chapter 6, Soil and Minerals , Issues 7, 10 11 and 13; Objective 5; Policies 1, 2 and 6; Methods 1-4, 7-11 and 20-23.
	Chapter 9, Ecosystems , Policy 4.
	Chapter 12, Energy , Policy 8.
	Chapter 13, Waste , Issue 7.
Water - protection	"Water" defined in Definitions .
	Chapter 5, Fresh Water , Issue 8; Objective 3; Policies 10-15; Methods 38-51; Environmental Result 13.
Water - public water supply	Chapter 5, Fresh Water , Issues 3-5 and 9-10; Objectives 1 and 2; Policies 1-5 and 15-16; Methods 1-16, 21 and 51-52; Environmental Result 10.
Water quality	Chapter 2, The Wellington Region , Sections 2.4-2.5.
	Chapter 5, Fresh Water , Issues 1-2 and 5; Objective 1; Policies 4-10 and 13-15; Methods 17-51; Environmental Results 1-2, 7-10 and 13-15.
	Chapter 7, Coastal Environment , Policy 5.
	Chapter 12, Energy , Objective 3; Policy 8.
	Chapter 13, Waste , Environmental Result 3.
Wetlands	Defined in Definitions .
	Chapter 2, The Wellington Region , Section 2.4.
	Chapter 5, Fresh Water , Issues 3 and 7-8; Objectives 1-3; Policies 1, 4-12 and 14; Methods 17-33, 36-42 and 45-50; Environmental Results 14-15.
	Chapter 7, Coastal Environment , Policy 1.

Chapter 9, **Ecosystems**, Issues 1 and 5-7; Objectives 1-5;
Policies 4-9.

Wind

Chapter 11, **Natural Hazards**, Method 5.

Chapter 12, **Energy**, Policy 6.

Part I

A Regional Policy Statement for the Wellington Region

1. Introduction

1.1 The Structure of this Document

Part I of the Regional Policy Statement contains three chapters which provide the backcloth. This first chapter aims to provide an understanding of the purpose, scope and content of a regional policy statement. It looks at the requirements of the Resource Management Act 1991 (hereafter called "the Act") for preparing a policy statement and the place of a regional policy statement in the policy and planning framework provided for in the Act. The relationship of this Policy Statement, both with the Wellington Regional Council's Annual Plan and Budget process and with the decision making processes of territorial authorities, is examined, with special attention being given to the affordability aspect of the Statement. Finally, the public participation process which the Regional Council adopted is explained, as well as the Council's special obligations to, and relationship with, the iwi of the Region.

Chapter 2 conveys the unique history, character and soul of the Wellington Region from both a pakeha and tangata whenua perspective. A brief discussion of the Region's demographic and socioeconomic characteristics is also included. The Policy Statement provides an opportunity for us to manage the resources of our Region in the way that we want. It is not meant to be a restrictive planning document, but an opportunity for us to realise the opportunities that this Region offers and to provide for our children's children to do likewise. Chapter 2 provides a summary of the significant resource management issues of the Region and two visions for the future, one of which is a tangata whenua vision. It is these visions which should guide how we manage our resources.

Chapter 3 outlines the philosophical approach which has been adopted in preparing the Regional Policy Statement. It discusses the concept of sustainable management and the principles and assumptions which underpin this document. A separate section is included on iwi resource management philosophies and practices.

Part II concentrates on the actual management of our resources. Chapters 4 to 14 are the heart of the Policy Statement. These chapters look at the significant resource management issues for the Region and discuss the management of these in detail.

In part III, chapter 15 outlines the processes by which the Regional Council plans to give practical effect to the Regional Policy Statement.

As so many of the terms of the Act are new and may not be readily understood by all, a list of definitions is included in the Appendix.

1.2 What is a Regional Policy Statement?

The Act aims to promote the sustainable management of natural and physical resources. Sustainable management is defined as:

managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while:

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment. (s. 5)*

"Natural and physical resources" are defined in the Act to include land, water, air, soil, minerals and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures. In turn, "structures" means any building, equipment, device or other facility made by people and which is fixed to land.

Under the Act one of the ways of promoting sustainable management of our resources is for regional councils to prepare a regional policy statement for their region. The purpose of a regional policy statement is:

to achieve the purpose of the Act by providing an overview of the resource management issues of the region and policies and methods to achieve the integrated management of the natural and physical resources of the whole region. (s. 59)

It is an overview document which provides the framework for managing the resources of our Region in a sustainable way.

The Act requires regional councils to look at the following things when preparing a regional policy statement:

- The procedures for preparing, changing or reviewing a regional policy statement (First Schedule);
- The purpose and principles of the Act (Part II);
- The purpose of regional policy statements (s. 59);

- The matters which have to be considered by regional councils (s. 61) and which may be provided for in regional policy statements (Second Schedule);
- The contents of a regional policy statement (s. 62);
- The functions of regional councils (s. 30); and
- The duty to consider alternative means, to assess the costs and benefits of alternative and chosen means, and to be satisfied as to the necessity and efficiency of chosen means (s. 32).

Regional policy statements must state:

- The significant resource management issues of the region;
- Matters of resource management significance to iwi authorities;
- The objectives sought to be achieved;
- The policies in regard to the issues and objectives, and an explanation of these policies;
- The methods used or to be used to implement the policies;
- The reasons for adopting the chosen objectives, policies and methods;
- The environmental results anticipated;
- The processes for dealing with issues which cross boundaries with other local authorities;
- Procedures to be used to monitor results;
- Responsibilities in relation to natural hazards and hazardous substances; and
- Any other information that the regional council considers appropriate (s. 62).

By providing for each regional council to prepare a regional policy statement, the Act is signalling that resource management issues vary between regions. What might be an important matter or problem in one region may be a minor matter in another. This Policy Statement deals with issues which are important to the Wellington Region. Some are unique to this Region, whilst others are shared with other regions.

The Act also allows for innovative resource management. It does not prescribe ways in which issues should be dealt with. Consequently, we have the freedom to choose a variety of ways to approach issues. However, the ways we adopt must be consistent with promoting sustainable management.

The Act requires that regional councils should publicly notify their regional policy statements within two years of the commencement of the Act, i.e., by 1 October 1993. The Regional Policy Statement for the Wellington Region was notified on 25 September 1993. The policy statements are to be operative for a period of 10 years, whereafter they must be reviewed.

1.3 The Policy and Planning Framework

The Act provides for a framework of policy statements and plans (Figure 1), each of which must achieve the purpose of the Act — to promote sustainable management.

The Act signals a shift in the way in which we manage our resources. By managing the adverse effects of activities, it moves away from the previous planning legislation (the Town and Country Planning Act 1977) which provided for the direction and control of development. Every policy and plan provided for under the Act must promote sustainable and integrated resource management by managing adverse effects on the environment in order to achieve specified environmental outcomes.

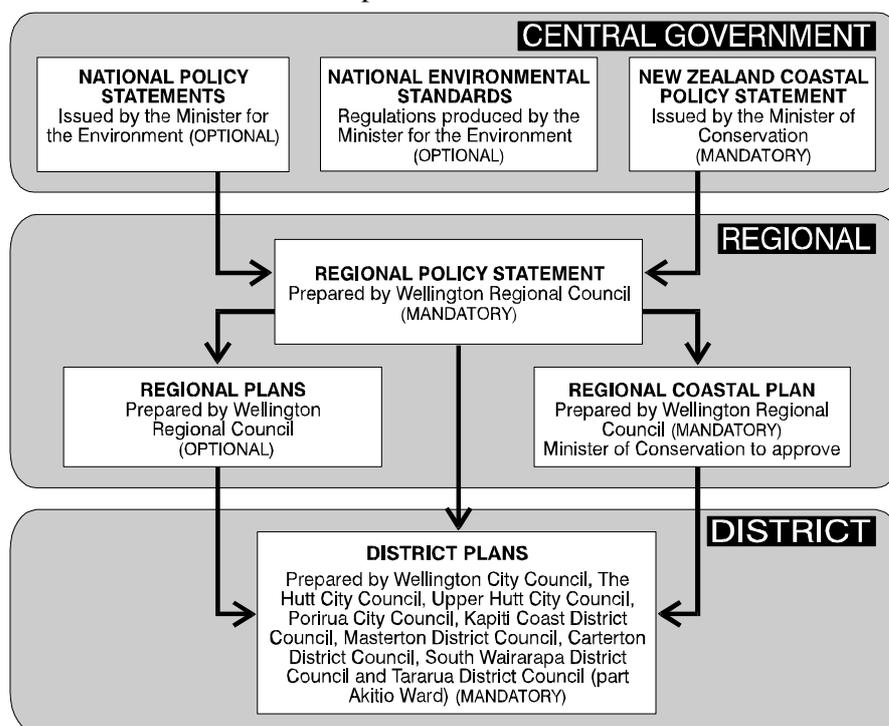


Figure 1 : Framework for Resource Management in the Wellington Region

Under the Act the following may or must be prepared:

(1) **National Environmental Standards**

The Minister for the Environment may establish technical standards which are in the form of regulations, and may prescribe implementation methods. These standards relate to the use, development and protection of natural and physical resources (s. 43-44).

(2) **National Policy Statements**

The Minister for the Environment may produce national policy statements on matters of national significance.

(3) **New Zealand Coastal Policy Statement**

The Minister of Conservation must prepare a New Zealand Coastal Policy Statement to state policies to achieve the purpose of the Act in relation to the coastal environment of New Zealand. There must always be at least one New Zealand Coastal Policy Statement which is prepared in the manner set out in the Act (s. 56-58). The New Zealand Coastal Policy Statement (1994) was released by the Minister in May 1994.

(4) **Regional Policy Statements**

See section 1.2 earlier in this chapter (s. 59-62).

(5) **Regional Plans**

Regional councils may prepare regional plans. With the exception of the Regional Coastal Plan, the preparation of these plans is optional. Regional plans are to assist regional councils to carry out their functions under the Act by focusing on some of the detail necessary to fulfil the policies contained in the regional policy statement. Plans may contain rules which prohibit, regulate or allow activities; they can be prepared for any matter for which regional councils are responsible and may apply to the whole or just part of a region.

The Regional Policy Statement states where regional plans are seen as being appropriate in the light of present understanding and priorities. Other regional plans may be prepared if further work shows them to be necessary. Under s. 65 of the Act, any person can request that the Regional Council consider preparing a regional plan. Such plans will be an important, but not the only method, by which the policies contained in the Statement will be implemented (s. 63-71). All regional councils must prepare a regional coastal plan for the coastal marine area of their region (s. 64).

(6) District Plans

Territorial authorities must prepare district plans to assist them in carrying out their functions under the Act. District plans may contain rules to prohibit, regulate or allow activities in order to mitigate, avoid or remedy effects.

The Act contains a hierarchical structure for these policies and plans. Although each is a statutory document in its own right, they are connected through this hierarchy.

A regional policy statement must not be inconsistent with:

- Any national policy statement;
- A New Zealand Coastal Policy Statement;
- A water conservation order (s. 62(2)).

A regional plan must not be inconsistent with the regional policy statement or with any other regional plan for the region (s. 67(2)). A district plan may not be inconsistent with the regional policy statement or with any regional plan for its region in regard to matters of regional significance or for which the regional council has primary responsibility (s. 75(2)).

1.4 The Regional Policy Statement and the Wellington Regional Council's Annual Plan

Under the Local Government Act 1974 all local authorities must prepare an annual plan. This plan must outline the nature and scope of activities to be undertaken by the organisation over the financial year, along with the funds required to undertake these activities. It is the latter which determines the rating level for the Region.

As the Regional Policy Statement must contain objectives, policies and methods for the sustainable management of the Region's natural and physical resources, it follows that the Statement will influence greatly the contents of the Regional Council's Annual Plan and Budget.

When preparing the Regional Policy Statement, the Wellington Regional Council has been concerned about the flow on costs to ratepayers. The Council is mindful that the Act aims to **promote** the sustainable management of natural and physical resources - not necessarily to achieve it immediately. Sustainable management is a long-term aim which we should all be working towards; the pace at which we go must always be determined by cost and time frame parameters.

The majority of methods contained in the Statement require the Regional Council **to do something**. In many instances, they are already being implemented by the Council; however, other activities are new. All activities proposed for the Council in this Regional Policy Statement will be subject to scrutiny through the Council's Annual Plan and budgetary process.

It is this process which will determine the priorities and time frames, as well as the affordability, of the methods. We cannot do everything at once; many of the methods will need to be implemented progressively.

We must continually balance the desirability of the end environmental result with the cost to the community of achieving that result. What is important is knowing where we want to go. We should have a vision for our Region and then strive to attain that vision.

1.5 The Regional Policy Statement and Territorial Authorities

The Regional Policy Statement seeks to provide a fair and equitable policy framework and direction for resource management in the Region.

The Act requires that territorial authorities, in their district plans, are not inconsistent with the objectives and policies contained in the Regional Policy Statement. The Regional Policy Statement does not and cannot place a requirement on authorities (or, indeed, other organisations) to do particular things.

Suggestions are made in the methods about possible means of implementing objectives and policies. However, decisions about specific actions, time scales and organisational arrangements belong to individual authorities.

1.6 The Consultation Process

The Regional Policy Statement is not a document for the Wellington Regional Council alone but a document for the Wellington Region. It is important that this Statement represents the collective expectations and visions of individuals, communities and organisations within the Wellington Region. The Wellington Regional Council therefore has placed great store on seeking the views of the regional community. Prior to publicly notifying the Proposed Regional Policy Statement, the Council prepared three other documents.

First, *Our Region, Our Future*, a public discussion document, was released in April 1992. It marked the start of a programme to involve the community in the Regional Policy Statement preparation process by providing an introduction to the significant resource management issues facing the Wellington Region and seeking comment on those issues. This document was widely distributed to schools, libraries, interest groups, iwi authorities, local authorities and interested individuals. Its existence was advertised in newspapers and on the radio. Over 50 groups and individuals replied, including residents' and ratepayers' groups, local authorities, environmental groups, Government departments, and private sector businesses. The responses received provided the Council with an indication of how the community wanted the issues to be dealt with. A substantial summary of submissions was prepared and made available to the public.

Secondly, an interim discussion document was prepared in October 1992 and circulated to a targeted audience. It was produced using the technical skills of Council staff, along with the comments received from the community on the first document. It included draft objectives and policies which the Council believed were appropriate for dealing with the issues which had been identified.

The comments received on this interim document (over 40 responses, many of which were very detailed), and the meetings which ensued with local authorities, central government, and those organisations who responded to our offer to meet with them, provided much information for a third document — a draft Regional Policy Statement. The draft was released in May 1993 and submissions called for.

The availability of the draft Statement was advertised in the daily and local newspapers in the Region. It was placed in City and District Council offices and service centres, as well as in public libraries throughout the Region. All those who had shown an interest in the previous documents were sent a copy of the draft or were advised by letter of its availability. The Council was mindful that the length and technical nature of the draft Regional Policy Statement could make it difficult for the general public to respond to, so an Overview Document was prepared and made available.

The Council presented the draft Regional Policy Statement to meetings of mayors and chief executives of territorial authorities, resource users, Government departments, and recreation and environmental groups. In addition, meetings were held with staff of all but one territorial authority, as well as with representatives of particular organisations and interest groups. These meetings provided for in-depth technical discussions on the draft document. Further, a workshop was held for the iwi of the Region and the document was taken to each of the iwi for comment.

Altogether, 56 submissions were received on the draft Policy Statement. Once again, many of these were very detailed; all were extremely helpful. The submissions and comments made at the meetings were all carefully considered in the preparation of the Proposed Regional Policy Statement. In addition, Council staff drew on their technical expertise to undertake extensive analysis to determine management options contained in the Proposed Statement.

The Proposed Regional Policy Statement was publicly notified on 25 September 1994. Seventy-six submissions were received and, within these submissions, approximately 1,000 specific decisions were requested by submitters. A summary of the decisions requested in submissions was prepared and its availability publicly notified in February 1994. Further submissions were invited in support or opposition to the decisions requested and 20 submitters took the opportunity to provide further comment.

The Wellington Regional Council held a Hearing into submissions in August 1994. For the Hearing Committee officers of the Regional Council prepared reports with recommendations on each of the specific requests made in submissions. Copies of the report were also sent to the appropriate submitters. This extra step in the consultation process enabled submitters to see how their request might be dealt with. It also helped focus the discussions at the Hearing on those matters where some disagreement or uncertainty remained.

Following the Hearing and the subsequent deliberations of the Hearing Committee, decisions were made on each of the requests. The decisions were confirmed by the Wellington Regional Council on 18 October 1994 and sent to submitters on 20 October 1994.

The Regional Policy Statement became operative in May 1995.

1.7 The Relationship of the Wellington Regional Council with Iwi Authorities

The iwi of the Wellington Region regard the Treaty of Waitangi as the founding document of New Zealand.

In signing the Treaty it is recognised that Maori ceded the right to govern to the Crown, subject to the Crown undertaking to recognise and guarantee the continued exercise of te tino rangatiratanga of iwi and hapu over their taonga.

Nga iwi o te Upoko o te Ika and the Wairarapa recognise that the functions and duties of the Wellington Regional Council and territorial authorities within the Region are derived from the Crown. They consider, therefore, that the relationship between the iwi and the Regional Council and territorial authorities is one that originates with the Treaty of Waitangi.

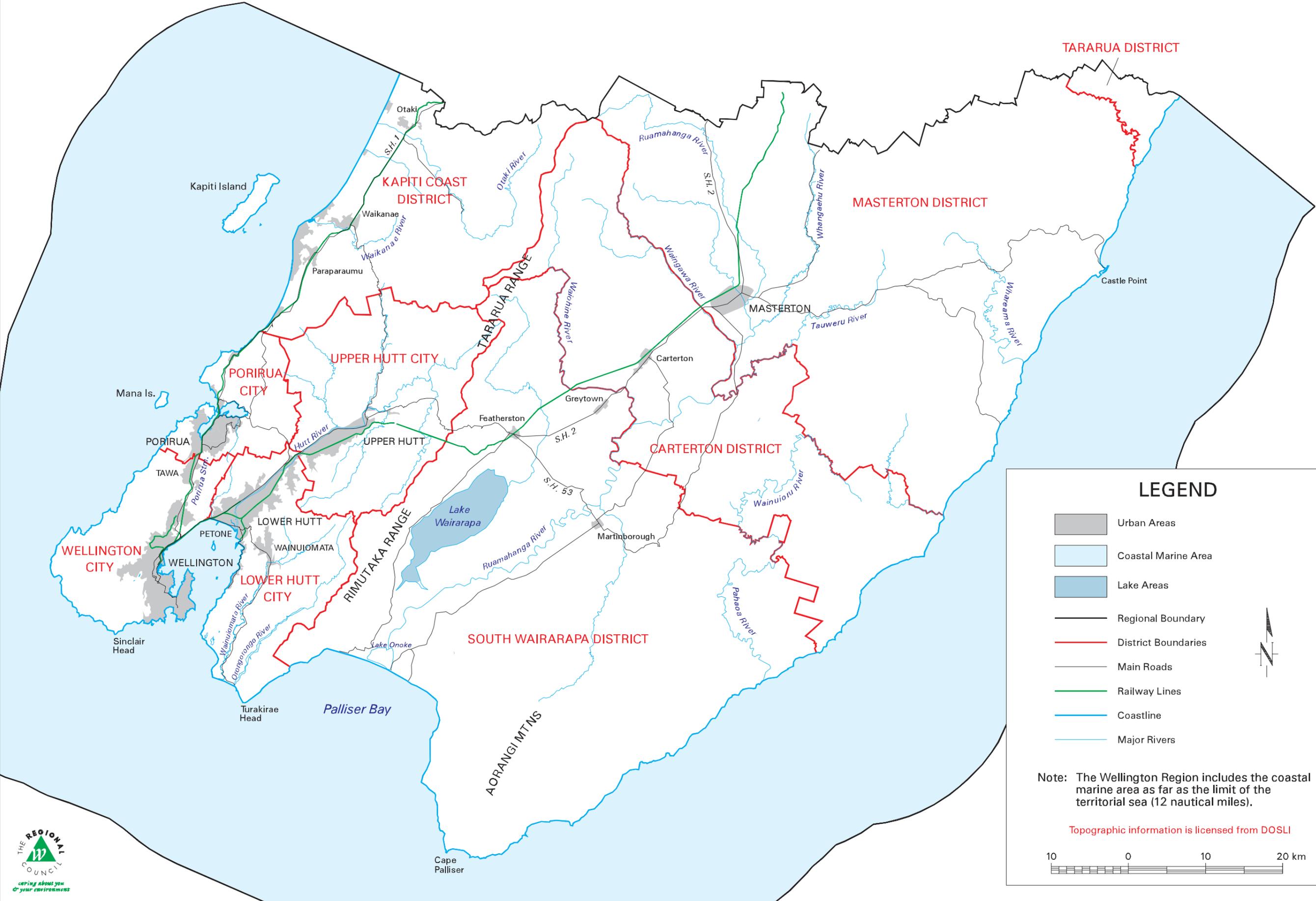
Under the Act, the Council is required to:

- Take into account the principles of the Treaty of Waitangi (s. 8);
- Have particular regard to kaitiakitanga (s. 7(a));
- Recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, waters, sites, waahi tapu and other taonga (s. 6(e)); and
- List matters of resource management significance to iwi in its Regional Policy Statement (s. 62).

There is no clear guidance in the Act on how the Council should proceed to recognise these legislative requirements. However, the Council has recognised the importance of establishing a relationship with tangata whenua and addressing the difficulties which inhibit iwi participation in the resource management system. Consequently, it has been guided by the principle of partnership when preparing this Regional Policy Statement and has attempted to take into account the various iwi preferences for participating in this document. Some iwi, with financial assistance from Council, gathered information on and articulated matters of resource significance to them. This information has served as policy guidance for the Council in preparing the Statement.

Nevertheless, in recognising the difficulty that some iwi were encountering in fully collating the information required, Council also set up an informal working party to provide advice on policy formulation. The working party comprised people with local iwi affiliations who were familiar with resource management issues. The working party has provided a summary of the Maori history of the Region, a vision for the Region from the iwi perspective (see section 2.6), and outlined iwi resource management philosophies and practices (see section 3.3). It has also provided input to the specific resource management chapters (chapters 4-14).

Figure 2: The Wellington Region



LEGEND

- Urban Areas
- Coastal Marine Area
- Lake Areas
- Regional Boundary
- District Boundaries
- Main Roads
- Railway Lines
- Coastline
- Major Rivers

Note: The Wellington Region includes the coastal marine area as far as the limit of the territorial sea (12 nautical miles).

Topographic information is licensed from DOSLI

10 0 10 20 km



2. The Wellington Region

2.1 Our Region : A Resourceful Approach

Flying high above the Wellington Region (figure 2), travellers heading north from Rongotai Airport are treated to unsurpassed views of the land below — meandering rivers, tumbling hills and deep valleys, fertile plains and the coast, lace edged with surf.

From the air, on a clear day (and we are fortunate in that the prevailing winds ensure a goodly number of clear days), you can see from one side of the Region to the other, from the Tasman Sea to the Pacific Ocean.

The clarity allows you to pick out landforms, towns and other items of interest, from the tallest peaks in the Tararua Ranges — the North Island's oldest rock formations and part of New Zealand's ancient backbone — to a single tractor ploughing a paddock in the backblocks of Te Horo. The scene is at once light green and dark green, disjointed and orderly, rugged and smooth. In places, the bush and the mountains look as they have done for tens of thousands of years; in others the signs of human occupation are unmistakable.

For the original Maori settlers, the land and the water were more than simply places to live, hunt and to fish. They were the domains of atua (gods) and their preciousness was revered in the traditions and practices of caring for the environment (see section 3.3).

When Europeans began taking an interest in the Region it was in a way that expressed their aspirations and values. The early colonists of the New Zealand Company looked towards starting a utopia, a promised land, in which they could escape the smoke stacks and "dark satanic mills" of the industrial revolution. However, the land they came to was not as smooth as the tabletop on which their plans were drawn in England.

The initial European settlers arriving in 1840 at Port Nicholson (called Poneke by the tangata whenua) discovered the Hutt Valley to be too swampy to build the perfectly laid out streets of their dreams; the Petone foreshore proved an inadequate anchorage, and Thorndon, though a secure haven for ships, had little flat land for building.

So, from the earliest European settlement, the resources of the Region were much in demand. Nature helped somewhat by providing more usable space when the great Wairarapa earthquake of 1855 raised the level of land around Lambton Harbour and drained the Basin Reserve area (a positive aspect of the earthquake perhaps, but a constant reminder of our precarious position on the border of the Indo-Australian and Pacific plates!). Reclamation added even more usable space and, today, in Wellington City, nothing remains of the original shoreline save a notion of its location, pinpointed here and there by brass pavement plaques, showing where the waters of Te Whanganui a Tara originally lapped in 1840.

The harbour has been made famous around the world. Descriptions range from the official reports of the early explorers, who declared it as safe an anchorage as could be wished for and which could hide an entire navy, to more prosaic accounts, such as in Katherine Mansfield's story *At the Bay* ...

The water was quite warm. It was that marvellous transparent blue, flecked with silver but the sand at the bottom looked gold, when you kicked your toes there rose a little puff of gold-dust.

Although Mansfield's fictitious waters were those of Crescent Bay, it is said her descriptions were based on her time at Eastbourne, and most likely refer to Days Bay, just as popular for bathing today — in fact, more so — than in the 1920s.

From Eastbourne, Wellington — capital city of New Zealand and cosmopolitan centre of the Region — can be seen, with the downtown commercial buildings taking centre stage against the dark green backdrop of the Tinakori Hills.

Here in this compact city is the seat of Government, along with the corporate headquarters of many of New Zealand's commercial giants. The commercial heart is also the cultural, with theatres and galleries, museums and marae, all within an easy reach.

To the north, the swamps of the Hutt Valley have long since been drained. Lower and Upper Hutt, along with Porirua to the west, are now substantial residential and commercial areas, supporting a huge variety of industrial and retail enterprises and providing for the needs of an ethnically and socially diverse community. With Wellington, these cities are a dynamic force, driving social and economic growth and development. Their homes, workplaces, facilities and services make up much of the Region's built environment and contribute to its natural resources and valued heritage.

Industries and other commercial enterprises are attracted to Wellington for all sorts of reasons: for some it's the convenience of being at the centre of New Zealand, with excellent road, rail, sea and air distribution networks; for others it's the proximity of the workforce, or the infrastructure of service industries. However, for many it's the abundance of water. The huge aquifer under the Hutt Valley and the Hutt River itself has long been a focal point of the area.

Not all water users are industries. People flock to the bush and the coast in search of peace and tranquillity, and to be near water often for recreational purposes, but also for its spiritual quality. Water has always been used for healing. It soothes, salves and serves each of us in a different way.

In the bush, water tumbles and bubbles its way over rocks, through gorges, over cliffs and on, meandering through farmland, on its journey to the sea. At each stage of that journey we meet it for different reasons; to drink and to cleanse, to swim and canoe, to sail, to irrigate, to feed stock to take from and drain into.

At Riversdale on the Wairarapa coast, the Motuwaireka Stream emerges from such a journey, joining the Pacific with a last determined detour, almost as though it wants to return inland. Here, at this tiny oceanside community, a small tidal population swells each weekend and holiday season as people arrive from Masterton, Wellington, and from north of the Region. They come for the surf, the sun, the dunes, the beach. Some camp, some stay in baches. All want use of the resources and all expect a plentiful supply of good clean water. Wairarapa means "sun on the glistening water".

Of course, water is not to everyone's taste. Some prefer wine in which case Wairarapa rates not only as our Region's main wine producing area (some wine is also made around Waikanae), but as one of the premium wine regions of New Zealand.

Although Martinborough in South Wairarapa seems only recently to have qualified as the wine capital of the Wellington Region, the area was well-known as being suitable for growing classical grape varieties last century, having been identified in 1895 by Government contracted viticulturist Romeo Bragato in his survey of New Zealand's most likely wine growing areas. Bragato labelled Wairarapa as one of the two most promising sites in the country. He's since been proved right, and today Martinborough produces some of New Zealand's best wines.

Getting to and from Wairarapa in the south involves tackling the Rimutakas, that formidable barrier of hills — though mountains seem a more appropriate term if you happen to be driving over them.

Fortunately, there is another option — the railway, which each day carries commuters from Masterton, Carterton, Greytown and Featherston, to and from Wellington. The Wairarapa-Wellington railway line was opened in 1878 and became one of the wonders of the Region, with its incline of 1 in 15 on the descent to Featherston. The incline section was closed when the Rimutaka Tunnel opened in 1955, yet today the route enjoys a resurgence of popularity as trampers, runners and mountain bikers puff their way up the steep mountainside in search of fitness and fun.

Crossing the Wellington Region from east to west (or vice versa) has never been easy, and even today road and rail travellers must detour to the north or south to do so. Although the Region's road and rail network is extensive, the rugged Tararuas present a majestic challenge, towering as they do along the spine of the Region. In early days Maori trails crisscrossed the mountains; today there are tramping tracks.

Travelling north by road or rail from Wellington along the west coast takes you via Porirua to the Kapiti Coast. This narrow coastal strip is becoming increasingly popular as a place to live and work.

As the railway line crosses the bridge at Paremata it passes the entrance to the beautiful Pauatahanui Inlet, a wide, tidal estuary, home to both pied stilts and — on the surrounding shores and hills — people. To the north of the inlet is a bird sanctuary where many different species can be seen wading through the shallows and along mudflats. Kingfishers, shags, white faced herons and, of course, the ubiquitous gulls, vie for the food of the shallow waters. Their habitat is also our playground and the balance of use is always delicate.

Continuing north along State Highway 1, the land has been developed both to the east and west. Yet just over 100 years ago thick native forest stretched from the sand dunes of the coast to the jumbled foothills of the Tararuas. To the north, the original inhabitants of the area were moa hunters. Later, flax swamps provided the area with a booming industry, with many mills being set up north of the Waikanae River. Such was the demand for flax, the area experienced something of a gold rush, though "green rush" seems more appropriate.

Although just a few kilometres north of Wellington, the climate of the Kapiti Coast, from Plimmerton north through to Otaki, is such that the area basks in more sunshine than the Capital. The clement weather, and fertile soils, have long been home to a local population of farmers, who recognised the area's potential as the "vegie garden of Wellington" as long ago as the mid-1800s.

The road traveller today has numerous opportunities for purchasing local produce from the many roadside stalls, testimony to the excellent growing potential of the land. This is not an accident, because while the Tararuas a little way inland represent some of the oldest rock in the North Island, the low lying coastal areas comprise some of the youngest soils, alluvial deposits formed by expanding river systems just 1800 years ago.

Today, the local farmers have been joined by an ever increasing population of urban residents who have either retired to enjoy the pleasures of the coast or who have decided to live away from the Capital's busy streets, relishing the relative tranquillity and slower pace of the "Gold Coast", but commuting each day to work. With a frequent train service, the journey to the Capital is no longer (and certainly more interesting) than that faced by many London commuters each day.

Recreationally, the Kapiti Coast area offers fishing, tramping, horse riding, sailing, golf virtually every sport and pastime imaginable, and the pleasure is not all centred on the land. The clear waters around Kapiti Island have recently been designated as a marine reserve in an effort to preserve the wealth of sea life for the enjoyment of the hundreds of divers who come to the area for the thrill of experiencing the deep.

On Kapiti Island itself — also a wildlife reserve — visitors can, on special occasions and by prior arrangement, experience some of New Zealand's most special native bird life. Tui, weka, takahe, kaka, robins and saddlebacks to them all, Kapiti is home.

Whatever our interest, whether its wildlife, wine or waste management, our real interest is in resource management. The balance between what's available and what's required, between using and abusing, and between enjoying and exploiting, is a fine one.

A resourceful region demands a resourceful approach.

2.2 Maori in the Wellington Region : Nga Korero Onamata O Te Upoko O Te Ika Me Te Wairarapa

The Wellington Region has had an eventful Maori history, not the least of which is its Maori identification as "Te Upoko o Te Ika a Maui" or the Head of Maui's fish. This naming presupposes an ability by early Maori to view Aotearoa from the heavens and so envisage the fish-like shape of the whole North Island. The head of the fish, in Maori thinking, is the sweetest part.

Kupe was probably the first Maori to come to this area around 950 AD. His names abound in the coastline and islands in and around the harbour. For example, Some Island is Matiu, named after one of Kupe's daughters, and Nga Ra o Kupe (the sails of Kupe) are rock formations at Cape Palliser. Kupe and his people did not stay to populate the area but returned to Polynesia. Toi, who had travelled to Aotearoa in search of his grandson Whatonga, was the next Polynesian traveller to arrive.

Since those early days, there has been considerable movement of Maori into and within the Region. The Wellington Harbour area (Te Whanganui a Tara) has seen various tribes occupying in succession, with periods of simultaneous occupation by different tribes. The most complex and turbulent period began when Europeans arrived in and around the area at the beginning of the 19th century and continued until the arrival of the New Zealand Company settlers in 1839. The harbour has been held by Taranaki tribes since 1832.

The migration, in the early 19th century, of both the Tainui tribes, from Kawhia and Mangatautari, and the Taranaki tribes, to the western part of the Region (including Porirua), caused major changes for the Muaupoko and Rangitane people who had been resident in the area for many years.

A taua (war party), led by Ngapuhi and Ngati Whatua, and including Ngati Toa and Atiawa chiefs, laid to waste many of the Muaupoko, Rangitane, Ngai Tara and Ngati Ira people in an area ranging from the west to the east of the Region. This taua proceeded as far as Hawkes Bay before returning to their home areas. A series of migrations from these attacking northern tribes moved into the Region over the next 20 years. It was this pattern of occupation that existed when the New Zealand Company Settlers arrived in Wellington in 1839.

The turbulent history of Te Upoko o te Ika had a lesser impact on the Wairarapa. Members of the east coast tribes of Ngai Tara, Ngati Ira, Ngati Kahungunu and Rangitane who were resident at Te Upoko o Te Ika, moved back to areas in the Wairarapa which had been occupied by their relations for a long period of time. The tribal history of the Wairarapa has most to do with Whatonga and his descendants, Rangitane, Ira-turoto and Kahungunu.

Today Te Upoko o Te Ika is home for people from all of the tribes of Aotearoa and Te Waipounamu (North and South Islands).

A rich mixture of tribal backgrounds is represented, from the pre-colonial tangata whenua who constituted most of the Maori of the Region for the best part of a century, to the East Coast tribes encouraged here by such people as Sir Apirana Ngata and Sir James Carroll. Maori were encouraged to come to Wellington for work and educational opportunities.

The resulting drift to the cities became a flood in the post World War 2 era because of the decline in rural industry and the rapid development of urban industry such as "The Gear" freezing works, Ford Motor Company and other light and heavy industrial employers of unskilled labour.

These modern migrations produced a situation where the original tribes of this area were numerically overwhelmed by Maori people from afar. This brought a cultural shift for the tangata whenua and for the new arrivals. The institution of Ngati Poneke, an urban Maori culture club for non-tangata whenua Maori, was one response to these changes.

The main tribes still maintaining their traditional tangata whenua status in the Region are as follows. Ngati Raukawa are centred in the north of the Region at Otaki, with only part of their tribal territory in the Wellington Region. Further south, around Waikanae, are Te Atiawa ki Whakarongotai. Ngati Toarangatira are focused around Porirua. Te Atiawa ki Te Upoko o Te Ika are centred mainly in the Hutt Valley and Wellington City. Ngati Kahungunu ki Wairarapa have traditional bases throughout the Wairarapa. There are other tribes with more than a passing presence in the Region. Notable among these are Rangitane and the other relations of Ngati Kahungunu, especially Ngai Tara and Muaupoko.

This dynamic history of changing mana whenua in the Region still influences Maori relations today and has an important bearing on resource management issues of interest to Maori people of the Region.

2.3 Our Region : Demographic and Socioeconomic Characteristics

In 1991 the Wellington Region, New Zealand's third most populous region, had a population of 399,438 (table 1). Its population is primarily urban; almost 83 percent of the Region's residents are found in the metropolitan areas of Wellington City, the Hutt Valley and Porirua. However, population growth is highest in the northwestern coastal strip of Kapiti and, to a lesser extent, Wairarapa. Kapiti Coast District's population increased by almost 19 percent between 1986 and 1991.

Although some parts of the Region are growing rapidly, the Region's population is projected to grow more slowly than the country as a whole. By 2011 the Region is expected to increase by 11.4 percent to 445,800 residents. Notable increases in

population are predicted for the Kapiti Coast District and Porirua City, while decreases are expected for Wellington and Lower Hutt Cities.

Table 1 : Resident Population - Wellington Region, 1991

Area	Population	% Share of the Region	% Population Change 1986-1991
Kapiti Coast District	34,581	8.7	18.9
Porirua City	46,440	11.6	1.7
Upper Hutt City	36,810	9.2	0.5
Lower Hutt City	94,695	23.7	-0.2
Wellington City	148,062	37.1	0.7
Masterton District	22,512	5.6	3.2
Carterton District	6,855	1.7	6.9
South Wairarapa District	9,132	2.3	3.5
Wellington Region	399,438		2.2
New Zealand	3,373,926		3.4

(Source : Department of Statistics)

The Region has a high proportion of young adults (20-34 year olds), who are attracted to the urban areas for education and employment. However, within the Region, there are pockets of younger and older populations. Children make up a higher proportion of the populations of Porirua City and the Wairarapa than elsewhere in the Region. Kapiti Coast District has the highest proportion of elderly residents of all the territorial authorities in the Region, although the number of young families in this district is increasing rapidly.

People from both outside the Region and from overseas have been attracted to the Region's cities. The metropolitan areas have one of the most ethnically diverse populations in the country. While the Region has proportionally fewer Maori people than New Zealand as a whole, it has more Pacific Islanders and people from other ethnic groups (table 2).

Table 2 : Ethnic Composition - Wellington Region, 1991

Ethnic Group	Percentage of Population	
	Wellington Region	New Zealand
European	77.5	78.8
Maori	10.5	12.9
Pacific Island	6.1	4.5
Other	5.0	2.9

(Source: Department of Statistics)

The importance of the service sector in the Region's economy has increased dramatically in the last 20 years. Table 3 shows that the vast majority of people employed in the Region work in this sector — in community services, sales/hotel/restaurants, business and financial services, and the public service. However, although manufacturing,

dominant in the early 1970s, has declined as a major employment sector, there are still significant concentrations of manufacturing in Lower Hutt City. Only a small proportion of the Region's residents are employed in the primary sector (agriculture, fishing, forestry).

The Wellington Region has one of the highest labour force participation rates in the country and has also traditionally enjoyed the highest average weekly earnings. These factors have a favourable effect on household incomes and spending power in the community.

These demographic and socioeconomic characteristics are pertinent in making policy for the management of natural and physical resources. For example, a growth in the population of an area leads to demands for supporting infrastructure and public utility services — with their associated effects on the environment. Similarly, the age and economic circumstances of a population influences the types of demands on the environment, both now and in the future.

Table 3 : Industrial Structure - Wellington Region, 1991

Industry Sector	Usually Resident Population Percentage of Numbers Employed	
	Wellington Region	New Zealand
Community/social/personal services	33	27
Wholesale/retail/restaurant	20	21
Business and financial services	19	12
Manufacturing	11	17
Transport/communications	7	6
Construction	6	6
Electricity/gas/water	0.9	0.7
Mining/quarrying	0.1	0.3
Agriculture/Hunting/Forestry/Fishing	3	10

(Source: 1991 Census of Population and Dwellings, Statistics New Zealand)

2.4 The Significant Resource Management Issues in the Wellington Region

The overview of the Wellington Region, the summary of its Maori history, and the facts and figures about its present population, help describe and explain the Region as it is today.

Our Region today is shaped by actions and values of the past; similarly, our actions today will shape our children's Region in the future. Although, for the most part, past decisions and actions have been based on the need to provide for the well-being of the

community, they have not been without costs. Unfortunately, these costs have often been met by the environment and paid for by a reduction in environmental quality.

The Regional Policy Statement provides us with an opportunity to take stock of the effects of development and to try to manage these effects in a way which protects the environment and facilitates development, both now and in the future. The Regional Policy Statement should identify the significant resource management issues for the Region and promote an appropriate approach to deal with these issues.

Significant resource management issues in the Wellington Region have been identified from a number of sources. These include responses received from the Council's consultation process on this Statement (see section 1.6) and a survey of environmental attitudes conducted by the Council at the beginning of 1993¹. The Council already had a great deal of knowledge of the issues relating to resources under its management (e.g., water and soil). In addition, a number of views which have been expressed elsewhere, for example, in the media, and in district and city council surveys, have provided valuable information.

These significant issues are discussed in detail in Part II of this document, but a synopsis is provided here as an introduction and as a precursor to our visions for the Region which follow in sections 2.5 and 2.6.

An environmental issue emerges when people express a concern about something that is happening — or not happening — or which is likely to happen — to an aspect of the environment that they value. These concerns reflect a variety of interests and experiences. What may be a concern for a farmer, whose livelihood depends on the land, may be of lesser concern for a someone who is using the land for recreation. Sometimes people's concerns are supported by technical data; at other times the evidence does not match the concern being expressed. These perceptions were taken into account when developing this Policy Statement as they are a reflection of community values and of the aspirations people have for their Region's resources. However, only those issues that can be addressed within the parameters established by the Act have been incorporated in the Policy Statement.

Water quality is one of the major issues facing this Region (see chapters 5 and 7). The community wants high quality fresh and coastal water. There are significant concerns about the quality of our coastal water, especially about the discharge of sewage. The disposal of sewage has been a dominant issue throughout the Region for some time. For Maori, water quality is a resource management matter of particular significance. The discharge of sewage into water bodies is considered to destroy the mauri (life principle) of water. However, research by the Council shows that concern about the discharge of sewage is by no means confined to Maori.²

¹ Wellington Regional Council, 1993, *Environmental Issues, Values and Behaviour, Environmental Attitudes Project, Stage 1*, Wellington Regional Council, Wellington.

² *ibid.*

People also want their rivers, streams and lakes to be clean. Although evidence shows that the Region's fresh water quality is no worse than the rest of the country, there are still areas which have poor water quality. In some cases this poor quality is the result of sewage discharges; in others it is because of other land based activities, for example, agricultural wastes and urban run-off.

Meeting the diverse demands for water is also a significant issue for the Region and conflict frequently occurs over the use of a particular river or water body. Some people value the natural or intrinsic character of water; some wish to use it to carry away waste or as a raw material for a production process, which itself generates wealth and employment; others wish to swim, fish or pursue other forms of water based recreation. All of these uses may conflict with the need for pure water for public water supply purposes.

Closely related to the concerns about water is the issue of **waste disposal** (chapter 13). The disposal of waste — solid, liquid and gaseous, hazardous and non-hazardous — has an adverse effect on the environment. Yet we currently have inadequate waste management practices. Leachate from landfills may discharge into waterways causing pollution; similarly, effluent from primary production (e.g., dairy farming in the Wairarapa) may pollute watercourses; we have problems with disposing of unused pesticides and other agricultural chemicals, particularly in the Wairarapa; the Wellington Region, like the rest of New Zealand, generates large quantities of waste, yet there are no incentives to reduce the amount of waste generated and we are experiencing difficulties in making recycling viable.

The Wellington Region is vulnerable to a **greater range of natural hazards** than any other region in New Zealand (chapter 11). It sits astride the boundary of two great crustal plates, and is cut by a number of major active fault lines.

The Region has frequent earthquakes and a major earthquake will occur here in the future. The urban nature of the Region makes it vulnerable to earthquake damage — a total of 29 km of fault lines pass through the urban areas in the western part of the Region.

Similarly, many of the Region's major floodplains have been developed and there are now **substantial assets at risk** from flood hazard. Of particular concern are the Hutt, Otaki, Waikanae, Porirua, Waingawa, Waiohine and Ruamahanga floodplains. The Hutt floodplain has an asset value of approximately \$10 billion, the second highest in New Zealand.

Erosion of the land through flooding, storms and poor management practices has damaged the environment and diminished the productive capacity of land. This is of particular concern in the Wairarapa (chapter 6).

Despite the constraints presented by steep hills, the Wellington Region's **urban areas are characterised by low densities and an extended form of development** (chapter 14). This has important cost implications for the provision and maintenance of infrastructure and public utility services. Because of the terrain, development has often occurred on

limited and valuable flat land — either land that has high value for food production, or floodplains that are, by definition, at risk from flooding.

Although the general perception is of "Windy Wellington", the Region does have **air pollution problems**. These emanate from a variety of specific and area sources, although the Region's transport routes are especially obvious in causing localised air pollution (chapter 8).

There is a high degree of dependence within the Region on **non-renewable energy sources**, particularly by the transport sector. Further, examples of **inefficient energy use** can be found in all sectors of activity (chapter 12).

The number, total area and quality of the Region's ecosystems is declining (chapter 9). For example, 90 percent of the wetlands that existed in the Wellington Region as recently as 1840 no longer exist³. Now only 1.6 percent of the Region remains in wetlands and few of these areas have any degree of formal protection. Urban demands have had, and continue to have, a significant detrimental impact on such systems, often permanently impairing their ability to function and, therefore, to provide vital services for people. For example, a lack of water in a river system not only damages habitats, but can also reduce a river's capacity to assimilate wastes.

The coastal environment holds special meaning for many people. However, the **natural character of this environment is under threat** (chapter 7). There is increasing demand for the expansion of urban areas along coastal margins, particularly along the Kapiti, Porirua and Wairarapa coasts; the downturn in the rural economy has resulted in an increasing demand to subdivide rural coastal properties. In addition, some coastal uses, such as mining and vehicles on beaches, are having adverse effects on the coastal environment.

The **perceived threat to particular landscapes** of regional significance from development and public access is a growing issue (chapter 10). Examples of such threats are development encroaching on the dune lands of Kapiti, as well as the visual impacts of mining.

The **tangata whenua are perturbed that their role in managing the natural resources of the Region** is not being fully recognised and that their ability to carry out this role is impaired through lack of resources (see section 3.3). For example, tangata whenua are seeking an active role in coastal management.

Finally, there is a need to ensure that the social and economic well-being of the regional community is facilitated through **the maintenance and enhancement of the infrastructure** of the Region. There are a number of important public services provided by network utility operators and others, the positive effects of which need to be recognised.

3

Wellington Regional Council, 1993, *Wetlands in the Wellington Region*, Wellington Regional Council, Wellington.

2.5 A Vision for the Future

By summarising the significant resource management issues of the Region, it is possible to create a vision for the future. Although much has been done already to find sustainable solutions to these issues, this vision remains one which the regional community can work towards achieving.

In the Wellington Region of the future it could be that:

- The water in streams, rivers and lakes is of a quality and of sufficient quantity to meet the demands of people and ecosystems. The natural character of wetlands, lakes and rivers is preserved, and there is public access to and along important water bodies.
- When natural hazard events occur, their effects are mitigated. Human actions do not add unnecessarily to the likelihood or magnitude of the effects of natural hazard events.
- The coastal environment is accessible to the community and, where possible, its natural character is preserved. Those coastal areas where there has already been degradation are rehabilitated or restored and further degradation is halted. Our coastal waters retain their natural characteristics.
- The soils are able to maintain their desirable physical, chemical and biological characteristics.
- The quantity of waste generated is minimal and the potential of waste products to be reused and recycled is realised. The use of raw materials is sustainable and production processes are clean.
- The natural and managed ecosystems are healthy and their processes support diverse populations of plants and animals and maintain the quality of soil, air and water.
- The important landscapes and treasured parts of the Region are protected.
- The nature and rate of development, and of growth, meets the needs of people, but takes place in a sustainable manner.
- Energy is used efficiently and there is minimal reliance on non-renewable energy sources.
- The air retains its natural characteristics.
- There is an accessible transport system which is safe, which allows for diversity in modes of transport, which uses resources efficiently and which has minimal adverse effects on the environment.

- People are able to satisfy their recreational demands with little adverse effect on the environment.
- Urban areas are healthy and attractive places for people to live and work.
- Places, things and objects of cultural and heritage value are conserved.
- Regional public works and services and network utility operations are provided for in a sustainable manner.

2.6 An Iwi Vision for the Future

Nga Iwi o Te Upoko o Te Ika me te Wairarapa have contributed their own vision for the future.

The tangata whenua relationship with the environment is one based on the ethic of kaitiakitanga (see section 3.3 for an explanation of kaitiakitanga). The primary focus of this ethic is the protection of mauri. Mauri is the life force that exists in all things in the natural world, including people. Without mauri, nothing can survive.

Iwi therefore have a vision for the future based on two broad objectives: first, the protection of mauri and, secondly, the exercise of kaitiakitanga. This vision is:

- The Treaty of Waitangi will be the basis of the relationship of tangata whenua with the Regional Council and territorial authorities;
- There will be a more harmonious and mutually beneficial interaction with the environment in the management and use of natural resources. This interaction will recognise the mauri present in all elements of the natural world and the spiritual dimensions of the physical environment;
- People will be more aware and take more responsibility for activities which have a detrimental impact on the environment;
- Tangata whenua will become a primary agent in achieving better environmental outcomes by exercising their kaitiaki role; and
- Recognition will be given to the need for tangata whenua to utilise their resources according to their own cultural preferences and to respond to the socioeconomic needs of the iwi and hapu.

2.7 Implementing These Visions

The visions in sections 2.5 and 2.6 are the ultimate aim and represent a desired, long-term outcome. In trying to attain these visions, economic and other social considerations must be taken into account. An integral part of the visions, for example, is the degree to

which we are economically capable of enjoying them. The desired outcomes will always need to be balanced with economic, social and practical considerations.

3. The Philosophical and Organisational Approach

3.1 Introduction

This chapter outlines the philosophical approach to managing the Region's natural and physical resources from both the Council and iwi perspective.

Chapters 5-14 are based on specific resources (fresh water, soil and minerals, the coastal environment, air, ecosystems, landscape and heritage, energy, waste, the built environment and transportation), and events (natural hazards). The Act requires that we look at the **effects** of the use of these natural and physical resources.

Matters of resource management significance to iwi are covered in two ways in the Statement:

- Issues of general concern to iwi are described in section 3.3 of this chapter; the objectives, policies and methods for dealing with these issues are found in chapter 4;
- Specific issues of concern to iwi, and objectives, policies and methods which help meet iwi aspirations in relation to specific resource management issues, are found in the chapters which follow.

This approach has been adopted in order to be consistent with an integrated approach to resource management. Iwi issues cover the entire scope of issues dealt with in this Statement. They therefore cannot be confined to a single chapter.

Although referred to in the Act, land is not considered in one specific chapter. The concept of land implicit in the Act is an **integrating** medium for activities and for other resources. The chapter on soil covers the productive capability of land. Land provides the physical base for a wide range of activities, the effects of which are considered in other chapters (e.g., Landscape, The Built Environment and Transportation).

The resource based chapters each have the same format. They begin with a brief introduction of the resource and then identify and explain the significant issues. The objectives for the Policy Statement are then stated, together with an explanation as to why each particular objective has been included. The policies and methods to achieve these objectives follow. To avoid repetition one explanation is sometimes given for groups of policies and methods.

Each issue, objective, policy and method has a discrete number. The links between these are noted in the right hand margin. Every issue is dealt with through an objective or policy. Every objective has a policy or group of policies to implement it and every policy is linked to a method or group of methods, except where a policy is such that the

method of implementation requires no further explanation. The integrated management of the Region's natural and physical resources means that the cross links between chapters are also noted. For example, policies for the management of the Region's soil resources are inextricably linked with policies for fresh water. To avoid confusion and unnecessary complication, only the key cross links are made.

The environmental results anticipated from the implementation of the stated policies and methods are outlined next. These tend to relate to the objectives, which in turn relate to our vision for the Region. In addition, the chapters on natural hazards and waste management and hazardous substances each contain a table which outlines responsibilities for the control of the use of land in relation to the issues covered in those chapters (s. 62(1)(ha)).

3.2 Guiding Principles and Underlying Assumptions

A number of principles and assumptions have guided the preparation of this document. These are outlined here as an aid to understanding the specific resource and activity chapters which follow.

3.2.1 Sustainable Management

The purpose of the Act is to promote the sustainable management of our natural and physical resources (see section 1.2). The Regional Policy Statement is pivotal in achieving this for the Wellington Region. Although the Act defines the term sustainable management, it provides little guidance on how to promote or achieve such management.

Sustainable management is primarily about the management of natural and physical resources — land, water, air, the coast, the urban infrastructure and so on. Resources may be used and developed, but within a framework of sound ecological practices. Sustainable management requires⁴:

- Sustainable resource use — this relates to the rate at which resources are used and are able to be replenished on a long-term basis. It involves ensuring that there are sufficient resources available for the needs of future generations.
- Sustaining ecological systems — this involves ensuring that ecosystems maintain their ability to function and flourish. It requires assessing environmental costs in decision making.
- Sustaining environmental quality — this involves ensuring that adequate levels of environmental quality are maintained. The term "environmental quality"

⁴ Schofield, R, 1991. *Sustainable Management - Making the Concept Work*. A Paper presented to a New Zealand Planning Institute workshop entitled "The Resource Management Act : The Realities of Implementation, 22 August 1991, Wellington.

includes both the intrinsic values of the environment and those aspects of natural and physical resources which are valued by people, that is, the amenity values of the environment.

Sustainable management is not an anti-development concept. The Act requires that resources be used, developed and protected in a way or at a rate which allows people to provide for their social, economic and cultural well-being, as well as for their health and safety. In short, resources can be used, but in a way which ensures that resources, ecological systems and environmental quality are sustainable.

3.2.2 Integrated Management

The Act requires regional policy statements to provide policies and methods to achieve integrated management of the natural and physical resources of the whole region (s. 59). Integrated management involves:

- Ensuring that the relationship between different resources and environmental systems is taken into account. It is an holistic approach which recognises that one resource cannot be managed in isolation from others; resources, and the effects of human activities on these resources, are inextricably linked;
- Interagency co-operation and co-ordination, whereby all agencies, including adjacent regional councils, territorial authorities, iwi authorities, special interest groups, the commercial sector, and community groups, work together to meet agreed resource management objectives;
- Consistency and co-ordination between the internal structures of organisations, particularly local authority departments;
- Appreciating the full range of effects that might arise from decisions and considering a full range of ways to achieve desired results (s. 32). The effects may be positive or adverse, temporary or permanent, past, present or future effects, and cumulative effects. Effects may also be potential effects (s. 3);
- Recognising the iwi environmental management system (see section 3.3); and
- Recognising that natural and physical resources are better managed by taking social, economic and cultural factors into account. Integrated management must recognise differing community values, interests and aspirations.

3.2.3 A Co-operative Approach

The Wellington Regional Council recognises that managing the Region's resources in an efficient, integrated and sustainable fashion, requires good co-operation with and between the territorial authorities of the Region and the Council. Although a co-operative approach is inherent in the Act, all local authorities have a moral, as well as a

statutory responsibility, to work together for the benefit of this generation and of future generations.

3.2.4 A Strategic Approach

The Regional Policy Statement is a strategic document. It provides an overview of issues, and ways of approaching these issues, with a view to attaining a vision for the future of the Region. Although the statutory life of the Statement is 10 years, it has been prepared with the welfare of future generations in mind.

3.2.5 The Limits of Environmental Systems

The Act requires that the life supporting capacity of air, water, soil and ecosystems be safeguarded. Environmental systems have limits or "bottom lines"; any deterioration beyond these limits will have irreversible effects and destroy forever the life supporting capacity of the system.

3.2.6 Information and Monitoring

The Policy Statement recognises that sustainable management needs good information (s. 35). Yet quality information about environmental and biophysical systems is not always available. Nevertheless, a comprehensive, integrated information system, which crosses organisational and disciplinary boundaries, would facilitate better decision making. Social, economic and cultural information is required, as well as biophysical, as the way in which we want to use our natural and physical resources is greatly influenced by socioeconomic factors.

3.2.7 A Precautionary Approach

The Regional Policy Statement adopts a precautionary approach to resource management when there is insufficient information available for specificity. When there is uncertainty about environmental limits, or the possible effects of activities are unknown, it is sensible to recognise this in decision making. A precautionary approach thus seeks careful decisions rather than delayed decisions.

3.2.8 An Anticipatory Approach

Rather than dealing with adverse effects after the event, it makes both environmental and economic sense to avoid the effects in the first place. For this reason the Policy Statement takes an anticipatory approach.

3.2.9 A Flexible Approach

The Wellington Regional Council appreciates that a regulatory regime for resource management may not be the best or only way of achieving the desired ends. Consequently, a range of methods is identified in this Policy Statement, including encouragement, support, information provision and setting good role models. The Council considers that the best results come from a shared understanding of common goals. It has recommended plans and regulation only when specificity and absolute certainty are required.

3.2.10 A Responsible Approach

This Statement recognises that everyone has a responsibility to the environment. S. 17(1) of the Act states that:

every person has a duty to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person

This duty may be given effect to in a number of ways. For example, organisations and individuals should seek to ensure that any procedures, activities, or operations they undertake in order to comply with environmental standards, or to avoid adverse effects, are performed effectively and achieve a high degree of reliability. It will only be through the diligence and responsibility of consent holders in consistently and reliably achieving standards set to protect natural and physical resources, that the benefits of a healthy environment will be enjoyed by everybody.

3.2.11 Regional Significance

The Regional Policy Statement may contain policies of several types: those that relate to the functions of the Council (as laid down in s. 30 and in Part 1 of the Second Schedule); those that relate to effects of the use of land which are of regional significance (as laid down in Part 2 of the Second Schedule); and more general policies relating to other resource management matters, such as energy efficiency. A mixture of policies of these kinds can be found throughout this document.

However, the meaning of regional significance is not defined by the Act. It does not contain any guidance as to the circumstances under which a regional council can legitimately prepare policies about land use matters of regional significance. The Council has therefore prepared guidelines to illustrate the grounds on which it has relied to include policies of this nature.

The places, species and effects which are in parentheses below, are examples only. While a policy **could** be prepared for each of the guidelines on the basis of its regional significance, it is not the case that a policy **has** been included in the Policy Statement.

The effects of the use of land may be regionally significant when they:

- (1) Are felt across territorial authority boundaries (e.g., effects on ecological processes and systems which cross boundaries, such as skylines, landscapes, roads, transport effects, etc.);
- (2) Are cumulative or combine with other effects to have more than local significance, even though individually they could be dealt with by the territorial authority in whose district they reside;
- (3) Relate to an aspect of the environment which is used, valued or appreciated by the regional community as well as the local community (e.g., Tararua Ranges, Queen Elizabeth Park, Wellington Airport, the port of Wellington);
- (4) Relate to an aspect of the environment which is found only in this Region or which contributes to the distinctive or unique character of the Region (e.g., Wellington Fault scarp, landforms);
- (5) Relate to an aspect of the environment which is rare or unique within the Region, even though it may be commonly found outside of the Region (e.g., wetlands, fish and plant species which are endangered in the Region, though common elsewhere);
- (6) Are considered by more than one iwi to require a regional approach;
- (7) Relate to land owned or managed by the Wellington Regional Council or to land which other relevant authorities agree should be managed by the Council; or
- (8) Relate to an aspect of the environment which is of national significance (e.g., Lake Wairarapa, Kapiti Island, Red Rocks, Turakirae Head Terraces), or of international significance (endangered species found only in New Zealand).

These guidelines may also be used to assist territorial authorities to identify situations where policies in the Regional Policy Statement which relate to land use should be considered in decision making. However, this may not be possible (or limited in some circumstances) where a district plan has established an activity as a permitted, controlled or discretionary activity.

3.2.12 Objectives, Policies and Methods

The Regional Policy Statement is required to state objectives, policies and methods for managing our resources. These terms have been interpreted in the following way:

Objective: The resolution of an issue or set of issues. It is the desired result, end state, situation or condition that is sought.

Policy: The general plan or strategy required to achieve the desired result.

Method: The practical action needed to give effect to the policy.

3.2.13 Considering Alternatives and Assessing Benefits and Cost

The objectives, policies and methods in the Regional Policy Statement have been chosen carefully. A rigorous approach has been adopted throughout the preparation process. The objectives, policies and methods have been assessed for their necessity and their appropriateness, given the alternatives available (s. 32). The Council has viewed this evaluation and justification as part of the process of writing a Regional Policy Statement and not as a separate exercise with a separate report.

3.3 Tiakina Te Mauri Ora : The Protection of "Mauri"

This section begins with an account of the Maori understanding of creation and the resulting ethos of Maori environmental management. The links between this ethos, along with the institutional processes used by Maori to put it into practice, and the Act, are then discussed.

3.3.1 Te Orokohanganga mai o Te Aro: The Creation of the World

The environmental management system of the iwi/hapu in our Region was developed over many centuries and has been exercised by numerous generations. It is still practised today and is recognised in the Treaty of Waitangi. Of fundamental significance to this management philosophy is the Maori perception of the natural world and its origins. The underlying set of principles arising from this perception guides all interaction with the environment.

Iwi/hapu traditions discuss the origins of the universe as being with Io who dwelt in Te Korekore. Io created various realms, such as the numerous Po, which lasted for eons. Ranginui (the sky father) and Papatuanuku (the earth mother) emerged from these realms and had some 70 children, all of which were Atua (Departmental Gods). The children of Ranginui and Papatuanuku created various domains in Te Ao Marama, the world between earth and sky. Within these domains everything in the natural world was created. Hence the tangata whenua view of reality is that it is constructed of inter-related and interconnected domains of Atua.

Iwi/hapu traditions concerning the creation of the universe do not recount the emergence of the physical reality (taha tinana) alone, but include the creation of the intellectual plane (taha hinengaro), and, most importantly, the spiritual realm (taha wairua) which is present in all things.

The children of Ranginui and Papatuanuku breathed life or mauri which emanated from Io into their various domains. These children of Ranginui and Papatuanuku became the

Atua of these domains and created the plants and animals within. They are the original kaitiaki or guardians of the domains.

The authority of the Atua (mana Atua), which allows them to be kaitiaki, is handed down through whakapapa (genealogy). Mana is passed from Io to Ranginui and Papatuanuku, and then to the Atua. All things in the universe are interconnected through whakapapa.

Some of these Atua and their domains include:

- Papatuanuku (land)
- Rangi (sky)
- Tane Mahuta (forests)
- Tangaroa, (ocean including inland water)
- Ruauumoko (earthquakes)

3.3.2 Tikanga

Practices, or tikanga, were developed to maintain the mauri of the domains of Atua. They are based on the general understanding that people belong to the land and have a responsibility of kaitiaki to that land.

Tikanga incorporates concepts such as tapu (sacredness) and rahui (temporary restriction). These are forms of social control which manage the interrelationship of people and the environment.

Tikanga were developed in recognition of the three planes of reality:

- te taha tinana (the physical plane)
- te taha hinengaro (the intellectual plane)
- te taha wairua (the spiritual plane)

Tikanga seek to unify these three planes in an holistic way. Observing tikanga is part of the ethic and exercise of kaitiakitanga.

3.3.3 Kaitiakitanga

Kaitiakitanga is a term that denotes the package of tikanga or practices concerning environmental management. A Kaitiaki is a person and/or agent who performs the tasks of guardianship.

All persons exercising powers and functions under the Act, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to kaitiakitanga (s. 7). Yet kaitiakitanga is not explained adequately in the Act.

Kaitiakitanga is an environmental decision making system which has been developed by tangata whenua to fulfil their responsibility towards the environment. The responsibility of kaitiaki is twofold: first, there is the ultimate aim of protecting mauri and, secondly, there is the duty to pass the environment to future generations in a state which is as good as, or better than, the current state.

Kaitiakitanga is a broad notion which includes the following ideas:

- Guardianship;
- Care;
- Wise management; and
- Resource indicators, where resources themselves indicate the state of their own mauri.

Kaitiakitanga may be practised through:

- The maintenance of waahi tapu, waahi tipuna and other sites of importance;
- The management of fishing grounds (mahinga maataitai);
- Protesting about environmental degradation (e.g., Moa Point protests);
- Observing the maramataka (lunar calendar);
- Observing the tikanga of sowing and harvest; and
- Designing settlements in keeping with the environment.

Kaitiakitanga is linked inextricably to tino rangatiratanga as it may only be practised by those iwi, hapu or whanau who possess tino rangatiratanga (customary authority) in their tribal area.

Individuals, and sometimes families and subtribes, are charged with the tasks of kaitiakitanga. Kaitiaki often receive their mana or authority with respect to a particular locality, place or resource. For example, a family or individual might be the kaitiaki for a pa or for a fishing ground because they possess an intricate knowledge of the local environment.

Whilst iwi authorities themselves may not be considered kaitiaki, they often represent them or can help in identifying them.

Kaitiakitanga is a proactive and preventative approach to environmental management. However, this traditional management system has rarely had the opportunity to address large-scale environmental degradation. For example, places like Moa Point and the mouth of the Waiwhetu Stream, through long-term abuse, have lost their mauri. Maori feel that if kaitiakitanga had been recognised, such degradation would not have occurred.

3.3.4 Taonga

Within the domains of Atua there are a variety of sites, resources, environmental phenomena and cultural institutions that are of particular significance to iwi. The term taonga is used in s. 6(e) of the Act and in Article 2 of the Treaty of Waitangi. It is an important institution, as it defines things of value to tangata whenua and also symbolises a different philosophical approach to environmental management.

The term taonga can refer to anything that contributes to the maintenance of a tribe's intellectual, physical and spiritual estate.

Although some taonga, such as land and water in any form (including rivers, lakes, groundwater, pools, waterfalls and springs), relate directly to domains, other taonga are of a different nature. They include sites and resources such as waahi tapu, tauranga waka and mahinga maataitai (each is referred to in the Act), other sites for gathering food and other cultural resources, hills, mountains and caves.

Taonga can refer to intangible, as well as tangible entities. Institutions that give expression to the tino rangatiratanga and mana whenua of the iwi are also regarded as taonga. All taonga are part of the cultural and tribal identity of iwi.

Examples of taonga are:

- **Nga Wai (water)**

Water is an essential element of life. Consequently, it is a very significant taonga to Maori and plays a central role in both the spiritual and secular worlds. Water represents the life blood of Papatuanuku, the tears of Rangi, and is the domain of Tangaroa. The condition of water is a reflection of the state of the land, and this in turn is a reflection of the health of the tangata whenua.

- **Te Moana (sea)**

The domain of Tangaroa has great spiritual significance vested in mana Atua. It also has a practical value. The sea is a food basket of the iwi. As such, practices and elements that defile the mauri and the mana of the sea are seen as abhorrent. The discharge of pollutants into the sea is an obvious example.

Te moana includes the shoreline, foreshore, estuaries, river mouths and so forth. Lakes, such as Lake Wairarapa, are often referred to as moana.

- **Nga Maunga (mountains)**

Maunga are a source of, and enhance, the mana of an iwi/hapu. The relationship of an iwi with its maunga can be affirmed and strengthened in a number of ways. Often a maunga is named directly after a tribal tipuna (ancestor), thereby establishing a clear genealogical relationship or commemorating a significant event. Often such maunga are classified as tapu to an iwi or hapu.

- **Nga Awa (rivers)**

Awa have a mauri, mana and tapu of their own. They are entities, like maunga, with which iwi groups identify. Tangata whenua often refer to the river as a taonga and in doing so denote their relationship to the entire river system, not to any one part. Rivers carry the life blood of the land; the well-being of a river is reflected in the well-being of the local people.

- **Nga Kai (traditional food)**

Various traditional foods are of value to the iwi. Some, like maataitai (see below) are identified as such in both the Act and in the New Zealand Coastal Policy Statement 1994. However, there are other valued sources of kai, for example, eels and watercress. All fauna and flora are the offspring of various deities; for example, all sea life are of Tangaroa, forests and animals are of Tane Mahuta and uncultivated foods are of Haumietikitiki. For this reason they have mana atua (divine origins) and are considered tapu.

Food also has a strong social and cultural meaning. Manaaki tangata is the custom of being aware of and caring for the needs of your guests. Food is a fundamental way of expressing this ethos. In turn, the mana of the tangata whenua is both upheld and enhanced. The loss of the ability of tangata whenua to provide for guests in this way can also be seen as a loss of mana.

- **Maataitai (seafood)**

Maataitai is food provided by the sea, for example, shellfish, fish, crayfish. Apart from being a major source of mana, the state of maataitai is a reflection of an iwi, hapu or whanau duty of kaitiakitanga. Where they are no longer able to protect these resources, iwi may suffer a loss of mana in being unable to fulfil their role as kaitiaki.

- **Waahi Tapu**

Waahi tapu, which is specifically referred to in the Act, covers a broad range of places. It is a status which recognises the tapu of the area. The area may be associated with creation stories of tangata whenua, a particular event (such as a battle or ceremony); it may be where the whenua (placenta) was returned to the earth, or where a certain type of valued resource is found.

- **Tauranga Waka**

Tauranga waka are landing sites for canoes. Sites used for landing and berthing of waka taua (war canoes) may, because of the association with life and death, be considered waahi tapu. Similarly, where a waka is of significance to the mana of the tangata whenua, its resting place may be categorised as a tauranga waka.

- **Cultural Resources**

Cultural resources comprise a broad category of resources used in cultural practices and activities of Maori. Such resources include flora and fauna for rongoa Maori (medicine), prized flora and fauna for weaving (e.g., pingao, kiekie, pigeon feathers), and wood (e.g., totara) for carving purposes.

Cultural activities are the essential working elements of the tribal culture. They give rise to, and reaffirm, the relationship of tangata whenua with the land. The guaranteed availability of these resources has implications that extend beyond the use of a material for any one cultural activity. It extends to preserving tikanga (customary practices) associated with their use.

- **Cultural Institutions**

Cultural institutions are matters of significance to iwi because of their relationship to tribal identity and tribal development. They comprise the essential institutional elements that denote mana whenua, the customary right of power relating to tribal rohe (boundaries). Turangawaewae (ancestral homes, including marae), papakainga (whanau/communal housing settlements), and mahinga maataitai are some of these institutions.

3.3.5 Te Tiriti o Waitangi

The general mandate for Maori involvement in resource management stems from s. 8 of the Act which states that:

In achieving the purpose of this Act all persons exercising functions and powers under it in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

A number of principles have been developed over recent years about the meaning, application and jurisdiction of the Treaty of Waitangi. In a legal sense, the primary source of Treaty principles has been the decisions of the Court of Appeal in relation to cases brought by Maori under the State Owned Enterprises Act 1986. The Waitangi Tribunal also has statutory responsibilities under the Treaty of Waitangi Act 1975 to determine whether certain matters are inconsistent with the principles of the Treaty. Waitangi Tribunal reports and findings are therefore a significant source of information on Treaty principles.

Because many of the claims before the Waitangi Tribunal have been concerned with land and other natural resources, many of the Treaty principles which have been developed to date are directly relevant to resource management matters under the Act. However, in both the Court of Appeal cases and the Waitangi Tribunal cases, principles have been developed in response to a particular claim or grievance. The principles, therefore, do not yet form a "complete set" to cover every resource management issue, and neither are specific principles always directly applicable to the range of circumstances that might arise under the Act. It is also important to remember that the principles defined by the Waitangi Tribunal and the Courts have been defined by bodies acting under legislation determined by the Crown. Tangata whenua may derive different principles from the Treaty which reflect their interpretations of the relationship between rangatiratanga and kawanatanga.

There is, therefore, a need for local authorities exercising powers under the Act and tangata whenua to consult and negotiate with each other as to how the principles of the Treaty should apply to resource management.

The Iwi Environmental Management System

4.1 Introduction

Section 3.3, Tiakina te Mauri Ora, set out the environmental management ethic and system of the tangata whenua of the Region. It discussed the overarching philosophy, principles and concepts, including the Treaty of Waitangi, that guide the relationship of tangata whenua with the environment. The issues of resource management concern to the iwi of the Region, and the objectives, policies and methods for meeting iwi resource management aspirations, derive from these principles and concepts.

This chapter provides a general statement of the objectives, policies and methods that flow from the perspectives elaborated in section 3.3. It complements the specific objectives, policies and methods relating to iwi which are found in the chapters which follow. If, in one of the following chapters, there are no specific references to iwi, it does **not** mean that iwi are not concerned with that particular issue. Rather, it means that the matter is dealt with generally in this chapter. In particular, this chapter addresses matters relating to the ongoing relationship between tangata whenua and local authorities that is required to achieve sustainable management.

Finally, section 3.3 provided most of the explanatory material for this chapter. Only the main points of that explanation have been repeated here and only when it has been necessary to explain why a particular objective, policy or method has been adopted.

4.2 Issues

General issues relating to the iwi environmental management system have been identified in section 3.3. Specific issues are identified in the chapters which follow.

See also
Fresh Water
Issue 2,
Coastal
Environment
Issue 7,
Landscape
Issue 3 and
Waste Issue 6

4.3 Objectives

Objective 1 *A mutually satisfactory relationship is developed and*

Iwi Policies 1
and 2.

maintained between the Wellington Regional Council and the iwi of the Region.

Objective 2	<i>The principles of the Treaty of Waitangi are taken into account in resource management.</i>	Iwi Policies 3-5.
Objective 3	<i>There are increased opportunities for tangata whenua to exercise kaitiakitanga in the Region.</i>	Iwi Policies 4, 6 and 7.
Objective 4	<i>There are increased opportunities for the cultural aspirations and tikanga of tangata whenua with regard to natural and physical resources to be met.</i>	Iwi Policy 8. See also Coastal Environment Objective 4.

Developing a satisfactory relationship and good planning and decision making processes is fundamental to addressing resource management issues of significance to iwi. By focusing on process, rather than environmental outcomes, this set of objectives retains the flexibility necessary to provide for iwi aspirations in a realistic manner within the framework of the Act.

The Treaty of Waitangi is the basis of Maori involvement in resource management in the context of the Act (**Objective 2**).

Kaitiakitanga (**Objective 3**) and the exercise of tikanga in relation to natural and physical resources (**Objective 4**) are two of the primary ways in the iwi environmental management system is implemented. Protection of mauri is one of the elements of kaitiakitanga which is embodied in **Objective 3**.

This set of objectives has been adopted in order to help achieve the iwi vision for the future of the Region, to provide general objectives for resource managers dealing with issues of iwi concern, and to give effect to the relevant provisions of the Act (see section 1.7 of the Regional Policy Statement). The wording of the Iwi objectives reflects what is **achievable** in the lifetime of the Regional Policy Statement.

4.4 Policies

Policy 1	<i>To develop an understanding of, and recognise the relationship between, rangatiratanga and kawanatanga in the management of the Region's natural and physical resources, including recognition of the principle of tino rangatiratanga and its association with tribal autonomy, authority, control and self-determination.</i>	Iwi Method 1.
Policy 2	<i>To support⁵ the active participation of tangata whenua in the</i>	Iwi Methods 2-5

development and implementation of resource management policy and plans, and in the resource consent granting process.

and 15.

Policies 1 and 2 have been adopted to provide guidance on the development of the relationship between the iwi and local authorities. **Policy 1** addresses the need for the relationship between rangatiratanga and kawanatanga, as set out in the Treaty of Waitangi, to be explored, developed and applied in a practical manner to the management of natural resources in the Wellington Region.

The development of this understanding and its application will be worked out between the tangata whenua and the Regional Council. **Policy 2** emphasises the participation of tangata whenua in the processes and implementation of the Act.

See also
Waste
Policy 10.

Policy 3 *To promote awareness of the Treaty of Waitangi and the Maori environmental management system within local authorities and other resource management agencies.*

Iwi Method 6.

Policy 4 *To recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga.*

Iwi Methods 7-10. See also Coastal Environment Policy 7 and Fresh Water Policy 13.

Policy 5 *To take account of relevant Treaty of Waitangi claims when developing policies and plans and making decisions under the Act.*

Policies 3-5 have been included in order to clarify some aspects of "taking the principles of the Treaty of Waitangi into account". **Policy 4** reflects s. 6(e) of the Act and all three policies are consistent with s. 8 of the Act.

Policy 6 *To recognise and promote the role and importance of kaitiakitanga.*

Iwi Methods 11-13.

⁵ The term "support" does not necessarily mean financial support. It can be encouragement or the sharing of expertise.

Policy 7 *To recognise environmental management plans prepared by iwi authorities.*

Iwi Method 14.

Section 3.3 described how kaitiakitanga and the protection of mauri are central to the iwi environmental management system. Recognition and promotion of the importance of kaitiakitanga (**Policy 6**) will help increase opportunities for kaitiakitanga to be

exercised, and is consistent with s. 7(a) of the Act. This includes iwi involvement in the practical management of natural and physical resources.

Iwi environmental management plans (**Policy 7**) are referred to in the Act and regard must be had to any such plans in the development of policies and plans under the Act. Iwi management plans allow iwi to be proactive in their involvement in resource management and are also of assistance to local authorities in carrying out their policy and planning responsibilities under the Act.

See also
Ecosystems
Policy 3 and
Waste
Method 4.

Policy 8

To recognise the Treaty right of iwi development and to facilitate resource development initiatives which are practical and permissible under the Act. This includes supporting, where appropriate, tangata whenua to develop and enhance their resources in accordance with their own tikanga and values.

Iwi Method 14.

Policy 8 recognises that the Treaty of Waitangi embodies a right to manage tribal resources — including both resource protection and resource development — in accordance with customary preference.

4.5 Methods

Method 1

The Wellington Regional Council and iwi representatives will jointly prepare a Charter of Agreement to guide their relationship under the Act.

Iwi Policy 1.

Method 1 will clarify how the Regional Council will work with tangata whenua to discharge its responsibilities under the Act.

The Wellington Regional Council will:

Method 2

- *Provide information to tangata whenua on resource management matters, including the respective responsibilities of different resource management agencies.*

Iwi Policy 2.

Method 3

- *Liaise with other environmental and resource management agencies on resource management matters of significance to iwi.*

Iwi Policy 2.

Method 4

The Wellington Regional Council, where it is the consent granting authority, will:

Iwi Policy 2.

- (1) *Consult tangata whenua on all consent applications it considers will have a significant effect on tangata whenua;*
- (2) *Encourage applicants to consult with tangata whenua as part of the assessment of effects;*
- (3) *Appoint Maori as hearings commissioners, when appropriate;*
- (4) *Recognise, when appropriate, tikanga Maori in pre-hearing meetings and hearings; and*
- (5) *Consider effects on iwi when assessing whether consent applications should be non-notified.*

Method 5

The Wellington Regional Council will recognise and provide for tangata whenua participation in environmental monitoring, as appropriate.

Iwi Policy 2.

Methods 2-5 have been included to support the participation of tangata whenua in resource management. **Method 2** acknowledges that lack of information can hinder the ability of tangata whenua to participate actively in resource management. **Method 3** has been adopted in order to promote an integrated approach to resource management matters of concern to iwi, between different levels of government and across jurisdictional boundaries. **Method 4** provides for tangata whenua values to be taken into account in the resource consent granting process. **Method 5** covers tangata whenua involvement in monitoring and recognition of indicators of environmental well-being used by iwi. This is consistent with recognition of the iwi environmental system and the relationship of iwi with the natural environment.

See also
Waste
Method 11.

See also
Ecosystems
Method 3.

Method 6

The Wellington Regional Council will conduct training courses for Council staff and elected representatives on the Treaty of Waitangi and the Maori environmental management system.

Iwi Policy 3.

Resource management agencies have a responsibility to increase their understanding of, and respect for, the Treaty of Waitangi and Maori values relating to the environment. Training staff and elected representatives will help ensure that structures and processes take account of these matters. **Method 6** could also be adopted by territorial authorities.

Method 7

The Wellington Regional Council and the tangata whenua will jointly produce a statement on access to information on waahi tapu and other sites and issues of significance.

Iwi Policy 4.

Method 8

The Wellington Regional Council will consult with tangata

Iwi Policy 4.

whenua over the management of any waahi tapu or any other significant sites or taonga which are located on Wellington Regional Council land or which are managed by the Wellington Regional Council.

Method 9

The Wellington Regional Council will, in its regional plans:

Iwi Policy 4.

- (1) *Acknowledge and incorporate, where appropriate, the special relationship that tangata whenua have with the environment, as reflected in their environmental management system;*
- (2) *Recognise and provide for waahi tapu and any other sites of significance to tangata whenua, where appropriate; and*
- (3) *Include objectives, policies and methods, as appropriate, for the management of taonga of importance to tangata whenua.*

Method 10

The Wellington Regional Council, when requested to do so by an iwi authority, will investigate the need for Heritage Orders.

Iwi Policy 4.

Methods 7-10 indicate four of the ways in which the Wellington Regional Council will give effect to s. 6(e) of the Act (which is reflected in Policy 4). **Method 7** concerns access to information and recognises that there needs to be negotiation between tangata whenua and local authorities on the availability and ownership of information on waahi tapu and other sites and issues of significance to iwi or hapu. The use of silent files is a potential element of this method.

See also
Fresh Water
Methods 43
and
44, and
Ecosystems
Methods 5 and
15.

Method 11

The Wellington Regional Council, in consultation and partnership with tangata whenua, will investigate opportunities for iwi management of resources and opportunities for joint management, where appropriate.

Iwi Policy 6.

The Wellington Regional Council will:

Method 12

- *Appoint tangata whenua as kaitiaki by a transfer of powers, where appropriate.*

Iwi Policy 6.

Method 13

- *Support tangata whenua to administer transferred powers, functions or duties, where appropriate.*

Iwi Policy 6.

Method 14

- *Support iwi to prepare iwi management plans, where appropriate and where iwi wish to do so.*

Iwi Policies 7
and 8.

Methods 11 to 14 focus on improving opportunities for iwi management of resources and on formal recognition of the role of

kaitiaki. These methods are consistent with a partnership approach to resource management, as required by the Treaty of Waitangi, and the transfer of powers provisions of the Act (s. 33). **Method 14** recognises that iwi authorities might require assistance to prepare their management plans. This assistance will most likely be in the sharing of ideas and expertise.

Method 15

The Wellington Regional Council will conduct training courses, or use other appropriate training mechanisms, to assist iwi representatives to increase their ability to participate in resource management activities.

Iwi Policy 2.

In taking account of the Treaty principle of active protection, and the duty of consultation, resource management agencies have a responsibility to provide sufficient information to iwi and to assist them in gaining knowledge and understanding of resource management matters. Provision of training opportunities will help iwi to carry out kaitiakitanga responsibilities and to work more effectively with resource management agencies. This method could also be adopted by territorial authorities.

4.6 Anticipated Environmental Results

This chapter is about implementing a relationship based on the Treaty of Waitangi, whereas other chapters focus on the management of specific resources. The environmental results anticipated in this chapter, therefore, relate mainly to improved processes, rather than to changes in the natural and physical environment.

Good processes will result in positive changes in the environment; these anticipated environmental results are covered in chapters 5-14.

- (1) Environmental policies of iwi authorities are developed and implemented.
- (2) Appropriate consultation is undertaken on all resource management matters of significance to tangata whenua.
- (3) Tangata whenua are involved in resource management decision making processes, as appropriate.
- (4) Tangata whenua are involved in environmental monitoring of matters of resource management significance to them.

- (5) Tangata whenua values are incorporated, where appropriate, into sustainable management.

5. Fresh Water

5.1 Introduction

The Act divides water resources into three categories: fresh water; geothermal water; and coastal water (s. 2). This chapter discusses fresh water, while chapter 7, "The Coastal Environment", deals with coastal water. There is, of course, a strong link between fresh and coastal waters because rivers and streams eventually flow into the sea. Fresh water is usually thought of as including surface water (lakes, rivers, streams, swamps, wetlands, etc.) and groundwater (aquifers, underground streams, etc.). The Act's special provisions for geothermal water are not relevant to this Region as it does not contain any known geothermal water. The Act provides definitions for such words as "fresh water", "river", "bed" (of a lake or river), "wetland", and so on, which are adopted in this chapter. However, references to water should be taken to mean fresh water unless specifically identified as coastal water.

Water is essential to the social, economic and environmental well-being of the Region. However, the demands placed on it are not easy to satisfy and frequently clash with one another. This occurs most often over the use to be made of a particular river or water body. Many people value water's natural or intrinsic characteristics. Some wish to use it to carry away waste or as a raw material for a production process, so generating wealth and jobs; others wish to use it for swimming, fishing or other forms of recreation; all of these uses may conflict with the need for pure water for public water supply purposes. In some areas, and at certain times of the year, there are conflicts between the human need for water and the environment's needs for survival. There may be inadequate water to satisfy user needs and community aspirations, as well environmental or ecosystem needs. Although water is, in general, a renewable resource, the ecosystems that depend on it can be seriously damaged by even brief periods of inadequate supply or inferior water quality.

The Act makes the trade-offs between human needs and environmental requirements much more explicit than in the past. The sustainable management of fresh water means it should be available (in quantity and of an appropriate quality) for meeting a range of human needs. However, this should not be at the expense of its life supporting capacity or its ability to meet the needs of future generations. Furthermore, the effects of its use on

the environment should be managed as far as possible.

The Wellington Regional Council has the primary role for managing the use of water and resolving any conflicts that arise from its use. Unlike some of the other resources discussed in the Policy Statement, the management of water has a strong regulatory focus. This is because the Act stipulates that taking water or discharging into water are prohibited unless expressly authorised.

The only possible forms of authorisation are a resource consent (which must be obtained from the Council) or a rule in a regional plan allowing an activity without a consent - making it a permitted activity (s. 14(3)). Some other activities are considered to be existing uses and these may continue until a plan says otherwise (s. 20). Moreover, while the Act provides for some economic instruments (e.g., permits to take water may be sold subject to certain conditions (s. 136)), these are limited.

However, the Council is committed to facilitating growth and economic development in the Region. It will make the process for obtaining consents as straightforward and efficient as possible and work to identify activities which may become permitted or controlled through minimal regulation.

Similarly, while economic instruments appear to be limited in their application, the Council will continue to investigate their future use. This will include the use of tradeable water permits and the promotion of charges for domestic consumption to ensure water is used efficiently.

5.2 Issues

Issue 1

Poor water quality is of concern to many people. The quality of fresh water is high on the list of the community's most significant environmental worries. Disposal of wastes into water is becoming more and more unacceptable to the regional community. For iwi, discharges of sewage are an affront to the mauri (life principle) of water bodies. However, sewage in fresh and coastal water is also of concern to the community more generally.

Fresh Water
Objectives 2
and
3.

See also
Waste
Issue 6.

Freshwater bodies identified by the Wellington Regional Council as having impaired water quality include:

- Waikanae River Estuary, Ngarara Stream and Mazengarb Drain, (Kapiti District);

- Hulls Creek (mid-section) (Upper Hutt City);
- Waiwhetu Stream and Wainuiomata River (Lower Hutt City);
- Ngauranga and Makara Streams (Wellington City);
- Makoura Stream (Masterton District);
- The lower Ruamahanga River (South Wairarapa District); and
- The shallow groundwater aquifer in the vicinity of the former Waingawa freezing works (Carterton District).

Poor water quality reduces the use that can be made of the water and, in particular, downgrades instream values, for example, aquatic ecosystems, swimming, fishing and mahinga kai.

The most common factors which limit water quality are bacterial and nutrient contamination. *Giardia* cysts have also been located at over 20 river sites throughout the Region.

Water quality is primarily affected by discharges, although the severity of any discharge is related to the quantity of the water in a water body. Pollution discharges can result in reduced species diversity and ecosystem instability. Discharges include:

- Pollution spills, for example, from manufacturing processes, petrochemicals, timber treatment chemicals.
- Stormwater run-off from industrial zones and city streets, for example, heavy metals and chemicals.
- Sediment from land clearance, track and road construction, quarries and new subdivision, for example, silt, loess.
- Discharges from sewage treatment plants, septic tanks, and leaks from sewage pipelines, including trade wastes.
- Diffuse pollution (non-point source), for example, silt from eroding hill country, and nutrients, including nitrate and phosphorous from agricultural activities, animal excreta, and chemicals.
- Agricultural wastes, e.g., cowshed effluent, poultry, stockyard and piggery waste, etc. These lead to high nitrates in shallow groundwaters or nutrient enrichment in streams.

See also
Waste
Issue 8.

See also Soil
Issue 6.

See also
Waste
Issue 6.

See also Soil
Issues 2 and
11.

- Discharges from mining operations, for example, stormwater run-off and water from aggregate washing which is often high in silt.

See also Soil Issue 9.

While there are undoubtedly areas of poor fresh water quality in the Region, public concern with water quality may be somewhat at variance with the scientific evidence. This concern may reflect a widely felt desire rather than a realistic appraisal of the state of the resource. There is also likely to be a degree of "carry over" from the **coastal** water quality (sewage) issue which has been prominent in the Wellington metropolitan area for many years. The 1993 New Zealand Water Quality Index, which measures the quality of rivers and streams, found (for the area west of the Rimutaka and Tararua Ranges) that 59 percent of monitored sites were in a good or very good condition (and classified as "suitable for general use"), 36 percent of sites were "doubtful", and only 5 percent were unsuitable for general use.⁶

See also Coastal Environment Issue 4.

This 5 percent are in a poor condition. In general, the rivers of the Wairarapa are in a better condition than those of the western part of the Region.

In this Region, as elsewhere, the quality of streams and rivers is closely linked to the predominant land use. The Region's catchments which are in native vegetation are in very good condition and our rural streams are in a better state than those regions with high density dairy production. Our urban streams are typical of urban streams elsewhere, whilst rivers such as the Hutt compare favourably — it passes through a major urban area and yet has high quality water and supports a quality trout fishery.

Issue 2

Some uses of fresh water do not meet the **expectations of the tangata whenua** for water. For them, water is a taonga (see section 3.3(2)). It provides essential elements of both a spiritual and physical nature and possesses a mauri or life force which can be harmed by certain practices, such as diverting water between catchments or rivers.

Fresh Water Objectives 1-3.

⁶ Wellington Regional Council, 1993, *Baseline Water Quality of Rivers and Streams in the Wellington Region : 1992/3*, Wellington Regional Council, Wellington, pp. 3-13.

Iwi believe some rivers to be under threat, saying mauri has been diminished by discharges and/or water diversion, for example, Ngati Raukawa believe this of the Otaki River.

Issue 3

There are conflicts in the allocation of water because of **competing uses and values**. These competing demands on the

Fresh Water Objectives 1-3.

resource cannot, at times, be satisfied. Fresh water is of importance for:

- The community as a source of public water supply, for example, Hutt River at Kaitoke, Waikanae River upstream of the railway bridge;
- Industry, both as a resource to use and as a medium in which to dispose of waste;
- Anglers for its trout population, for example, mid-Ruamahanga River, Wainuiomata River;
- Recreationists for the "thrill of the experience", for example, Otaki River Gorge;
- Intrinsic and wildlife values, e.g., migrating birds use Lake Wairarapa and its associated wetlands (a habitat of national significance);
- Farmers for irrigation and other uses; and
- The community in general for its aesthetic and scenic values, beauty, inspiration, and so on.

Issue 4

Overallocation and the **demands of sustainable management** are presenting increasing challenges to water management.

The sustainable management of water requires an adequate residual flow to be left in rivers to safeguard fish and wildlife habitats and provide for other instream values.

However, overallocation of water has, in some places, created periods when the demand exceeds supply, for example, the Waitohu River, the Hutt River at Kaitoke (Wellington water supply), and the Kaipatangata Stream in the Wairarapa (Carterton water supply).

There are also a number of notified uses, authorised under previous legislation, but without time limits or conditions, which have resulted in takes or discharges which cannot be considered sustainable in the long-term. The Act states that these will expire in 2001.

Issue 5

Of related concern is how to manage water so that **the needs of future generations** are taken into account (s. 5). While it may be hard to determine what future generations may need, it is easier to determine what they do not need — water bodies that are polluted

Fresh Water
Objective 1.

Fresh Water
Objectives 1
and
2.

or over allocated to such an extent that they cannot be used or enjoyed.

- | | | |
|-----------------|--|--|
| Issue 6 | Some activities in the beds of rivers and streams , such as shingle abstraction, cross blading, and stopbank construction, may have a significant impact on the river ecosystem and threaten related groundwater systems. Works are undertaken for a number of purposes, including protection of the community and its assets (flood prevention), telecommunications, structures to take or dam water, and the extraction of shingle. | Fresh Water Objective 2. See also Soil Issue 8. |
| Issue 7 | There is widespread concern about the loss of freshwater habitats . Wetlands, in particular, are a fast disappearing habitat and there is considerable support for their protection. Natural areas have also declined dramatically through human settlement and land clearance. Most of the catchments in the Region are heavily modified, except for those in the Tararua and Rimutaka Ranges.

Further losses of habitat may result from overallocation of water, modification of small stream channels and silting due to run-off from subdivision, for example, at Pauatahanui. Discharges from sewage ponds or agricultural waste can also cause algal growths which restrict habitats. | Fresh Water Objective 3. See also Ecosystems Issues 1 and 6. |
| Issue 8 | S. 6 and 7 of the Act require consideration to be given to the protection of various aspects of fresh water , including quality, natural character, and any scenic, cultural, recreational, fisheries, or other amenity values. There is currently little formal protection for rivers, lakes and streams, or parts thereof, that are highly valued by the community (e.g., the aquifer under the Hutt Valley). Only some water bodies are protected in any way by the Wellington Regional Council. This includes limiting access to water supply catchments, preserving the Lake Wairarapa wetland system through a national water conservation order, and maintaining the quality of the Hutt aquifer from saline intrusion. As well as protection, there are also public demands for the enhancement of water quality. | Fresh Water Objective 3. See also Ecosystems Issues 5 and 6. |
| Issue 9 | People are concerned about their inability, in some instances, to gain access to water bodies and about the potential loss of access elsewhere. Many people enjoy the experience of interacting with fresh water. People are concerned at the denial of public access into the headwaters of public water supply catchments. Such access, without continuous full treatment of the water supply, will increase risks to public health. | Fresh Water Policy 16. |
| Issue 10 | The increasing use of water for domestic, commercial, | Fresh Water Objective 1. |

agricultural and industrial purposes (garden watering, car washes, bottling plants, irrigation, etc.) has made water conservation an important issue. Population growth, a changing demography, and climatic conditions, for example, have put pressure on the Waikanae River. The Kapiti Coast District Council has already taken steps to reduce consumption in its area. This issue, however, is likely to become a problem for the Wellington urban area as a whole if consumption is not held in check. Issues such as charging for water, metering, efficient use, and leakage from reticulation systems are all related to this problem.

Inefficient and inappropriate use of water will result in increased costs being passed onto urban ratepayers if new water sources have to be investigated and supply infrastructure developed.

5.3 Objectives

Objective 1

The quantity of fresh water meets the range of uses and values for which it is required, safeguards its life supporting capacity, and has the potential to meet the reasonably foreseeable needs of future generations.

Fresh Water
Policies 1-3.

The meaning of this objective is that water should be available to meet the range of uses that people make of it and to provide for the requirements of the riverine ecosystem. Water should be available for the following (not listed in any order of importance): to achieve growth and development in the Region; to enable people to provide for their social and cultural well-being, and their health and safety; to meet the spiritual, recreational, scenic, heritage, and other amenity needs of the regional community; to provide for the requirements of aquatic and riparian ecosystems; to meet the reasonably foreseeable needs of future generations; and to safeguard the water's life supporting capacity.

Objective 2

The quality of fresh water meets the range of uses and values for which it is required, safeguards its life supporting capacity, and has the potential to meet the reasonably foreseeable needs of future generations.

Fresh Water
Policies 4-9.

The meaning of this objective is the same as for Objective 1, except that it is concerned with the quality of fresh water (that is, water should be available of a quality that allows for the uses and values listed in the explanation to Objective 1 to be provided for). There is a strong public expectation that good quality water should be available so that all of its associated benefits may be enjoyed. Poor quality water has the potential to reduce its life

supporting capacity and prevent both present and future generations from fulfilling their reasonable needs. It is also a statutory requirement that the quality of fresh water is maintained.

Objective 3

Freshwater resources of significance or of high value for cultural, spiritual, scenic, ecosystem, natural, recreational, or other amenity reasons are protected or enhanced.

Fresh Water
Policies 10-16.

Some water bodies (or parts thereof) and their component ecosystems, habitats, and flora and fauna have greater importance than others and require a higher level of protection than the norm. For iwi, all water bodies are a taonga. Other rivers and streams may have the potential for a higher status if they were improved in some way. The principal reasons for adopting this objective are to safeguard these waters and to give effect to s. 6-8 of the Act.

See also
Ecosystems
Objective 5.

5.4 Policies

Policies for fresh water are arranged in three groups: **Policies 1 to 3** deal with water quantity; **Policies 4 to 9** deal with water quality; and **Policies 10 to 16** deal with iwi matters, the management of waters of special significance and amenity values.

Policy 1

To manage the quantity of fresh water so that it is available for a range of uses and values, and:

Fresh Water
Methods 1-6.

- (1) *Its life supporting capacity is safeguarded; and*
- (2) *Its potential to meet the reasonably foreseeable needs of future generations is sustained; and,*
- (3) *For surface water, any adverse effects on aquatic ecosystems are avoided, remedied, or mitigated.*

Water is used in many ways and may have a number of values attached to it. These values include recreational, cultural, spiritual, scenic, and heritage values, as well as the needs of fish and other components of the aquatic ecosystem.

Water management has traditionally been concerned with balancing these uses and values. This remains a practical necessity. However, the Act now requires additional consideration to be given to the sustainability of the resource and to the needs of future generations. While ensuring water is available for the many and varied uses humans make of it (meaning some balancing must occur), the Act requires some

priority to be given to these requirements. In addition, s. 7 requires policy to have regard to the quality of the environment and the intrinsic values of ecosystems — hence the requirement to reduce any adverse effects on aquatic ecosystems to the extent possible.

Policy 2

To promote the conservation and efficient use of fresh water.

Fresh Water
Methods 7-12.

Competing water uses can result in water shortages and conflicts, particularly during low flow periods. The conservation and efficient use of water may reduce conflicts and increase water availability. S. 7(b) of the Act requires that particular regard be given to the efficient use of natural resources.

A reduction in the use of water now will also reduce the stress on vulnerable water bodies and assist them to meet the needs of future generations.

Policy 3

To control the use and allocation of groundwater so that it is not depleted in the long-term and sea water intrusion is minimised.

Fresh Water
Methods 13-
16.

Groundwater is a valuable resource currently used for public water supply (rural areas, Lower Hutt and Otaki), industrial uses (cooling water in Lower Hutt City and Upper Hutt City), and the irrigation of horticultural crops (grapes, kiwi fruit, pip fruit) and pasture. Iwi regard it as important for its spiritual qualities and its purity.

The resource needs to be managed so that abstractions are sustainable both in the short and long-terms (i.e., that groundwater levels do not decline over time) and that adverse effects from human activities, such as ground sinking, interference between wells, and springs drying up are minimised.

Aquifers that connect with the sea must be protected against over-extraction to prevent sea water flowing into them. This can render them unusable for many years.

Policy 4

To maintain and protect the quality of fresh water so that it is available for a range of uses and values, and:

- (1) *Its life supporting capacity is safeguarded; and*
- (2) *Its potential to meet the reasonably foreseeable needs of future generations is sustained; and*
- (3) *For surface water, any adverse effects on aquatic and riparian ecosystems are avoided, remedied, or mitigated.*

Fresh Water
Methods 1, 2
and 17-21.
See
also Soil
Policies 1, 2
and
6.

This policy is similar to Fresh Water Policy 1. It is aimed at ensuring there is water available of a **quality** that meets the uses and values which might reasonably be expected of it. Quality may have a number of dimensions (colour, clarity, the presence of contaminants, biological growths, etc.) and these may vary from one water body to another. The desired quality of a water body will depend on the uses and values which the community desires for it. For example, it may be desirable to allow some deterioration in one river in order to protect the special scenic or recreational values of another.

The policy recognises that fresh water may be used to assimilate wastes and that there may be some acceptable diminution, or local deterioration, of water quality as a result. However, in no instance should any deterioration in quality be allowed to jeopardise the life supporting capacity of the water body or prevent its potential for providing for the needs of future generations from being realised. With regard to surface water, the needs of the aquatic ecosystem also need to be considered and adverse effects provided for, where necessary. The Act also contains a number of parameters relating to surface water quality which must not be exceeded (e.g., s. 69 and 70). These parameters are also relevant to other policies in this chapter (e.g., Policies 6, 9 and 10).

Water bodies may need to be protected from a number of external influences or changes in their composition. For surface water this could include waterborne disease, sewage, excess nutrients, changes in temperature and colour, or activities likely to damage the aquatic ecosystem (such as river works). If water bodies are to be managed according to differing parameters, it follows that what is maintained or protected will also vary from one water body to another.

While the overall intent of this policy is to ensure water is available for the widest possible range of uses and values, it is recognised that in some cases some of these may be inconsistent with others.

Policy 5

To improve water quality and restore contaminated water to a standard which is appropriate for its desired uses and natural values.

Natural and near natural water is widely sought after by people. It protects ecosystems and contributes to meeting the needs of future generations. The degree of improvement required for any particular water body should be determined by reference to the uses the community may desire of it and the values attached to it. In this policy the word "uses" should be widely defined to include

any values which the community may also attach to the water. This may include, for example, recreational, aesthetic, or cultural values.

The community may be happy to see lesser quality water continue in some cases where the cost of improvement is prohibitive. Implementation of the policy should also recognise that some contaminated water is naturally contaminated and enhancement is not realistic. For example, some groundwater is more highly mineralised than other groundwater. This is because saline water from deeper formations has migrated to near surface water through natural processes such as faulting.

This policy is also important for integrating environmental processes in both inland and coastal waters. The policy seeks to ensure that, where necessary, the quality of the water entering the coastal marine area is improved with a consequent improvement in the quality of coastal waters.

See also
Coastal
Environment
Objective 3
and
Coastal
Environment
Policy 5.

Policy 6

To ensure that the effects of contaminants contained in point source discharges on the quality of fresh water and aquatic ecosystems are avoided, remedied, or mitigated and allowing for reasonable mixing:

Fresh Water
Methods 26-
29.

- (1) *Do not render any fresh water unsuitable for any purpose specified in any regional plan for that water;*
- (2) *Do not prevent the receiving fresh water from meeting any standards established in any regional plan for that water;*
- (3) *Do not render any water in the coastal marine area unsuitable for any purpose specified in a regional coastal plan for the Wellington Region.*

See also
Coastal
Environment
Policy 5 and
Waste Policy
10.

Point source discharges of contaminants emanate from a single (usually controllable) source. Examples include stormwater discharges, pollution spills, mining discharges, sewage overflows and discharges, landfills, dairy shed effluent disposal, piggery and poultry farms wastes, and septic tanks.

A variety of instruments is currently in place to manage these activities, but there are inconsistencies of approach across the Region. The effects of some of the more minor of these activities are covered by rules in the Transitional Regional Plan called general authorisations. These allow activities to occur without a resource consent. However, the effects of some of these may not be sustainable.

The potential for the quality of point source discharges to be controlled means that the discharge of contaminants can be managed to meet any desired objectives in relation to receiving waters. Discharges can be tied to the purposes to which their receiving waters are put (clause 1 of the Policy). Under the Act, purposes for particular water bodies may be specified in a regional plan (s. 69).

Clause 2 of the policy is designed to ensure that the discharge of contaminants does not prevent the receiving water from meeting any standards that may have been established for it.

The purpose of clause 3 is to ensure that the quality of fresh water entering the coastal marine area does not affect the quality of any water in that area to such an extent that it is not suitable for any purpose specified in the Regional Coastal Plan for the Wellington Region.

Clause 3 also provides for the resources of the Region to be managed in an integrated manner, consistent with the philosophy of the Act (s. 59).

In addition to the requirements of this Policy, any discharge for which a resource consent is granted by the Council must, after reasonable mixing, comply with criteria established by the Act (s. 107(1)). These criteria establish a set of statutory minimum water quality standards that apply irrespective of whether a discharge is permitted as of right or controlled in some way.

Policy 7

To avoid, remedy, or mitigate adverse effects on water quality and aquatic ecosystems of contaminants contained in non-point source discharges.

Fresh Water
Methods 30-
33.

Fresh water (including groundwater) may be contaminated by pollutants entering it from a diffuse range of sources (non-point sources), as well as from a single controllable discharge (point sources). The run-off from most land uses — pastoral, horticultural, forestry (during establishment and logging operations), industrial, urban areas — contains contaminants with the potential to degrade the quality of water. Rural run-off may contain nutrients, sediment, agrichemicals and effluent. In urban areas run-off may also contain sediments and nutrients, as well as hazardous substances and heavy metals from motor vehicles and roads.

See also Soil
Policy 6.

The reduction of adverse effects is the only practical policy response to this issue since the relationship between the cause (activity) and the effect (contamination) is often difficult to

determine. The diffuse nature of the origin of such contaminants prevents the adoption of a more strict policy to ensure their effects are consistent with the purposes and uses identified for their receiving waters.

Policy 8

To promote the retirement and planting of riparian margins for the purposes of maintaining or improving the structural integrity of the beds and banks of water bodies, flood management, maintaining or enhancing water quality, and encouraging the healthy functioning of aquatic and riparian ecosystems.

Fresh Water
Methods 30-
33.
See also Soil
Policies 1, 4
and
8, and
Ecosystems
Method 17

In determining catchments, subcatchments, or reaches of water bodies to which this policy might apply, to have regard to the following:

- (1) *Any existing inferior water quality (including high water temperatures, and nitrate and dissolved phosphate levels);*
- (2) *Any existing inferior habitat quality (including instream habitat);*
- (3) *The potential of land uses to affect water quality and their proximity to a watercourse;*
- (4) *The actual or likely contamination from non-point source contamination;*
- (5) *The extent of any bank degradation, erosion, or loss of vegetation;*
- (6) *The actual or potential uses made or to be made of the water body;*
- (7) *The actual or potential amenity values of the water body (including scenic and recreational values);*
- (8) *Any relevant Maori spiritual or cultural values; and*
- (9) *Any significant flora or fauna in the water body.*

The purpose of this policy is to reduce the effects of non-point source pollution on water quality, bank erosion, and riparian ecosystems and to promote the benefits of riparian margins. While riparian management offers a means of improving the freshwater environment, it involves costs which must be justified. The policy, therefore, includes criteria for identifying and prioritising water bodies for which riparian management may be applicable.

Policy 9

To avoid, remedy, or mitigate the adverse effects of modifications to the beds of water bodies on water quality, groundwater, aquatic ecosystems, and the amenity and cultural values of water.

Fresh Water
Methods 34-
37.

This policy refers to activities in or on the beds of lakes and rivers. Although river and lake beds are classed as land by the Act, policy for the effects of their use on water and related ecosystems is provided for in this chapter. Provision needs to be made for the management of activities that have the potential to affect adversely water based ecosystems, water quality, groundwater, or any uses and values associated with the water. Such activities include river management works (rock rip-rap, concrete blocks for bank protection, bank protection plantings, groynes), the extraction of material from watercourses (gravel), and structures (bridges, culverts, dams, weirs, stopbanks, poles, pylons supporting overhead wires, discharge outlets and water intake inlets). Adverse effects on the environment from such activities may include flooding, water quality degradation, interruption of flows, inhibitions on the movement of aquatic life, and soil erosion.

See also Soil
Policies 4 and
5.

The need for river works is often considerable, despite their adverse effects, as communities take steps to avoid or mitigate natural hazards, store water for use during low flow periods, or generate hydro-electricity.

Policy 10

To manage the quality of water in, and the flows, levels and beds of, water bodies so that the following values are protected:

Fresh Water
Methods 38-
42.

- (1) *Regionally significant natural features, indigenous vegetation or regionally significant habitats of indigenous aquatic fauna, including those identified in table 4.*
- (2) *Scenes or landscapes of regional significance within which water forms an essential component, as identified in table 5.*
- (3) *Landforms and geological features of regional significance, including those identified in table 6.*
- (4) *Heritage, recreational, scientific, or other amenity or intrinsic values of regional significance, including those identified in table 7.*

This policy is designed to provide a high degree of protection for waters of high value. Rivers, lakes, and streams may be regarded as regionally significant for a number of reasons. These include

See also
Ecosystems
Policy 5 and
Coastal
Environment

the presence of indigenous fauna and flora, scenic or landscape attributes, the presence of landforms or geological features (fault trace, river terrace, dune lakes, etc.), naturalness, heritage, recreational, or scientific qualities, and other amenity or intrinsic values (e.g., their form, biological diversity, resilience).

Some of these values are matters of national importance which are required to be recognised and provided for in a Regional Policy Statement (s. 6). Others are mentioned in s. 7, which states that particular regard shall be had to amenity values (including heritage, recreational, and scientific values), the intrinsic values of ecosystems, the quality of the environment and any of its finite features.

Although s. 6 refers to the need to protect **outstanding** natural features, the Act provides no guidance as to the meaning of this word. In this case (Policy 10(1)) any natural feature which is regionally significant is considered to be an outstanding natural feature under s. 6.

Table 4 : Water Bodies of Regional Significance for their Natural Features, Indigenous Vegetation or Habitats of Indigenous Aquatic Fauna

- Waiohine River (gorge and above)
- Otaki River (gorge and above)
- Hutt River (Kaitoke Gorge and above)
- Lake Kohangapiripiri
- Lake Kohangatera
- Lake Onoke
- Upper Wainuiomata River
- Orongorongo River
- Lake Wairarapa

Table 5 : Water Bodies of Regional Significance for their Landscape and Scenic Qualities

- Ruamahanga River (gorge and above)
- Waiohine River (gorge and above)
- Otaki River (gorge and above)
- Hutt River (Kaitoke Gorge and above)
- Orongorongo River (upper reaches)

Table 6 : Water Bodies of Regional Significance for their Landforms and Geological Characteristics

- Hurupi Stream (stream cliffs at coast)
- Bells Creek, Mangaopari Stream, Makara River (4 km of river and stream cuts)
- Otaki River, upstream of Pukehinau Stream

- Ruakokopatuna Gorge
- McLouds Trig Rock Slump (Hidden Lakes)
- Kaiwhata Stream Sills

Table 7 : Water Bodies of Regional Significance for their Heritage, Recreational or Other Amenity Values

- Mid-Ruamahanga River (recreation, angling)
- Otaki River, gorge and above (recreation, angling)
- Otaki River, gorge to State Highway 1 (recreation, angling)
- Hutt River, Kaitoke Gorge and above (recreation)
- Mid-Hutt River (angling)
- Wainuiomata River (angling)
- Kopuaranga River (angling)
- Middle and Lower Orongorongo (recreation)
- Lake Onoke (recreation)
- Lake Wairarapa (recreation, waterfowl hunting)

This policy seeks to protect the special values which make the water body regionally significant. This may include protection from effects which arise indirectly or cumulatively. Water bodies identified in tables 4 to 7 were derived from assessments prepared by relevant professional bodies since 1984 and other studies by the Wellington Regional Council.⁷

The policy seeks to provide protection for the listed sites, but not to exclude protection of sites of regional significance that have not been identified in the tables.

S. 7 of the Act requires the Regional Policy Statement to have particular regard to the protection of the habitat of trout. This is achieved by the following: protecting the recreational fishing values of highly valued streams and rivers under **Policy 10** (thereby protecting the conditions that exist in those rivers which cause them to be valued highly); requiring the avoidance, remedying, or mitigation of effects on recreational fishing values and the habitat of trout in water bodies to which **Policy 11** applies; **Policy 11's** attention to near natural areas; the requirements of **Policy 9** (on modifications to watercourses and river works); and all other policies which aim to maintain or improve the quality or quantity of fresh water.

Policy 11

To ensure that, in respect of all water bodies not covered by Fresh Water Policy 10, any adverse effects on amenity values or the intrinsic values of ecosystems which may result from any use and development, and on any natural or near natural areas, are avoided, remedied, or mitigated.

Fresh Water
Methods 38-
42.

All water bodies have values or intrinsic qualities that require

some protection, but these values may not be as significant as those listed in **Policy 10** and so may not deserve the same level of protection. Avoiding, remedying, or mitigating effects (depending on their severity) will be the most appropriate management response to ensure this. Natural areas are given some prominence because they:

⁷ Kenny J A and Hayward B W, 1993, *Inventory of Important Geological Sites and Landforms in the Manawatu and Wellington Regions*, Geological Society of New Zealand Miscellaneous Publication No.73, Lower Hutt; Grindell D S and Guest P A, 1986, *A List of Rivers and Lakes Deserving Inclusion in a Schedule of Protected Waters*, Report of the Protected Waters Assessment Committee, Water and Soil Miscellaneous Publication No. 97, NWASCA, Wellington; Egarr G D and Eggar J H, 1981, *New Zealand Recreational River Survey*, Water and Soil Miscellaneous Publication Nos 13 and 14, NWASCO, Wellington; Richardson J, Tierney L D and Unwin M J, 1984, *The Relative Value of Wellington Rivers To New Zealand Anglers*, MAF, Wellington.

- (1) Are of special importance for their rarity in or along water bodies that may otherwise be reasonably modified (s. 7(f) and (g)); and/or
- (2) Are likely to provide a more conducive habitat for indigenous fauna or vegetation (s. 6(c)); and/or
- (3) Are likely to provide a more conducive habitat for trout (s. 7(h)); and/or
- (4) Are appreciated by humans for their naturalness, scenic and other amenity values (s. 7(c)).

The term "near natural" reflects the fact that few areas in New Zealand are completely free of the influence of human induced change.

Near natural areas, therefore, are more likely to occur in most instances (particularly in and around heavily populated areas or within a wider and more highly modified ecosystem) and are areas where disturbance by humans is of a minimal nature or which resemble as closely as possible an original condition.

Policy 12

To avoid, remedy, or mitigate any adverse effects of any new or existing use and development where these effects impact on the natural character of wetlands, lakes, rivers, and other water bodies, and their margins.

Fresh Water
Methods 38-
42.

This policy gives effect to the requirements of s. 6(a) to recognise and provide for the preservation of the natural character of water bodies and their margins. Natural character is not defined by the Act. It can be thought of as the extent to which the naturally occurring ecology and/or physical processes of a place or

resource remain intact. It does not exclude structures or other human induced changes (a place may retain some of its natural character even with a building in it) but it is reduced by their presence.

As natural character is not an absolute concept, its absolute preservation is not required in every case. It is appropriate, therefore, that the policy prescription of "avoid, remedy or mitigate" should apply, depending on the degree of natural character of the water body or site in question. In places where the natural character is largely intact, the emphasis of management should be on avoiding adverse effects. Where human activities have already modified the natural character, a more flexible approach may be appropriate. Where substantial deterioration of natural character has occurred, some effects might still need to be avoided but remedying or mitigating adverse effects may have a more prominent role.

Policy 13

To recognise the cultural relationship of the tangata whenua with rivers, lakes, wetlands, and other water bodies, and to promote the management of fresh water in ways that take into account iwi values and beliefs. In addition, to promote the protection and management of sites of significance to iwi within the beds of water bodies.

Fresh Water
Methods 43-
44.

Many of the policies in this chapter are consistent with iwi values, for example, safeguarding water resources for future generations, seeking the highest water quality possible, restoring degraded water, and so on. In addition, this policy aims to meet the requirements of s. 6(e) of the Act.

See also Iwi
Policies in
chapter 4.

Policy 14

To protect the healthy functioning of wetlands and their biological communities from the inappropriate effects of land and water use and to promote the restoration of degraded wetlands and the creation of artificial wetlands.

Fresh Water
Methods 45-
50.

In assessing the appropriateness of the effects of land and water use, to have regard to the following characteristics of any wetland:

- (1) *The degree of modification from a natural state;*
- (2) *The degree of significance of areas of indigenous vegetation and/or habitats of indigenous fauna;*
- (3) *The degree of representative importance;*
- (4) *The biological uniqueness and/or diversity of species, communities, or habitats;*

- (5) *The amenity values of the wetland (including cultural, recreational, and aesthetic values); and*
- (6) *The degree to which the wetland provides for the continued functioning of ecological and physical processes.*

Wetlands are recognised as vital ecosystems. They provide a habitat for a rich variety of flora and fauna. They can also be used to help reduce the impact of flooding and abate water pollution by naturally filtering out contaminants and excess nutrients to improve water quality. They also have high social (leisure), cultural, and recreational values (bird watching).

Over the last 150 years wetlands have suffered from subdivision, land drainage, the modification of streams, river channels and estuaries, pollution, and the invasion of habitats by exotic plants and animals. Many are still at risk from these influences. There is public concern to protect and enhance those that remain and to reinstate others where this is feasible.

A recent study by the Wellington Regional Council identified 169 wetlands in the Wellington Region comprising 13,300 hectares (of which the Lake Wairarapa complex totals 9000 hectares.)⁸ The remainder vary in ecological status, size, and ownership. Fifty percent are less than 10 hectares and only 10 exceed 100 hectares. Approximately two-thirds are in private ownership. Fifteen of the wetlands are considered to be either nationally or regionally important by the Department of Conservation. Only one is protected by a national conservation order (Lake Wairarapa).

S. 5, 6 and 7 of the Act all relate to the need to preserve and protect wetlands in order to safeguard the life supporting capacity of water and ecosystems, preserve their natural character, and protect them as significant habitats of indigenous fauna and flora. Wetlands are also of significance to the tangata whenua.

S. 6 of the Act regards the preservation of wetlands as being of national importance but does not preclude their "appropriate" use. Decisions as to what might constitute "inappropriate" use are essentially management decisions involving the weighing up and prioritising of a wide range of competing uses and values. The criteria have been included to assist with assessing the significance of wetlands and the appropriateness of any adverse effect.

By using these criteria it should be possible to protect wetlands,

See also
Ecosystems
Policies 5-7
and
9.

but not preclude their use for some purposes, especially those that could assist with environmental management (e.g., the disposal of treated effluent or as a filter for removing contaminants from stormwater).

⁸ Wellington Regional Council, *Wetlands in the Wellington Region*, op. cit.

Policy 15

To protect water resources used for public water supply from abstractions of water and discharges of contaminants which may affect the suitability of those waters for water supply purposes.

This policy recognises the importance of ensuring a reliable supply of potable water, free from any risks to human health. There is general public agreement that waters that provide for the needs of communities for public water supply (both urban and rural) should receive some protection.

Fresh Water
Methods 51
and
52. See also
Soil Policies 1
and 6.

Policy 16

(1) *To ensure, when planning for and making decisions on new subdivision, use, and development, that:*

(a) *There is no reduction in the quality of existing legal access to and along water bodies, and*

(b) *Opportunities to enhance access to water bodies, or parts of water bodies, which are:*

(i) *Of regional significance (as listed in tables 4 to 7 of Policy 10 or in a regional plan); or*

(ii) *Are considered by the relevant territorial authority to be of benefit to the local community for their recreational, cultural, scenic, spiritual, or other amenity values*

are recognised and provided for.

(2) *To promote through other means, where practicable, access to and along water bodies (to which subsection 1(b) of this policy applies), other than in exceptional circumstances.*

The maintenance and enhancement of public access to and along the margins of lakes and rivers is a matter of national importance (s. 6). Policy 16 gives effect to this requirement. The Policy

Fresh Water
Methods 53-
55.

See also
Coastal
Environment
Policy 4.

seeks to maintain existing legal opportunities for access to and along water bodies. The policy recognises that, through changes in land use, there are likely to be situations where **existing** access points are sought to be removed or altered. The policy requires that alternatives are provided of a number or nature that maintain the quality, as far as possible, of the access that was previously provided. "Quality of access" refers to access of a type and scale that allows users of a water body to continue to enjoy the benefits and values they derive from the water body and from the access itself.

The policy also recognises that there will be opportunities to **enhance** access to certain water bodies when changes in land use are sought. Those opportunities should be recognised and provided for by territorial authorities in their district plans. Requirements for esplanade reserves and esplanade strips are likely to be the most appropriate way of doing this.

In addition, there may well be circumstances (other than through planning or consent procedures) where it may be appropriate or beneficial to provide or enhance access. The policy encourages local authorities and landowners to do this where it is practicable and other than in exceptional circumstances. "Where practicable" means taking into account the costs and benefits of providing access arrangements. Exceptional circumstances include the need to:

- Protect any characteristics of any sites or features which give a water body its special value or any conservation values;
- Provide for public health and safety;
- Provide for security on private property; and
- Protect the rights of property owners, including the protection of crops and stock.

The protections provided by the reference to exceptional circumstances in clause (2) of the policy are not explicitly provided for in clause (1) of the policy. This is because these protections are provided by the Tenth Schedule of the Act which applies when esplanade strips or access strips are established.

Not all water bodies, or parts thereof, require access. The policy applies only to water bodies of regional significance (as identified in Tables 4 to 7 or in a regional plan) and of local amenity value, as determined by the territorial authority in whose district the water body lies.

The principal reasons for adopting **Policy 16** are to meet the requirements of the Act (s. 6) and to provide a framework for balancing the demands of the public for access and the rights of landowners. It is recognised that private landowners in the Region are generally willing to provide access so long as their property and stock is respected. It is also recognised that there are limits to the resources of territorial authorities in the Region and that providing for access to every river and stream is impractical.

5.5 Methods

Methods for Fresh Water Quantity

Fresh Water
Policy 1.

The Wellington Regional Council will:

- Method 1**
 - *Manage the use and development of all fresh water by means of resource consents unless the use is allowed by a rule in a regional plan or the water is taken for reasons allowed by the Act (s. 14 (3)).*
- Method 2**
 - *Prepare a Regional Fresh Water Plan to address water availability and allocation issues, to permit or regulate the use of fresh water and activities which affect it, to establish priority uses for low flow periods (including life supporting capacity) and to consider other water issues of a regional nature.*
- Method 3**
 - *Develop and apply flow regimes and safe yields based on instream habitat requirements and other relevant factors (e.g., to preserve amenity, cultural or intrinsic values) for surface water bodies which require them.*
- Method 4**
 - *Prepare a location specific plan to safeguard life supporting capacity, establish minimum flows and allocate the safe yield of any water body (or the water resources of a particular locality) which is under pressure from competing uses, or has special ecological needs or values that need protection. The water resources of the Kapiti Coast District are a priority.*
- Method 5**
 - *Investigate transferable water permits (under s. 136) and provide for their use where appropriate.*
- Method 6**
 - *Establish a methodology for providing for future*

generations and identifying the components of life supporting capacity of the Region's fresh water.

The regulatory regime in **Method 1** is required by s. 14 and 15 of the Act. Any activity that would contravene s. 14 requires a water permit, and any activity that would contravene s. 15 requires a discharge permit. However, regional councils may develop regional plans under s. 63 which may contain rules to allow, regulate, or prohibit activities. Activities for which a consent is not required are known as permitted activities. The preparation of a Regional Fresh Water Plan will provide the opportunity to facilitate minor or desirable activities by removing the need to apply for a consent.

This plan will provide an overall legal framework for managing consents and replace, where necessary, related sections of the Transitional Regional Plan that are no longer appropriate. The transitional arrangements were not designed to provide a comprehensive or lasting framework.

Where circumstances require, a location specific regional plan may be prepared. In issuing resource consents for water bodies for which such a plan has been prepared, the Wellington Regional Council will have regard to any flows, levels (minimum flows, etc.), standards, or agreements contained in that plan.

A location specific plan will take into account the needs of all those people with an interest in the water body.

The Act requires the management of water to be on a basis which is sustainable. In determining the quantity of any water body which may be allocated or used (the safe yield), consideration must be given to safeguarding its life supporting capacity and sustaining its potential to meet the needs of future generations. Instream habitat assessments will allow for the identification of minimum flows and flow regimes which, in turn, will establish the quantity of water that can be safely allocated for other purposes.

Flow regimes of this kind are likely to be established for rivers which are suffering from pressure of use, where life supporting capacity is threatened or which have significant values which require the protection of a flow regime. Other rivers may not require such careful management but will be subject to the policies of the Regional Fresh Water Plan and may have minimum flows set on a more general basis.

Allowing for the future is a pivotal component of sustainable management but how it might be put into practice is not well understood. Research will be necessary to identify aspects of the

freshwater resource which may require explicit protection, or more careful management, to safeguard the interests of future generations (e.g., guarding against the irreversible loss of wetlands). To some extent, the needs of the future will be dealt with automatically by adopting the basic principles of sustainability the Act requires.

Similarly, it is not clear what safeguarding the life supporting capacity of water entails. While an activity (such as a take or discharge) may damage a particular habitat, species or place, it may not have any appreciable effect on the overall life supporting capacity of the freshwater ecosystem or on the freshwater body as a whole. Effects at particular times (fish spawning), or on critical parts of the ecosystem, may have a greater impact and thus require more control.

An understanding of what is required to provide for life supporting capacity and the needs of future generations will enable the requirements of s. 5 of the Act to be met and ensure that effects on the aquatic ecosystem are minimised.

Above these environmental bottom lines (the two may be different), allocation will be determined by the variety of purposes for which a particular water body is managed.

These purposes will be decided by reference to current uses (although s. 128 of the Act allows these to be reviewed if need be), the views of the local and regional communities, iwi values, and any reason for the waters being highly valued on a regional or national basis. For example, a river may be managed for ecological purposes, for a consumptive purpose, and for recreation, as well as for its scenic values and value to iwi.

Mechanisms for safeguarding the requirements of instream uses (that is, setting minimum flows) have in the past utilised "rule of thumb" techniques which did not take into account biological habitat requirements (for example, 30 percent of mean monthly flow). However, the Act has established the need for a more comprehensive approach which includes assessing factors which contribute to biological health, such as habitat and food production. Community requirements and the needs of users (for clarity, safeness of contact, etc.) will also influence the flow requirements which are established and may well set these at levels higher than any ecological "bottom lines". Ultimately, flows and levels will be determined through the combination of a number of overlapping layers relating to the varying needs of those who use or value the water, and will vary by place and by season.

Location specific regional plans will enable the Wellington Regional Council to control water takes and discharges more effectively through policies and rules directed at the conditions of the water body in question.

Other waterways may not be subject to such pressures and, while using water would still require a permit (unless otherwise authorised), a plan may not be necessary.

The Act allows for the transferability of water permits in certain circumstances. However, this is a new tool for the allocation of water and further investigation is required of its workability. While the Council will continue to uphold the Act and to facilitate requests to use this procedure, it will not promote its general use until it has completed **Method 5**.

Methods for Fresh Water Efficiency and Conservation

Fresh Water
Policy 2.

The Wellington Regional Council will:

- Method 7**
 - *Place conditions on water permits to promote efficiency and water conservation.*
- Method 8**
 - *Investigate the use of consumption targets for uses such as irrigation, residential supply and leakage from closed pipe reticulation systems, in order to encourage the efficient use of water.*
- Method 9**
 - *Promote water conservation and the efficient use of water through advocacy, education, and the provision of information.*
- Method 10**
 - *Require water race systems to obtain consents to take water by 1 October 2001.*
- Method 11**
 - *Require, where practicable, that abstractors provide evidence of actual consumption according to the class or type of consumption and demonstrate how water is being used.*
- Method 12**
 - *Undertake or promote research into methods which promote water conservation and efficient use, including the use of economic instruments, and collect and publicise water usage data to ensure progress in meeting consumption targets.*

As the regulator of water usage, the Council has a responsibility to promote the efficient use of water and the avoidance of waste.

Efficient use lowers demand and helps reduce the need for costly future storage and supply infrastructure. By reducing the pressure on existing freshwater systems and assisting them to meet demand on an indefinite basis, water will continue to be available for the future.

The efficient use of water can be promoted in the following ways: by the Council discussing users' needs with them at the time an application is made; through educating and informing existing users about more efficient and less wasteful ways to use water (**Method 9**); and through placing conditions on water permits (**Method 7**).

Such conditions are an effective method and one which is easy to administer. Conditions which could be applied include:

- (1) Requiring users to install flow meters to measure water use (to ensure the correct amount is taken or to identify that a lesser amount is actually needed than the consent allows for);
- (2) Requiring the irrigation or water supply system to be designed so that excess water does not run to waste;
- (3) Requiring records of use to be kept and supplied to the Council (e.g., daily or weekly use); and
- (4) Imposing a financial contribution as a condition of a consent to achieve positive effects on the environment, in line with s. 108(9) of the Act. These could be used to offset adverse effects, where these cannot be avoided, and as a means of mitigating and remedying adverse effects.

The intent of **Method 8** is to identify reasonable levels of consumption for particular uses so that excessive use and wastage is avoided. As a responsible regulator, the Wellington Regional Council needs to know what constitutes reasonable use (particularly where the resource is under pressure) and to estimate and plan for potential future uses or demands on the resource.

Appropriate ways of achieving possible targets (**Method 8**) must be discussed and their costs and benefits determined. Possible time frames must allow the relevant authorities to prepare medium to long-term plans for achieving targets and for spreading

costs accordingly.

Method 10 refers to un piped reticulation systems from which significant losses can occur through uncontrolled seepage and evaporation. The right to take water for these systems was initially granted under the Water and Soil Conservation Act 1967. The continued right to do so is in s. 386 of the Resource Management Act 1991. However, this right will expire on the 10th anniversary of the commencement of that Act (i.e., 1 October 2001) (s. 386(3)). At this time new consents will be required.

Method 11 is necessary to ensure a basic level of information is available to manage the resource and promote efficiency. The Council will require waste abstractors to monitor their use (e.g., by flow metering) in some circumstances, particularly where the abstraction makes a significant difference to the quantity or quality of a water body.

Legal advice to the Wellington Regional Council suggests that economic incentives for achieving the efficient use or conservation of water (e.g., by charging more for water as "bottom lines" are approached) are not provided for by the Act. However, research by the Council into the use of such methods will continue.

Advocacy, information and public education (**Methods 9 and 12**) are necessary to achieve meaningful reductions in domestic and commercial use.

Methods for Groundwater Quantity

Fresh Water
Policy 3.

The Wellington Regional Council will:

- Method 13**
 - *Determine the safe yield of significant groundwater systems (e.g., Lower Hutt, Te Ore Ore), and allocate groundwater in order to protect its recharge capability and minimise sea water intrusion.*
- Method 14**
 - *Require resource consents for all groundwater abstractions (except where s. 14 of the Act allows otherwise) and bore permits for the construction of bores.*
- Method 15**
 - *Review the suitability and applicability of the general authorisations relating to groundwater and the Underground Water Bylaws operating in the Hutt Valley and prepare, if appropriate, a regional plan for the Hutt*

groundwater system, and for such other aquifers as required.

Method 16

- *Seek to educate drillers and groundwater users in appropriate construction methods to improve efficiency and prevent leakage or wastage between aquifers.*

Groundwater within the Region is used for both private and public water supply. Major takes for public water supply occur in the lower Hutt Valley and near the towns of Otaki and Masterton. In Upper Hutt the groundwater is used for industrial purposes (cooling water, bottling processes). On the Kapiti Coast and in the Wairarapa groundwater is predominantly used for agricultural purposes (e.g., stock water and irrigation).

The allocation of the resource requires careful management to ensure it is not overextracted. Overextraction could result in "mining", saltwater intrusion, subsidence of the surrounding land, or interference between users.

The Act provides for a range of small takes which do not require consents (s. 14). Large takes will continue to be controlled by means of water permits. The general authorisation requires reconsideration as it allows takes of up to 20,000 litres per day. However, as the Council has little knowledge of what is actually being taken, the sustainability of the resource is unknown in some cases.

Education of groundwater drillers and users is an effective means of avoiding waste and other adverse effects of extraction.

Methods for Fresh Water Quality

Fresh Water
Policy 4.

The Wellington Regional Council will:

Method 17

- *Require resource consents for all discharges to water, land or groundwater not allowed for in the Act or in a regional plan.*

Method 18

- *Include fresh water quality in the Regional Fresh Water Plan and/or prepare a location specific regional plan for water bodies, or parts of water bodies, which are suffering from poor water quality (including from non-point sources) or are not suitable for the uses or values the community desires (if the issue is not manageable through the consent process).*

Method 19

- *Review its water classification methodology. A new*

methodology, if judged necessary, will review areas not presently classified and determine which areas require water quality standards (s. 69).

Method 20

- *Investigate the use of bonds and other financial contributions in preventing discharges of contaminants.*

Method 21

- *Investigate and engage in public education about the use and care of fresh water.*

The maintenance and protection of water quality will be controlled through the regulatory regime imposed by s. 15 of the Act (**Method 17**). If necessary, conditions will be attached to resource consents, or rules could be included in the Regional Fresh Water Plan, to set limits on types and volumes of discharges, regulate non-point source discharges, and limit abstractions to control quality.

Where a management plan or regional plan for a specific water body is prepared (**Method 18**), discharges of contaminants into water, or onto land where water may be contaminated, would be permitted only (by a consent or a rule) if the discharge was consistent with the uses agreed upon in the plan. A regional plan could also indicate prohibited discharges and land uses which might also be controlled where water might be contaminated.

Classification of water bodies (**Method 19**) is a method with both advantages and disadvantages. The advantages of such standards are that they establish bench marks, simplify the consent process, and establish certainty. The disadvantages include the difficulties of applying standards in practice, difficulties in accounting for the effects of natural run-off and non-point source discharges, and the likely degradation of water to a minimum standard.

The existing water quality standards in the Region have not succeeded in achieving the degree of uniformity expected of them. The Region has a disjointed series of classified water bodies based on two different sets of standards (Water Pollution Regulations 1963, Water and Soil Conservation Act 1967). These classifications have been included in the Transitional Regional Plan as an interim measure. The Act provides a set of water classifications (Third Schedule) but the Council may propose more stringent standards if it wishes (s. 69).

Legal advice to the Council suggests that the Act does not allow for charging polluters according to the quantity or quality of pollutants discharged. This would appear to rule out a quota system, whereby polluters could discharge contaminants up to a

defined level.

Methods for Enhancement and Restoration of Poor Quality Water

Fresh Water
Policy 5.

The Wellington Regional Council will:

- Method 22**
 - *Identify water requiring an improvement in its quality and provide advice to consent holders and the public as to how this might be achieved.*

- Method 23**
 - *Investigate any request for contaminated or poor quality water to be improved and, if necessary, prepare a programme for doing so for public debate.*

- Method 24**
 - *Where the quality of fresh water entering the coastal marine area is inadequate to meet any purposes for which coastal water is being managed, investigate means of improving the quality of the water through, for example, riparian management and the encouragement of better or alternative land use practices, and conditions on consents which require staged improvements in quality over time.*

- Method 25**
 - *Seek improvements in water quality in the Waikanae River Estuary, Mazengarb Drain, Ngauranga Stream, and Makoura Stream in co-operation with the relevant territorial authority; monitor the effectiveness of works undertaken to reduce bacterial contamination in the Kaiwharawhara Stream which the Wellington City Council provided for in its 1993/94 capital works programme; monitor Hulls Creek and the Waingawa Freezing Works aquifer for improvements which are expected from remedial work which has been completed; address the discharge of treated sewage to the Wainuiomata River through the consent process and prepare a regional plan for the management of this river.*

Once water has been degraded significantly it may take considerable time and expense to reinstate it to a standard applicable to its desired use.

Specific studies may be required to locate the source of the degradation and identify how the resource can be cleaned up. Non-point source pollution may be difficult to identify.

The Wellington Regional Council will consider any request to improve the quality of water in a water body. Where it is desirable to rehabilitate water, public consultation will enable the regional community to decide whether it is prepared to accept the

cost of upgrading on a case by case basis. Costly upgrading of water may take a number of years to be implemented in full. For example, the Council is already seeking improvements in stormwater quality in some urban areas but recognises that this is costly and time is needed for the communities concerned to sustain the costs involved. Cost effective mechanisms for improving water quality should always be considered. Other means, such as catchment afforestation, may deliver improved water quality to communities at a lesser cost **Method 25** provides an indication of other ways in which the Council is addressing areas of poor quality water.

Education and advice are powerful means of changing behaviour. Studies by the Wellington Regional Council have indicated that farmers and business interests would like greater information on how to deal with wastes and avoid pollution before it occurs. Similarly, recreational users such as trampers, campers and anglers need to be advised of successful waste disposal and removal methods.

Methods for Controlling Point Source Discharges

Fresh Water
Policy 6.

The Wellington Regional Council will:

Method 26

- *Where necessary, develop standards, guidelines and codes of practice (based on nationally recognised codes of practice and in association with territorial authorities, industry and professional groups) for the following activities or effects:*
 - (1) *Dairy shed effluent disposal;*
 - (2) *Stormwater run-off;*
 - (3) *Land clearance;*
 - (4) *Subdivision and mass earthworks effects;*
 - (5) *Mining;*
 - (6) *On-site sewage treatment and disposal (e.g., septic tanks);*
 - (7) *Installation of underground storage tanks; and*
 - (8) *Spills of contaminants.*

See also Soil
Methods 4, 10,
20-23.

Method 27

- *Reassess the effectiveness of the general authorisations*

(under s. 22 of the Water and Soil Conservation Act 1967) and replace these where necessary.

- Method 28**
- *Undertake education programmes and provide information and advice to the public and industry on the requirements for, and proper handling of, discharges.*
- Method 29**
- *Investigate complaints regarding water resource misuse, including unauthorised pollution, and will invoke the enforcement procedures of the Act when less formal methods of enforcement are not successful.*

Controlling point source discharges is required by the Act. Some discretion can be exercised as to the extent to which regulation is used to do this. In many cases, activities with inconsequential effects on water may be authorised in a regional plan so that regulation will not be necessary. In other cases the effects may be of such a magnitude that a consent is warranted.

Adverse effects can be reduced through the use of guidelines and codes of practice. The intention of **Method 26** is for the Regional Council to prepare guidelines or codes of practice (where necessary and in co-operation with the relevant groups) which can be used in a voluntary way to reduce the adverse effects of the listed activities. Even where a consent is required, the additional voluntary use of guidelines and codes of practice can also assist in reducing effects through better practice.

In addition, the Council may state in the Regional Fresh Water Plan or any other regional plan relating to water quality that discharges (such as dairy shed effluent and stormwater) should meet certain standards. The degree of control exercised over these activities in the plan would be dependent on the degree to which the discharge met these standards. Moreover, standards relating to the receiving waters of some of these activities, particularly those with significant adverse effects, could also be included in any regional plan relating to water quality under s. 69 of the Act.

Where activities are controlled by means of receiving water standards, those from different sectors which cause similar environmental effects will face consistent controls.

Guidelines and codes of practice are useful as an educational tool, and where ongoing maintenance of systems is necessary (e.g., on-site sewage systems).

However, the Council will not prepare guidelines for subdivision and mass earthworks effects where territorial authorities have

district plans and codes of subdivision and engineering practice that deal with these matters.

The purpose of **Method 27** is to reconsider and replace any defective general authorisations with more appropriate control mechanisms.

The enforcement regime in the Act (**Method 29**) is necessary to ensure compliance with consents, plans, regulations, and orders. Enforcement provisions enable direct intervention if necessary and provide adequate penalties if the Act is contravened or environmental damage is caused.

Methods for Avoiding Land Use Effects on Water and for Promoting Riparian Management

Fresh Water Policies 7 and 8.

The Wellington Regional Council will:

- | | | |
|------------------|--|---------------------------------|
| Method 30 | <ul style="list-style-type: none"> • <i>Identify land based activities which contribute to adverse effects on water bodies and provide advice on ways of minimising those effects through district plans or other means available to territorial authorities.</i> | See also Soil Methods 4 and 23. |
| Method 31 | <ul style="list-style-type: none"> • <i>Identify waterways suffering from the effects of non -point source pollution and investigate the potential of managing riparian margins (e.g., by afforestation and other vegetation management systems) to mitigate these effects.</i> | |
| Method 32 | <ul style="list-style-type: none"> • <i>Encourage landowners and other organisations or agencies acting under other legislation to create and manage riparian margins (including, where appropriate, advocating to territorial authorities that esplanade reserves or strips be used for water bodies suffering from non-point source pollution).</i> | See also Soil Method 7. |
| Method 33 | <ul style="list-style-type: none"> • <i>Manage land it owns or controls to implement Fresh Water Policy 7 and will encourage land users to adopt management practices which control non-point contaminant sources.</i> | See also Soil Method 23. |

Land management practices and activities on land can be modified to limit the effects of contaminants on water quality and ecosystems. This is true of both point source discharges and non-point source contamination. However, the relationship between activities on land (in particular, non-point source contamination), and their effects on water and how they might be mitigated effectively through the range of instruments available to local authorities, is not well understood.

The Wellington Regional Council has identified a range of effects on water which are influenced or caused by land uses and which it wants to avoid or reduce. The Council will work with territorial authorities to identify the causes of these effects and ways of avoiding them. The Council will provide advice to territorial authorities seeking assistance with such matters as subdivision impacts, the effects of earthworks, and so on. Methods which might be used to influence this nexus between land and water at the territorial level include provisions in district plans (including rules), guidelines and/or standards (for earthworks, track cutting, etc.) bylaws, design conditions, and operational activities by local authorities.

While the Wellington Regional Council has the power to control land use for the purpose of maintaining or enhancing water quality and quantity (s. 30 (1)(c)), it will seek, in the first instance, to avoid the effects listed below by co-operating with territorial authorities and using the instruments available to these authorities.

The major effects on water quality, quantity, and ecological processes which the Council will seek to avoid or reduce are as follows:

Effects on fresh water quality:

- Increased sedimentation
- Nutrient enrichment *
- Increased water temperatures *
- Decreased oxygen levels
- Increased suspended solids *
- Reduced clarity
- Changes in colour and acidity
- Increased faecal bacteria *
- Nuisance growths
- Toxicity (e.g., from agrichemicals, heavy metals, etc.)

Effects on fresh water quantity:

- Increased surface run-off
- Increased run-off velocity
- Decreased groundwater storage and recharge capability *

Effects on ecological processes:

- Erosion and disturbance of soil
- Public health effects

- Bioaccumulation of toxic substances

(It should be noted that many activities will cause these effects to a small extent; the Council's interest will lie with those which are likely to have a significant adverse effect.)

Effects on this list marked with an asterisk are particularly relevant to groundwater. The quality of this resource should be protected to enable present uses to continue and because it has the potential to provide for water needs that are currently not being adequately met by surface waters, for example, on the Kapiti Coast. The Council will identify the recharge areas of groundwater systems and work with territorial authorities to avoid effects which might threaten these areas or activities which could pose a threat to the quality of groundwater (e.g., underground storage tanks).

Agricultural activities, in particular those close to watercourses, can cause non-point discharges, for example, the application of fertiliser and agrichemicals. High stocking rates may also cause high nitrogen levels in groundwater.

Management of a riparian buffer zone, in particular the protection of stream bank vegetation, is an effective technique for controlling non-point source contamination of surface waters. It has been demonstrated that riparian zones containing vegetation contribute to a reduction in bank erosion and a reduction in sediment entering waterways. They also act as a natural filter of run-off and provide treatment of nutrient rich animal excrement, fertilisers, and sediment.

Riparian buffer zones contribute to lower water temperatures in the summer and enhance fisheries and wildlife habitats. Aesthetic and scenic values are enhanced and the buffer can be managed for walking and fishing.

However, the effectiveness of riparian strips is variable and depends on the nature (width, channel morphology, etc.) of the river or stream, the nature of any land uses adjacent to a strip (improved practices might achieve the same result at a lesser cost), the quality of the water, and the nature of the problem for which a strip is the suggested solution (type of pollutant).

The Council's intention is to identify rivers suffering from non-point source pollution and investigate the ability of riparian management to mitigate these effects (**Method 31**). The Council will work co-operatively with territorial authorities, advising them of water bodies which might benefit from riparian management so that adequate provision can be made for riparian margins in

planning decisions. The Council will also work with the Department of Conservation and other agencies as appropriate (**Method 32**). Land management and land use practices which reduce the incidence of non-point source pollution will be promoted because these reduce the need for riparian margins (**Method 33**).

There are significant costs involved in retiring land from grazing, fencing, and providing alternative stock watering facilities. Apart from when subdivision occurs (when esplanade reserves are established), the agreement of landowners will be required. While the Wellington Regional Council will promote buffer zones of this nature, the above mentioned variables mean its financial involvement will of necessity have to be assessed on a case by case basis.

Methods for Controlling Activities in River and Lake Beds

Fresh Water Policy 9.

The Wellington Regional Council will:

- | | | |
|------------------|---|---------------------------------|
| Method 34 | <ul style="list-style-type: none"> • <i>Control activities in river or lake beds by means of resource consents or authorisation in a regional plan.</i> | See also Soil Method 18. |
| Method 35 | <ul style="list-style-type: none"> • <i>Prepare, where appropriate, guidelines to assist in the reduction of adverse effects on river and lake beds and promote adherence to any that are prepared amongst those engaged in riverbed activities.</i> | See also Soil Methods 4 and 19. |
| Method 36 | <ul style="list-style-type: none"> • <i>Require river works to provide for the passage of fish, where appropriate.</i> | |
| Method 37 | <ul style="list-style-type: none"> • <i>Place conditions on consents to work in a river or lake bed that require, where appropriate, activities to be undertaken in ways that cause the least disturbance to aquatic ecosystems (e.g., outside breeding season) or indigenous fauna and flora.</i> | |

S. 13 of the Act provides for Council control of any activities that would alter the character of, or detrimentally disturb, lake or riverbeds. Activities on the surface of rivers and lakes are controlled by territorial authorities. Until a regional plan containing rules is in place (this may be either the Regional Fresh Water Plan or another regional plan) riverbed activities will continue to be controlled through the transitional provisions of the Act.

Guidelines for activities, (**Method 35**) such as gravel extraction or the movement of vehicles in riverbeds, will encourage

responsible practices by operators and provide information to allay the concerns of other river users (anglers, picnickers, etc.).

The free passage of fish to and from spawning and feeding areas is essential to the well-being of a fishery (**Method 36**). Structures can prevent this from occurring. Uses of riverbeds and water should, where practicable, provide for the passage of fish. The appropriateness of providing for fish passage in relation to any particular use may be established in a regional plan or a resource consent.

The Director General of Conservation has authority under the Freshwater Fisheries Regulations 1983 to require facilities for the passage of freshwater fish past or over structures (dams or diversions) in watercourses.

Methods for Protection of Waters of High Value

Fresh Water
Policies 10-12.

The Wellington Regional Council will:

- Method 38**
- *Prepare, as part of the Regional Fresh Water Plan, an inventory of water bodies of high value and identify means of protecting these waters where necessary (including heritage protection and water conservation orders and rules in regional plans). It will include water bodies of national, and regional significance, as well as those waters of regional significance to iwi.*
- Method 39**
- *In determining safe yields or preparing plans for water bodies or catchments, take into account natural character, any values attached to highly regarded rivers, lakes, and streams, and the amenity and intrinsic values of other water bodies.*
- Method 40**
- *Identify, in co-operation with other agencies such as the Department of Conservation, water bodies most likely to provide regionally significant habitats for indigenous fauna (freshwater fish, etc.) and areas of significant indigenous flora.*
- Method 41**
- *Where waters are of national or regional significance, encourage the protection of adjacent land in order to maintain or enhance their value.*
- Method 42**
- District plans would be an appropriate means of implementing Fresh Water Policy 10 through land use controls alongside waters of high value.*

In general, the Region does not have many rivers and streams of high value on a national scale. None are cited in the National Inventory of Wild and Scenic Rivers⁹. Nor are there any in either of the top two categories of the New Zealand Recreational Rivers Survey¹⁰. While the overall quality of the freshwater resource is good, the preservation (and enhancement, where practicable) of those of high quality on a regional scale is a priority.

Existing records of waters of high value are dated and may be inaccurate in places. The assessments upon which tables 4 to 7 were derived, though professional, may have been overtaken by development in the intervening years.

Moreover, very little is known of rivers, streams, and lakes of significance to iwi. It will be necessary for the Wellington Regional Council to advance its knowledge in this area to provide a complete coverage of waters of regional significance (**Method 38**). The Region also has a number of wetlands of regional, national and international significance which should be included in this inventory (e.g., Lake Wairarapa).

High value waters and the preservation of the natural character of water bodies will be given consideration in every plan

⁹ Grindell D S, 1984 *A National Inventory of Wild and Scenic Rivers*, Water and Soil Miscellaneous Publication No. 68, NWASCA, Wellington.

¹⁰ Eggar G D and J H op. cit.

prepared by the Council for the management of fresh water (**Method 39**).

Amenity values will also be taken into account in the management of water bodies.

The location of indigenous fauna and instream flora in the Region is not well understood. Further work is necessary to identify important habitats and ensure these are taken into account in consent granting. This is a responsibility that the Wellington Regional Council shares with other agencies.

The Council will advise applicants for resource consents relating to waters of high value of the significance of the water body, and of such matters as significant sites of significant indigenous fauna and flora. These will need to be taken into account by applicants in their assessment of environmental effects.

Method 41 refers to steps which may be taken by the Council to

protect important values in relation to water bodies, including advocacy, economic incentives, direct service provision, rules, and so on.

Most water bodies of high value are so valued because of a combination of water and land features or characteristics. In some cases it may be necessary to provide for the protection of land in order to preserve valued features.

Control of the use of land is primarily a territorial authority responsibility and is most appropriately dealt with by territorial authorities (**Method 42**).

Methods for Implementing Iwi Policy

Fresh Water
Policy 13.

The Wellington Regional Council will:

- Method 43**
 - *Promote, where appropriate, high water quality, restoration of degraded water and the maintenance of the spiritual integrity of water bodies through its management of the Region's freshwater resources.*
- Method 44**
 - *Investigate and provide, if necessary, policy for the diversion of water from one catchment into the watercourses of another catchment.*

The principal reasons for adopting these methods are to meet the requirements of the Act and ensure iwi values and tikanga are considered in the management of fresh water. Other relevant methods are described in chapter 4.

Methods for Protecting Wetlands

Fresh Water
Policy 14.

The Wellington Regional Council will:

- Method 45**
 - *Request territorial authorities to ensure it is notified of any proposal for any activity on land (which includes or lies adjacent to a wetland) or for any other activity which may have an impact on the quality or quantity of water in a wetland.*
- Method 46**
 - *Require permits to take, divert, or discharge into water where wetlands may be affected. An assessment of effects will be required and the appropriateness of any effect*

measured against the criteria in the policy.

- Method 47**
- *Identify wetlands and wetland systems of national and regional significance, and establish methods for their protection in a regional plan or the Regional Fresh Water Plan.*
- Method 48**
- *Manage wetlands on land owned or controlled by it in accordance with Fresh Water Policy 14, investigate the workability of measures required to protect wetlands and wetland systems (e.g., buffer zones and land use practices), and advocate for protection by landowners for all significant wetlands.*
- Method 49**
- *Where appropriate, investigate transferring powers of management so that some wetlands could be managed by iwi and/or interested groups.*
- Method 50**
- District plans and resource consents would be appropriate means for territorial authorities to give effect to Fresh Water Policy 14.*

The principal reasons for adopting a strong regulatory regime for the control of wetlands is to prevent the rapid reduction in these vital habitats. These methods address the finite character of this resource (s. 7(g)) and recognise that if current patterns continue without some control there will be a significant overall loss in the quality of the environment (s. 7(c)) and in the intrinsic value of these ecosystems (s. 7(d)).

The Wellington Regional Council will control activities that could potentially impact on the hydrology and aquatic ecology of wetlands, such as the use and diversion of water and the discharge of contaminants. The Council will advise territorial authorities of the wetlands to which **Method 45** applies.

Other means of protecting wetlands include voluntary protection arrangements entered into by landowners (e.g., open space conservation covenants negotiated with the Queen Elizabeth II National Trust). The Council will advocate for the greater use of such arrangements (**Method 48**). Territorial authorities could also protect wetlands from the adverse effects of land use through provisions in district plans.

Fresh Water
Policy 15.

Methods for Protection of Public Water Supply

The Wellington Regional Council will:

- Method 51**
- *Through resource consents, control abstractions and*

discharges with the potential to detract from the quality or quantity of any water which is used to maintain public water supplies. Conditions may be imposed on existing consents over time where it is necessary to improve the quality or availability of water.

Method 52

- *Encourage water supply authorities and other authorities to use the provisions and powers of other Acts, regulations and guidelines to protect the quality of water in water bodies and promote public health.*

Method 51 is the most direct and effective means of providing for Fresh Water Policy 15.

The main water bodies to which **Method 51** applies are the Hutt River, Orongorongo River, Wainuiomata River, Waikanae River, and Otaki River, Bush Stream, Waiohine River, Waingawa River, Huangara River, Hutt Aquifer and various other small aquifers.

There are a number of regulations, guidelines and other Acts which promote the maintenance of clean water for public water supply purposes and which encourage supply authorities to deliver a high quality product. These include the New Zealand Drinking-water Standards, Health Act 1956 and grading criteria for public water supplies. The Council will encourage the relevant authorities to use these, where relevant, in the interests of promoting public health and ensuring a sustainable potable water supply for future generations.

Methods for Public Access to Water Bodies

Fresh Water
Policy 16.

The Wellington Regional Council will:

Method 53

- *Investigate and identify water bodies or parts thereof which are of regional significance in terms of public access, and encourage the provision of access where appropriate.*

Method 54

- *Where riparian management is adopted as a method, encourage its dual use for public access where this is possible.*

Method 55

District plans and land use consents would be an appropriate means of implementing Fresh Water Policy 16.

Access to water bodies is primarily a territorial authority responsibility as it involves the use of land. Provisions relating to esplanade reserves, esplanade strips, and access strips would be

appropriate means of recognising and providing for access in district plans. The Wellington Regional Council will encourage landowners and territorial authorities to provide access to waterways (or parts thereof) of regional significance, where there is an identifiable demand for that access.

5.6 Anticipated Environmental Results

- (1) Water quality, flows and levels do not fall below standards set to safeguard the life supporting capacity of water or the needs of future generations.
- (2) Water quality, flows and levels set to manage a water body for certain purposes are maintained.
- (3) Water is available for the social and economic development of the Region.
- (4) The sustainable yield of groundwater is not exceeded and saltwater intrusion is minimised.
- (5) The ecological health of aquatic ecosystems is protected and enhanced.
- (6) The relationship of the tangata whenua with fresh water is better understood and iwi concerns and values are considered in the management of water bodies.
- (7) Water of poor quality is enhanced where necessary and contaminated water is restored to appropriate levels.
- (8) Water quality is improved through appropriate land use practices and integrated land and water management.
- (9) All discharges into fresh water comply with the relevant water quality standards.
- (10) The quantity and quality of water for public water supply is protected so that supply is ensured and public health is protected.
- (11) Efficiency and conservation targets established by relevant authorities are achieved.
- (12) The adverse effects of river works and other activities in the beds of lakes and rivers are avoided, remedied, or

mitigated.

- (13) The special values attached to water bodies are protected.
- (14) Significant indigenous flora and significant habitats of indigenous fauna are protected.
- (15) There is no net loss in the number and quality of wetlands and wetland systems in the Region of national and regional significance.
- (16) Riparian management programmes are established where appropriate.
- (17) Public access to water bodies is maintained and/or enhanced where appropriate.

6. Soil and Minerals

6.1 Introduction

The Regional Policy Statement **distinguishes between soil and land**. The former refers to the soil cover, that is, the inorganic and organic materials overlaying and including the parent material from which it is derived. Soil is but one aspect of land. Land includes water, vegetation, the built environment and landform.

This distinction assists in identifying the effects of various activities and events on the different aspects of land. It is not intended to obscure the interdependence of these aspects. The intimate relationship that exists between soil, water, vegetation, and air is fully recognised.

A further distinction is made among the **components of soil**. Soil is not homogeneous, but comprises parent material overlaid by inorganic and organic components which may in turn be divided into subsoil and topsoil. Soil includes mineral deposits. The process of soil formation involves complex chemical, biological and physical processes which take place continuously over long periods of time.

Soils perform a range of important **functions**. They absorb, retain and channel water; they support and sustain vegetation and economically important crops; they store and dispose of natural, domestic and industrial waste; they provide support for buildings and other structures; and they are a source of economically valuable minerals and construction materials.

By virtue of their wide ranging functions, the Region's soils are a primary source of its economic wealth. Soil resources provide the physical setting in which production and other activities take place, as well as the "natural capital" on which people draw.

The different uses to which soils can be put give rise to competing demands. These occur most often at the fringe of urban areas, but also in rural areas. For example, demands for residential use compete with demands for primary productive use (agriculture, horticulture, forestry), mineral extraction, recreational use (parks, sports grounds), industrial use (manufacturing, processing), commercial use (retailing, offices), transport use (roads, rail, airports, shipping), and utilities (water, gas, electricity distribution networks).

The different uses of soil give rise to **effects** which vary in terms of their severity, extent, timing, and consequences for other associated resources (water, vegetation, air). Soils can be damaged, degraded, contaminated, and destroyed, and thus lose their ability to perform the functions required of them.

Soil degradation occurs when soil fertility is depleted, soil structure is lost, soil or soil forming materials are lost or removed, and when soil is contaminated. There are a number of areas in the Region where soil is being degraded or where the risk of degradation is high. The process of deterioration may become irreversible if remedial action is not taken and the resource may be lost or only be suitable for a restricted range of uses — by both current and future users. The costs of rehabilitation and of lost production can be very high.

The Wellington Regional Council has a responsibility to ensure that the Region's soils are managed so as to maintain their ability to meet human needs, both now and in the future. The Act imposes some constraints on the use of soils. In giving effect to these the Council has a primary role in controlling the use of land for the following purposes: soil conservation; maintaining and enhancing the quality of water; maintaining the quantity of water; avoiding or mitigating natural hazards; preventing or mitigating any adverse effects of the storage, use and disposal or transport of hazardous substances.

The soil issues discussed in this Statement relate primarily to the maintenance of soil cover and the soil forming process, the maintenance of sustainable interactions between soil, water, and vegetation, and the maintenance of soil fertility to meet the primary productive needs of people in the Region.

Minerals are a component of soil. Minerals are used extensively throughout the Region, largely for construction purposes, but also in agriculture. The only mineral deposits of economic significance in the Region are those which consist of rock material. Sand, rock, gravel and lime are mined from rivers, beaches, coastal cliffs and inland quarries. The Region has no known metallic minerals or oil or gas deposits of economic significance.

S. 5 of the Act excludes minerals from the requirement to sustain their potential to meet the reasonably foreseeable needs of future generations. This recognises the finite nature of most mineral resources. It means that sustainable management of deposits of rock material, and their efficient use and development, are constrained only by the requirement to sustain the life supporting capacity of air, water, soil and ecosystems, and the need to avoid,

remedy or mitigate adverse effects of extraction activities on the environment.

6.2 Issues

Issue 1

Erosion due to natural processes is inevitable, but the effects of this can be avoided, remedied or mitigated. Susceptibility to erosion is determined primarily by soil and rock type rather than by location, although faultlines are particularly susceptible.

Soil
Objectives 1-4.

Almost 42 percent of the Region is made up of young sedimentary rocks — mudstones, siltstones and sandstones. These rocks are poorly structured and are further weakened by tectonic processes, such as earthquake faulting and crushing. The associated landscape is widely susceptible to soil erosion.

The Rimutaka, Tararua and Aorangi Ranges comprise 24 percent of the Region's land area and provide the catchments for all urban water supplies. The combination of high rainfall and active forces, such as earthquake uplift, contributes to rapid rates of erosion in these ranges. This causes gravel to build up in river courses, which, in turn, poses a flood risk. Vegetation needs to be retained in a pristine condition if erosion is to be minimised, water supplies maintained, and downstream flooding not increased.

The loss of vegetation is often the cause or trigger for erosion. Protective vegetation is removed by a variety of events such as land clearance, accidents (e.g., fire), pests, and extreme climatic events (e.g., storm induced slips). Poor land management practices (e.g., overgrazing, overcultivation) or inappropriate land use can also trigger erosion. Individually, these events may not cause erosion but, when two or more of them occur together, severe damage can result. The preconditions for damage can exist and develop for a considerable time before noticeable damage occurs.

Issue 2

Surface erosion during the development phase of urban subdivisions, such as those surrounding the Pauatahanui Inlet, can cause deposition of soil and debris in watercourses and estuaries. This may destroy natural habitats and ecosystems and increase the risk of surface flooding, water pollution and disruption of services. Although topsoil retention may not be an issue when earthworks are carried out, the control of subsequent erosion and of water pollution are issues to be addressed.

Soil
Objectives 1, 2
and 5. See
also
Fresh Water
Issue 1.

- | | | |
|----------------|---|--|
| Issue 3 | River and stream bank erosion is an ongoing problem in most waterways and, if not correctly managed, can lead to a loss of productive and conservation land, degrade stream habitats and pose a threat to residential and commercial areas. These problems are apparent in river catchments such as the Waiohine, Otaki and Hutt. The use of bankside management techniques, such as tree planting and rock placement, can avoid or alleviate erosion problems. | Soil Objectives 3 and 4. |
| Issue 4 | Light textured topsoils are prone to wind erosion which reduces soil fertility and primary production capability. Some soil types on the Wairarapa Plains are subject to wind erosion under particular land management practices (e.g., intensive cropping). In coastal areas (e.g., Kapiti) recreation and subdivision activities can trigger dune erosion. | Soil Objectives 1, 2 and 4. |
| Issue 5 | Erosion may also be induced by gravity on slopes that are susceptible to slumping and slips . Land clearance on hill country carries the risk of slope failure before new vegetation cover becomes established. The Tawhero syncline at Tinui is subject to extensive mass movement and associated gully erosion. | Soil Objectives 1, 2 and 4. |
| Issue 6 | Erosion can also occur through overdrying of soils as a result of land drainage. Overdrying increases the risk of wind erosion and, when combined with cultivation, destroys soil structure and creates soil instability. This can cause problems for developers wishing to build and for farmers and horticulturalists. Sensitive soils include those which are high in organic matter, such as peat. Peat soils are present throughout the Region, with areas of particular importance being Whitemans Valley and the dune/lowland/foothill complex along the Kapiti Coast. | Soil Objective 1. |
| | Erosion can have severe environmental and economic effects, including reduction of productive capacity, reduction of the flood carrying capacity of waterways through sediment deposits, and damage to ecosystems and property. | |
| Issue 7 | Vegetation clearance and soil disturbance can occur when roads and tracks are constructed for the purposes of agriculture, forestry, other primary production activities and mineral extraction. Soil is exposed to more rapid weathering and sediment and nutrient loads in surface run-off are increased. After vegetation removal even minor accelerations in erosion and sedimentation rates can destroy fish spawning beds, affect the behaviour of some fish and filter feeding animals, disturb stream ecosystems and contaminate water supplies. Logging operations in adjacent areas have previously caused silt contamination of | Soil Objective 5.
See also Fresh Water Issue 1. |

trout spawning grounds in the Mangatarere and Akatarawa Rivers. Burning and uncontrolled grazing of native vegetation in areas such as the Rimutaka foothills have reduced vegetation cover and accelerated erosion. This has led to increased run-off which contaminates water with sediment and nutrients and aggrades river and stream beds.

Issue 8

Commercial extraction of gravel and sand can assist river management, including flood and erosion mitigation, in rivers such as the Hutt, Waikanae, Ruamahanga, Waiohine, Waingawa and Otaki.

Soil Objectives 1, 2 and 4. See also Fresh Water Issue 6.

Overextraction or uncontrolled extraction of gravel in these rivers can cause erosion by altering the river channel's development. Poorly controlled disturbance of riverbeds can cause significant siltation, with consequent adverse effects on aquatic habitats if extraction occurs in flowing water. Overextraction can also affect bridge stability and the effectiveness of flood protection works.

Sand and gravel extraction operations on beaches have the potential to create erosion in three ways: firstly, at the point where material is removed; secondly, by breaching the beach ridge; and thirdly, by restricting or removing the supply of sand and gravel to downdrift beaches. The risk of flooding behind the beach and on land adjacent to river mouths may be increased because the supply of sand and gravel is cut off.

Issue 9

Activities associated with **hard rock extraction** can cause land instability when vegetation is removed, when mine faces, benches and access tracks are not designed correctly, and when overburden waste and fines from washings are not properly disposed of. Water can be contaminated with sediment when aggregate is washed and when soil is disturbed with machinery. Extraction activities, particularly on hard rock sites, create noise, dust, vibration and visual impacts which can create a nuisance or disamenity for the community.

Soil Objectives 1, 2 and 5. See also Fresh Water Issue 1.

Issue 10

Extraction of topsoil exposes the subsoil, leaving it open for erosion by wind and water. As a consequence, loss of sediment and nutrients into waterways may occur. Topsoil removal can also compromise the versatility of the soil by restricting the range of alternative uses.

Soil Objectives 1, 2 and 5.

Studies have determined that in Wellington the most suitable soils for topsoil removal are those in the Belmont series.¹¹ Turf farming has effects which can be similar to those of topsoil removal, although the loss of topsoil can be minimal with good management practices.

Issue 11

Contamination of soil by agrichemicals, and by industrial waste and contaminants, can damage soil microorganisms, as well as insects, worms and other invertebrates which play a vital role in maintaining the soil's ability to support plant and animal life. There can also be adverse off-site effects when non-target organisms are affected and when groundwater is polluted. In addition, there are concerns about the impact of chemical residues on public health and on wildlife and ecosystems. When persistent agrichemicals are applied they can be carried in run-off from the soil into waterways and affect ecosystems far removed from their point of application. Damage can also occur when persistent chemicals that have been stored in the soil are released, perhaps years later, by earthworks or other disturbances. Discharges of waste or chemical pollutants onto land may reduce the life supporting capacity of soil, be visually offensive, create unpleasant odour and have potentially serious consequences for water quality and aquatic ecosystems.

Soil Objectives
1
and 5. See
also
Air Issue 9.

Soil acts as a filter for water percolating through the soil profile. It removes contaminants or assists in their breakdown to less harmful forms. Soils vary, but all are limited in their capacity to perform this assimilative function. Rates of waste disposal in excess of this capacity, or disposal of forms of waste which persist in a harmful form, will result in the accumulation of contaminants and a consequent reduction in the ability of soil to support plant life and to purify water.

Issue 12

Loss of soil fertility can occur through overcultivation, overgrazing in drought prone areas, the removal of topsoil, and

Soil Objectives
1
and 2.

¹¹ Hart P, August J, Watts H, 1990, *Topsoil Mining in the Wellington Region : Background Issues, Agronomic and Cost/Benefit Studies on an Upland Soil, and Rehabilitation Guidelines for the Region*. DSIR, Division of Land and Soil Sciences, Land Resources Department, Lower Hutt.

the removal of vegetation in sensitive areas. For example, intensive cropping practices, if poorly managed, will deplete fertility through the loss of organic matter, soil compaction and wind erosion. Soil fertility includes all soil characteristics which enhance plant growth. A decrease in soil fertility will reduce the ability of the soil to support a wide range of uses and may be irreversible.

Issue 13

The effects of the use and development of soils are often not limited to the site where the activity takes place but occur off-site as well.

Soil Objectives
3
and 5. See
also
Fresh Water
Issue 1.

Major **downstream effects** include further erosion, deposition of sediment and other material onto land, contamination of water

with sediment, and contamination of water with chemicals leached from the soil. For example, land clearance for pasture establishment in the Dry River catchment has previously caused significant on-site erosion. This resulted in excessive downstream gravel and sediment deposition which closed the Martinborough water supply and covered prime dairy land. At its junction with the main Ruamahanga River, gravel blockages have resulted in higher flood levels and substantial river bank erosion.

Issue 14

Areas with **high quality soils** in the Wellington Region are limited and the total available area, particularly in and around high population areas, is decreasing. The Land Use Capability Survey (1974)¹² shows Class I land as comprising less than 1 percent (5,200 hectares) of the total area of the Region and Class II land as comprising less than 4 percent. The adverse effects of a continued loss of high quality soils include loss of the potential to meet the needs of future generations, loss of life supporting capacity and greater pressure on soils of lesser quality.

High quality soils are often associated with intensive production of food and ornamental crops, but human settlement has resulted in fewer high quality soils being available for such uses. Urban development has an irreversible effect on soil. It often involves its physical removal and renders soils inaccessible for long periods of time (decades or centuries) through the construction of roads and buildings. For example, urban expansion in the Hutt Valley has rendered most of the high quality soils unavailable for alternative uses. Similarly, urban expansion in the future could

Soil Objective
6.

¹² Ministry of Works, 1974, *Land Use Capability Survey Handbook*, Ministry of Works, Wellington

threaten the last remaining good quality soils in areas such as Otaki and the Wairarapa.

Issue 15

There is a risk that restrictions may be placed on the continued use or development of some sources of minerals because of the **effects of extraction activities** on neighbouring communities. Air pollution, noise, water contamination and visual impairment are effects which can occur and which may result in pressure to restrict activities on, or to close down, extraction sites. The problem is most likely to arise where hard rock quarry sites are adjacent to residential subdivisions or adjacent to areas which can be subdivided.

Soil Objective
7.

6.3 Objectives

Objective 1

The soils of the Wellington Region maintain those desirable physical, chemical, and biological characteristics which enable them to retain their life supporting capacity and to sustain plant growth.

Soil degradation has been raised as an issue. The loss of soil structure or fertility, or the loss of the soil cover itself, reduces the potential of soil to meet the needs of land users, and may reduce the life supporting capacity of soil (s. 5). The intent of this objective is that the basic physical, chemical and biological properties of soils are maintained so as to meet the s. 5 requirements.

The incidence of erosion, eutrophication, and contamination of soil and waterways in the Region shows that the capacity of some soils to meet the life supporting and productive functions required of them is being undermined by inappropriate land use practices.

Objective 2

Land degradation is limited to that for which there is no feasible remedy.

Soil Policies 1,
2, 3, 6 and 8.

The intent of this objective is that, in the long-term and over the Region as a whole, the amount or extent of degraded land should only be that which results from natural processes which it is not feasible to control. By "feasible" is meant that a remedy is technically possible and financially achievable. Where it is feasible to control or influence the causes of degradation — whether this results from natural processes or human activities or some combination of these — such degradation is either prevented or remedied. This allows for situations where, in spite of the best efforts, degradation might still occur, but requires that the damage be remedied.

Objective 3

Land uses within river catchments are consistent with downstream river management and water use requirements, and do not undermine catchment resilience to storm damage and other natural calamities.

Soil Policies 1,
3, 7 and 8.

The intent of this objective is that all catchments, and especially those which have multiple uses, are capable of sustaining these uses.

An important aspect of soil stability is the maintenance of adequate vegetative cover.

Objective 4

The susceptibility of soils to natural hazards (flooding, land

Soil Policies 1,
3, 4, 5, 7 and

movement, subsidence, erosion, fire and wind) is such that the risk of damage is acceptable to the communities affected and the adverse effects of these events are reduced as far as is practicable.

8. Natural Hazards Policy 3.

This objective recognises that soils cannot be completely protected against the effects of natural hazards. The level of protection for soils is consistent with the level of risk that the affected communities are willing to bear.

Objective 5

The off-site impacts of soil degradation on land, water, air, ecosystems and communities are avoided or mitigated.

Soil Policies 1, 2, 3 and 6.

The intent of this objective is to encourage land users to have regard to the wider context in which their land use activities take place. The strong interrelationship between soils, water, vegetation and air means that effects on one usually flow on to affect another. Some degradation will occur as a result of natural events or human actions, or some combination of both, but this should be controlled to the extent that damage is avoided or mitigated to a level that is acceptable to the communities affected. It is intended that resource users should first seek to avoid or mitigate off-site impacts, rather than allowing them to occur unabated before trying to remedy them.

Objective 6

The total stock and occurrence of Class I and Class II land is sufficient to meet the needs of existing and future users, and future uses are not limited by the irreversible effects of existing uses.

Soil Policies 1, 8 and 9.

There is a presumption that options on the use of the best quality land in the Region are kept open. The soils associated with Class I and II land are capable of a wider range of uses than soils of lesser quality and are also limited in total area within the Region. The loss of these may result in greater pressure on those of lesser quality.

All soils constitute a natural capital resource. However, high quality soils are capable of supporting uses that other soils of lesser quality cannot. Some uses of high quality soils result in depletion of the capital stock (e.g., through erosion, removal, construction of buildings and roads, etc.) or loss of the soil's ability to deliver the services required of it (e.g., through loss of fertility or structure). The principle of sustainability requires that these stocks are managed over time so as to be available for future use.

Objective 7

The Region's needs for rock material continue to be met and are

Soil Policy 10.

not unnecessarily disadvantaged by restrictions on the availability of, or access to and operation of, extraction sites.

The intent of this objective is that the Region's mineral resources are developed and used efficiently. Unnecessary disadvantage may occur when costs are imposed that result in an inefficient outcome or which are unreasonable. For example, when residential land uses are sited in proximity to hard rock quarries, pressure may be brought to bear on operators to avoid, remedy or mitigate the effects. While this may be appropriate to address environmental concerns, in extreme cases it may result in operations being stopped or relocated. This should only occur if the benefits outweigh the costs. Decision making about new land use, development or subdivision should give consideration to potential conflicts with adjacent existing or planned mineral extraction activities.

6.4 Policies

The policies set out below have the overall aim of ensuring that the "natural capital stock" of soils and minerals in the Region is maintained so as to achieve the purpose of the Act, recognising that s. 5(2)(a) specifically excludes minerals.

Policy 1

To avoid, remedy or mitigate erosion and other forms of soil degradation on susceptible sites and avoid off-site effects of erosion and other soil degradation, including the contamination of water, contamination of the beds of water bodies and the coastal marine area and contamination of air.

Soil Methods
1-
10.

This policy is intended to deal with those situations where, because of the susceptible nature of the site, a proactive approach to soil conservation is necessary. Susceptible sites include areas of Class VII and Class VIII land and areas where topsoil has been removed or substantially disturbed.

See also
Fresh Water
Policies 4, 7
and
8.

Avoidance of a problem reduces the cost to the community. These costs include the loss of productive capacity due to soil loss, the costs of remedying a problem once it has occurred, and downstream or off-site costs, such as deposition of debris onto neighbouring areas and damage and disruption to services. Initiating soil conservation on land that may be prone to erosion under certain conditions or has been damaged by past use (or exceptional natural events) will avoid worsening the problem.

Off-site impacts often occur as a result of a failure to take a wider view of soil and water management. In focusing too narrowly on

problems at particular sites, the opportunity is lost to see features in common with other sites. For example, a catchment approach, rather than a property approach, will allow management practices to be integrated so as to address on and off-site impacts.

Policy 2

To ensure that the adverse effects of commercial topsoil removal, mineral extraction and turf farming operations are avoided, remedied or mitigated, or do not exceed any relevant rules or standards set for soil, water, air, ecosystems or landscape in any regional or district plan.

Soil Methods 1, 4 and 11.

This policy is intended to deal with those situations where disturbance of the land is likely to cause acute on-site and off-site effects. Relevant rules and standards will include national standards and those rules and standards set out in any regional plans and district plans.

See also Fresh Water Policies 4-6.

Policy 3

To ensure that, where feasible, sites are rehabilitated in circumstances where, as a result of either natural processes or human activities, or some combination of both, soils are, or are likely to be, eroded, removed, disturbed or otherwise rendered unable to sustain their life supporting capacity or to meet the needs of the local or regional community.

Soil Methods 1, 12 and 13.

This policy is intended to deal with those situations where the severity of the modification to a site means that human assistance is needed to mitigate or remedy the damage.

Rehabilitation of a site refers to the restoration of a site to a state where it will continue to meet the needs of the local or regional community in a sustainable manner. By "feasible" is meant that rehabilitation is technically possible and financially achievable.

Policy 4

To manage rivers within approved design standards derived from floodplain management studies.

Soil Method 14-16.

This policy is intended to ensure that erosion control and flood control measures are carried out in accordance with guidelines which derive from consideration of the whole catchment system and not on an ad hoc basis. Floodplain management studies have been carried out or are proposed for the major river systems of the Region (Otaki, Waikanae, Hutt, Waiohine, Waingawa, Ruamahanga) and river management plans designed as a result. Failure to manage rivers within the guidelines of these schemes increases the risk of damaging floods and erosion.

See also Fresh Water Policy 9 and Natural Hazards Policies 3 and 4.

Policy 5

To manage river gravel extraction at sustainable levels so as to complement river management programmes.

Soil Methods 1 and 17-19.

This policy is intended to deal with those situations where gravel extraction may cause river bank erosion or endanger other works or structures.

Extraction of gravel from riverbeds must occur at or below the rate of replenishment otherwise channel form may be altered. This, in turn, can alter water flows and lead to erosion of the riverbed, river bank and foundations of structures such as bridges.

See also
Fresh Water
Policy 9.

Policy 6

To avoid, remedy or mitigate the adverse effects of harmful waste and contaminants on soil, and to dispose of these in ways which respect the assimilative capacity of the soil and which comply with relevant standards set for water quality and air quality.

Soil Methods 1
and 20-23.

Contamination of soils can arise from inappropriate application of harmful chemicals, and from poor management of the disposal of waste to land. It is recognised that there are means of safe disposal to land for some waste products (e.g., treated dairy shed effluent) and that these should be allowed within set limits and conditions. These must have regard to the capacity of the soil to assimilate those components of the discharge which have the potential to reduce the productive or life supporting capacity of the soil, and to the requirements for water and air quality where there is a risk of flow-on effects from soil to water and/or air. Methods of waste disposal must also have regard to the concerns of tangata whenua regarding the use of soil for waste disposal.

Policy 7

To integrate soil conservation with other land management objectives on a planned whole catchment or subcatchment basis.

Soil Methods
1,
6-10 and 24-
25.

This policy is aimed at integrating soil conservation programmes with other land uses by addressing them on a scale which enables multiple use objectives to be met and which encourages efficient use of the available resources.

Land uses such as agriculture, forestry, recreation and conservation have differing objectives. In catchments with multiple land uses, conflict between these objectives can lead to land management practices which cause adverse effects. The accumulation of such effects, or the flow on impacts of such things as vegetation removal and soil disturbance, can combine to create large-scale problems.

In catchments where land uses are primarily productive (e.g.,

farming) and where land management practices differ between adjacent properties, soil conservation objectives are best achieved through planning on a scale which takes into account the whole catchment or the relevant subcatchment rather than just individual properties.

Policy 8

To manage soils in such a way that the risks of flooding, erosion, land movement and subsidence are reduced to a level which is acceptable to the affected community.

See also
Methods 1 and
26-31.

The intent of this policy is to ensure that land management activities which destroy vegetation and disturb soil do not lead to soil erosion and associated detrimental downstream impacts on assets, land and water quality. Communities throughout the Region differ in their exposure to natural hazards and may therefore be willing to accept different levels of risk in terms of measures taken to avoid or mitigate the effects of such hazards.

See also
Natural
Hazards
Policy 3.

An "acceptable level of risk" will be one that balances the benefits and costs of various risk reduction measures, taking into account non-monetary costs, community aspirations and the statutory responsibilities of relevant authorities. Public input is required to determine this level.

Policy 9

To ensure, when planning for and making decisions on new subdivision, use and development on Class I and Class II land (as defined by the Land Use Capability Survey), that there is a net benefit to the local community which includes consideration of environmental standards, the needs of future generations, and any matters of significance for the Region.

Soil Methods
32-35.

Remaining areas of high quality soils are located primarily in the floodplains of the Otaki, Waiohine and Ruamahanga Rivers. These soils are very versatile because of the wide range of primary productive uses to which they can be put. They can be used intensively and are close to easily accessible supplies of water. However, they are in short supply.

This policy is intended to deal with those situations in which there is, or is likely to be, a significant or permanent loss of these soils. Decisions should include consideration of all costs and benefits and should proceed in favour of uses which may have irreversible effects only where the benefits clearly outweigh the costs. In situations where there is no net benefit from a change of land use, the presumption is that existing uses should remain. Matters of significance for the Region include, but are not limited to, the economic consequences of the loss of land which is highly suited to food production, and loss of land which has value in terms of

its rural character.

The use of high quality soils for activities such as urban development (which would deny the option of alternative uses such as orcharding or market gardening) results in what is effectively a permanent loss. The irreversible nature of these changes creates a need to evaluate carefully further loss of the high quality soils that remain.

While it does not necessarily follow that protection of high quality soils is always desirable, neither does it follow that their use should be unconstrained. While it is desirable that the total stock of the soil resource is not diminished, it is also necessary that there be flexibility in the way soils are used. There may be circumstances where the advantages of land development could outweigh the advantages of protecting the soils. However, there is a risk that in the long-term high quality soils may be lost entirely. Trade-offs may be made, but these should have regard to the full range of costs and benefits associated with the changes. These decisions require good information about the costs and benefits of the alternatives. There is often not enough information about these, so a cautious approach is advocated. Until better information about the effects of alternative uses is available, it is prudent not to foreclose on future options.

Policy 10

To ensure, when planning for and making decisions on new use, development and subdivision of land, that consideration is given to the consequences for access to and the location of existing or proposed mineral extraction sites on nearby land.

Soil Method
36.

This policy is intended to ensure that when planning residential and other types of development which may be sited adjacent to mineral extraction sites, such as hard rock quarries, full consideration is given to the impacts that each type of land use will have on the other. Consideration should be given to the effects of extraction activities on nearby residents and to the consequences of possible objections to those effects on mineral extraction operations. Minerals are fixed in location and, even where alternative sites exist, extraction operations cannot be easily relocated. Changes in land use adjacent to existing extraction sites, which may have implications for those sites, should only be made when the full range of economic, social and environmental costs and benefits has been taken into account. Forced closure or relocation can result in higher costs for operators and may result in an economic disbenefit for the Region when supplies are unavailable or must be sought from more distant sources.

6.5 Methods

The Act has highlighted the concept of sustainability as the cornerstone of soil conservation, while acknowledging the need to avoid, remedy or mitigate erosion and to rehabilitate eroded land. It specifies that it is a function of regional councils to minimise and prevent damage by floods and erosion and to control the use of land for the purpose of soil conservation. The majority of soil conservation problems in the Wellington Region occur on private land. The emphasis given in the methods to Regional Council initiatives derives from the wider powers that the Regional Council has to operate on private land and its ability to enter into co-operative projects with landowners and territorial authorities for soil conservation purposes.

The Wellington Regional Council will:

Method 1

- *Prepare a Regional Soil Plan to guide and/or regulate activities which can cause adverse effects through the destruction of vegetation and disturbance of soils.*

A Regional Soil Plan is proposed as the means by which any rules that might be required will be specified. Rules can only be made through a Plan. The contents of the Plan will be determined through discussions with territorial authorities and other relevant interest groups.

The use of regulation is retained to address severe, intractable and inappropriate use and management of the Region's soil resources. Some form of regulatory control over activities that cause or contribute to erosion is necessary in circumstances where the actions of one or more persons create effects which are borne by others.

Methods for Avoiding, Remediating or Mitigating Erosion and Soil Degradation

The Wellington Regional Council will:

Method 2

- *Identify priorities for soil conservation on a regional scale, based on land use capability, frequency of damaging events, and downstream impacts of erosion.*

Method 3

- *Provide information to landowners on land use capability, soil conservation principles and practice and soil rehabilitation.*

Method 4

- *In consultation with territorial authorities and industrial and professional groups, develop (where appropriate) and*

Soil Policies 1-3 and 5-8.

Soil Policies 1 and 7.

See also Fresh Water Method 35.

encourage adherence to relevant guidelines and codes of practice for routine activities such as mineral extraction (gravel, sand, hard rock, etc.), topsoil removal, turf farming, river management, forestry operations, and urban and rural earthworks, in order to avoid or mitigate adverse environmental effects.

Method 5

- *Provide advice on establishing and managing soil conservation plantings used in revegetation programmes to ensure long-term stability is maximised.*

Method 6

- *Inspect Wellington Regional Council plantings and other works put in for soil conservation purposes, particularly after storm events, to ensure that they are adequately maintained and to assess their effectiveness.*

Method 7

- *Encourage and promote the retirement, legal safeguarding and reforestation of areas affecting targeted waterways to diminish and prevent excessive sediment in run-off entering such waterways and to avoid and mitigate erosion risk.*

See also
Fresh Water
Methods 31-
33.

Method 8

- *Encourage and facilitate the afforestation of areas of Class VI and Class VII land identified as being increasingly susceptible to erosion and where it is shown to be ultimately unsustainable for pastoral use.*

Method 9

- *Investigate the use of other policy mechanisms, including economic instruments, as a means of avoiding, remedying or mitigating soil erosion and degradation, and other adverse effects of land use.*

Method 10

District plans would be an appropriate means of implementing Soil and Minerals Policy 1 by providing for the susceptibility of sites to soil erosion, soil degradation and other adverse effects caused by existing land uses and potentially caused by new land use, development and subdivision.

Past attempts, and the existence of some major problems, show that regulation alone has not been adequate in preventing soil erosion. There are enforcement problems, particularly on private land. It is important that landowners take responsibility for their own soil conservation problems. Subsidies and grants have been successful, but unless it can be shown that the benefits accrue primarily to the community rather than to individuals, other methods may be more effective and efficient.

Methods 2-8 provide an information/education/facilitation mechanism which fits well with the results required. These

methods are community targeted and funded. They are flexible enough to encourage the avoidance of soil erosion, preserve or protect the soil and control actions which contribute to erosion. They can be designed to give direction to communities and allow for community involvement. This encourages community ownership of soil erosion problems and community solutions.

The use of information, education and facilitation, together with any necessary regulation, is the most effective means of implementing policies for controlling off-site impacts on soil and water. The permissive nature of the Act is given effect to through a whole catchment approach to planning and implementation. This is a community based approach which presumes a high level of co-operation among those affected. It requires information to be fully and freely available and that both on-site and off-site users of soil and water resources understand the issues and problems involved.

By identifying priorities for soil conservation, preventative and rehabilitative measures can be targeted and carried out efficiently. Such information is essential for the preparation of the proposed Regional Soil Plan and in the preparation of codes of practice.

Soil erosion and degradation problems can arise through lack of knowledge on the part of land users. **Methods 3, 5, 6, 7 and 8** address this by raising awareness of, and encouraging a favourable attitude toward, soil conservation. **Method 8** will use the New Zealand Land Resource Inventory (NZLRI)¹³ as the basis for identifying land which is highly erosion prone. The NZLRI recognises that the majority of Class VI land can be sustainable for pastoral use with appropriate soil conservation measures.

Where codes of practice contain adequate provisions for avoiding or mitigating adverse effects, a consent authority may require adherence to these as a condition in resource consents. The consent authority may also require an assessment of off-site impacts in consideration of consent applications for land development proposals. **Method 4** makes provision for the preparation of codes of practice and for consultation with relevant codes and other sources of expertise.

Financial measures, such as economic instruments, offer a greater degree of flexibility than regulation and may be more cost effective. The use of these, whether alone or in combination with regulatory measures, may provide an effective means of implementing Soil Policy 1. **Method 9** makes provision for the investigation of such measures.

In seeking to avoid, remedy, or mitigate adverse effects where they occur, consideration should be given to both existing and proposed land uses. The effects of all land uses on soil should be subject to scrutiny, not just from the point of view of existing land uses, but from a perspective which includes prospective land uses. **Method 10** seeks to give effect to this approach.

Methods to Avoid, Remedy or Mitigate the Adverse Effects of Extraction of Topsoil and Minerals

Soil Policy 2.

The Wellington Regional Council will:

¹³ Landcare Research New Zealand Ltd, *New Zealand Land Resource Inventory*, Lincoln (electronic database)

- Method 11**
- *Include objectives, policies and, where appropriate, rules and other methods in the Regional Soil Plan to contribute to the implementation of Soil Policy 2.*

Soil degradation, resulting from activities which remove, deplete or disturb soils, is an ongoing issue. A strategic approach has therefore been adopted in **Method 11**. The Regional Soil Plan will include policies to avoid or mitigate adverse on-site and off-site effects.

Methods for Rehabilitation of Soils

Soil Policy 3.

The Wellington Regional Council will:

- Method 12**
- *Make provision through the consent granting process for the rehabilitation of land used for mineral extraction and soil removal (e.g., require applications for consents to be accompanied by a site rehabilitation plan).*

- Method 13**
- *Investigate the use of performance bonds as an incentive for operators of mineral extraction, topsoil removal, and turf farming activities to undertake site rehabilitation or other remedial action. Bonds should cover a period long enough to adequately assess the long-term impacts of extraction activities and rehabilitation methods.*

See also Soil Method 4.

The Regional Soil Plan may include guidelines for the rehabilitation of soils. Where degradation of, and damage to, soils as a result of human activities causes significant adverse effects on-site or off-site, the damage should be remedied by those who cause it. This may be given effect to through the resource consent process whereby a consent is issued conditional upon a

plan for site rehabilitation being presented. Sometimes the effects do not appear until some time after the damaging activity occurs. This may be addressed through an economic instrument such as a performance bond. This would provide a financial incentive for operators to ensure that site rehabilitation covers long-term, as well as short-term, impacts.

Methods for Riverbed Management

Soil Policy 4.

The Wellington Regional Council will:

- Method 14**
- *Undertake, as appropriate, floodplain management and hydrological studies as the basis for selecting river management policies for major rivers in the Region.*

- Method 15**
- *Provide funding assistance, as appropriate, for river management activities in accordance with management policies for each river.*

- Method 16**
- *Consult with those affected by river management schemes.*
- Methods 14-16** provide for a comprehensive and integrated approach to riverbed management. Landowners, territorial authorities and other parties have both a financial and a personal interest in river management. The Council is best placed to provide appropriate information and funding assistance and will ensure that there is appropriate consultation with affected parties. The provision of part funding for capital works accounts for the public good aspect of erosion control. Consultation with affected parties is an appropriate means of providing information to land users and of ensuring the continuity of protective measures.

Methods for Managing River Sand and Gravel Extraction

Soil Policy 5.

The Wellington Regional Council will:

- Method 17**
- *Maintain and modify stream beds and channels, when necessary, to improve the flow of flood water in accordance with the provisions of flood hazard management programmes in a regional plan or floodplain management plan.*

See also
Fresh Water
Methods 34-
37.

- Method 18**
- *Authorise, through resource consents or regional plans, the extraction of sand and gravel from targeted rivers.*

- Method 19**
- *Monitor riverbed levels and other relevant indicators to provide information for decisions on gravel extraction rates and sites.*

S. 13 of the Act restricts activities in the beds of lakes and rivers and permits these to occur only through rules in a regional plan or through resource consents. **Methods 17 and 18** provide for this. **Method 19** is needed in order to provide information for resource consents and to evaluate the effectiveness of rules in a regional plan.

Methods to Avoid, Remedy or Mitigate Soil Contamination

Soil Policy 6.

The Wellington Regional Council will:

- Method 20**
- *Control the discharge of waste products, chemical contaminants and effluent onto or into soil through provisions in a regional plan dealing with the discharge of contaminants to land.*
- Method 21**
- *Advocate a strengthening of the educative and information provision role played by manufacturers and suppliers of agrichemicals to commercial contractors and consumers (e.g., farmers, urban residents) in terms of minimising the risks of and potential for contamination of soils.*
- Method 22**
- *Encourage the preparation of waste management codes of practice by industries that generate liquid and solid wastes which may be discharged to land (e.g., poultry, pig farms).*
- Method 23**
- *Investigate soils that are known to be, or may be, contaminated as a basis for identifying contaminated sites and for developing appropriate strategies for remedial action.*

See also
Waste
Method 20

S. 9 and 15 of the Act provide for controls on discharges of contaminants or any substance into or onto land. Such uses are prohibited unless provided for in a rule, resource consent or regulation. The potentially severe impacts of contaminant discharge are best dealt with through a combination of methods, including risk reduction measures, guidelines or codes of practice, and regulatory measures. **Methods 20-23** provide for soils which are, or are at risk of being, contaminated to be identified, for guidelines to be prepared for situations where land users may wish to discharge wastes or other substances into or onto the soil, for information to be provided as a way of reducing the risk of contamination and for rules and other methods to be prepared in a regional plan.

Methods for Integrated Land Management

Soil Policy 7.

The Wellington Regional Council will:

- Method 24**
- *Produce and promote integrated land management plans for catchments and individual properties based on sustainable land use.*

See also Soil Methods 6, 7 and 8.

- Method 25**
- District plans would be an appropriate means of implementing Soil and Minerals Policy 7.*

It is a function of the Regional Council to develop objectives, policies and methods to achieve the integrated management of land (s. 30). This can be effectively achieved through a planning approach which is flexible in scope. Flexibility is important in soil conservation because the nature of the problem varies widely. In some cases, a preventive approach is possible, but in other cases a rehabilitative approach is necessary. Some problems occur at a property level but others are more widely based and occur across a number of properties. **Method 24** is intended to integrate soil conservation measures with other land uses at both a catchment and a property level.

Territorial authorities, through their responsibility for the control of subdivision of land, can make provision for controlling the adverse effects of land use in district plans. **Method 25** identifies district plans as being a useful additional means of achieving regional soil conservation objectives.

Methods to Avoid, Remedy or Mitigate the Effects of Natural Hazards on Soils

Soil Policy 8.

The Wellington Regional Council will:

- Method 26**
- *Advise on techniques of land management that reduce the risk of soil erosion, flooding, subsidence and landslip.*

See also Natural Hazards Policy 1.

- Method 27**
- *When appropriate, develop conservation plans to identify any long-term soil conservation and land management practices required for sustainability.*

- Method 28**
- *Provide funding assistance, as appropriate, for soil conservation activities identified in conservation plans and in accordance with Regional Council policies.*

- Method 29**
- *Work with territorial authorities and landowners to ensure regional soil management objectives are met.*

- Method 30**
- *As part of a consent process, require developers to provide an assessment of environmental effects for land development proposals where there is a significant risk of soil erosion or degradation.*

Method 31 *District plans would be an appropriate means of implementing Soil and Minerals Policy 8.*

Reducing the adverse impacts of natural hazard events requires a combination of risk reduction and restoration measures. Prevention of damage is not always possible, but the damage can be reduced to an acceptable level. **Methods 26-31** combine information provision, service provision, and a regulatory approach to natural hazard mitigation.

Territorial authorities could, through rules in district plans and through the consent granting process, make provision for soil conservation measures. **Method 31** identifies this as being a useful additional means of mitigating the adverse effects of natural hazards on soils.

Methods to Assist Decision Making on Land Use

Soil Policies 9 and 10.

The Wellington Regional Council will:

- Method 32**
- *Identify areas of highly versatile soils that are viable for continued agricultural or horticultural use and promote the continued availability of these soils where the benefits of doing so outweigh the costs.*

- Method 33**
- *Identify situations in which urban expansion onto agricultural land is likely to cause effects which are of significance to the Region.*

- Method 34**
- *Establish a methodology to evaluate the full range of economic, social and environmental costs and benefits of proposed land use changes on Class I and Class II land.*

Method 35 *District plans would be an appropriate means of implementing Soil and Minerals Policy 9.*

Decisions on alternative uses of land should have regard to the effects of proposed uses. In the case of resources which are limited in supply and where proposed uses may have irreversible effects, consideration should be given to the issue of sustainability. Unless the requirements of existing and future users can be met from the remaining resource stock or by augmenting the capacity of soils of lesser quality, the presumption is that the resource stock should not be diminished. **Methods 32-**

34 provide for "at risk" situations to be identified, an evaluative methodology to be developed, and strategies adopted to promote the continued availability of high quality soils. **Method 35** suggests that territorial authorities may also promote the policy through district plans.

Method 36

District plans would be an appropriate means of implementing Soil and Minerals Policy 10.

Where proposed new activities will be affected by existing activities, the consent authority could, through the consent granting process, require applicants to show how actual or potential adverse effects of activities occurring on neighbouring sites would be dealt with. Examples of methods by which adverse effects can be remedied or mitigated include buffer zones, establishing screening vegetation, landscaping and the use of provisions in building codes for noise reduction.

6.6 Anticipated Environmental Results

- (1) There is sustainable use of the remaining high quality soils throughout the Region.
- (2) The physical, chemical and biological characteristics of the Region's soils are maintained.
- (3) The rate of soil degradation is the natural rate resulting from processes beyond the control of landowners.
- (4) Damage to farmland, urban areas and other land from floods, erosion and subsidence is at levels acceptable to local communities and the regional community.
- (5) The life supporting capacity of the Region's soil resources is maintained or enhanced.
- (6) Catchments are stable and robust enough to withstand the effects of natural hazards and to accommodate human activities where required.

7. The Coastal Environment

7.1 Introduction

The coastal environment of the Wellington Region varies greatly in character and provides for a diverse range of human needs. The character ranges from the largely rural Wairarapa coast to the highly developed urban areas around Wellington and Porirua Harbours. The Kapiti Coast has sandy beaches, is experiencing rapid population growth and is an important recreational resource for the Region. The south coast is rugged yet, because of its proximity to the Hutt Valley and Wellington City, is a popular place to visit.

The tangata whenua have especially strong links with the coastal environment, value its mauri, and all it offers. From Otaki round to the Wairarapa, the Region's coastal environment also contains significant habitats for a wide variety of plants and animals.

The coastal environment is thus an important focus of human activities and aspirations. It is also a location where particular types of natural processes and unique ecological values can be found. Balancing the use and the protection of the coastal environment requires careful management.

The Act gives the coastal environment special recognition in the following ways:

- Preservation of the natural character of the coastal environment and the maintenance and enhancement of public access to and along the coastal marine area are identified in s. 6 as matters of national importance;
- The Minister of Conservation is required to prepare a New Zealand Coastal Policy Statement to state policies for the sustainable management of the coastal environment; and
- Regional councils are required to prepare a Regional Coastal Plan. The Plan provides objectives, policies, rules and other methods for the management of the coastal marine area of the coastal environment.

The Regional Policy Statement provides an interpretation of the Act and the New Zealand Coastal Policy Statement 1994 for the coastal environment of the Wellington Region. The Statement

also provides the broad context for the more specific matters addressed in the Regional Coastal Plan. Additionally, it provides a policy framework for the "wet" and "dry" parts of the coastal environment. This framework recognises the ecological, geographical, cultural, social, and economic links between land and sea, and the complementary responsibilities that different authorities have for coastal management.

Care needs to be taken in describing the component parts of the coastal environment. The Act and the New Zealand Coastal Policy Statement 1994 use particular terms to describe specific parts of the coastal environment. These have been used in the Regional Policy Statement. The parts of the coastal environment and the various responsibilities for its management are shown in figure 3.

7.2 Issues

Issue 1

Many activities in the coastal environment cause few adverse effects when considered in isolation. However, there is **potential for individual developments to cause significant adverse effects**. Also, the **cumulative effects** of individual and otherwise insignificant developments or uses can also be significant. Together, these effects mean that there is **increased potential for loss of natural character and damage to coastal ecosystems and landscape features**. These effects can arise from:

- Demands for the expansion of existing urban areas along coastal margins, resulting in sprawling urban development (e.g., along the Kapiti Coast, and around Porirua Harbour);
- Demands to subdivide isolated rural coastal properties as a consequence of the downturn in the rural economy, resulting in sporadic development (e.g., in the Wairarapa);
- Development pressures for specific facilities that need to be located in the coastal environment (e.g., expansion of port facilities, marinas, etc.); and
- Pressures from activities which consume natural and physical resources (e.g., mining) or which can cause adverse effects (e.g., driving of vehicles along beaches and sand dunes).

Coastal
Environment
Objective 1.

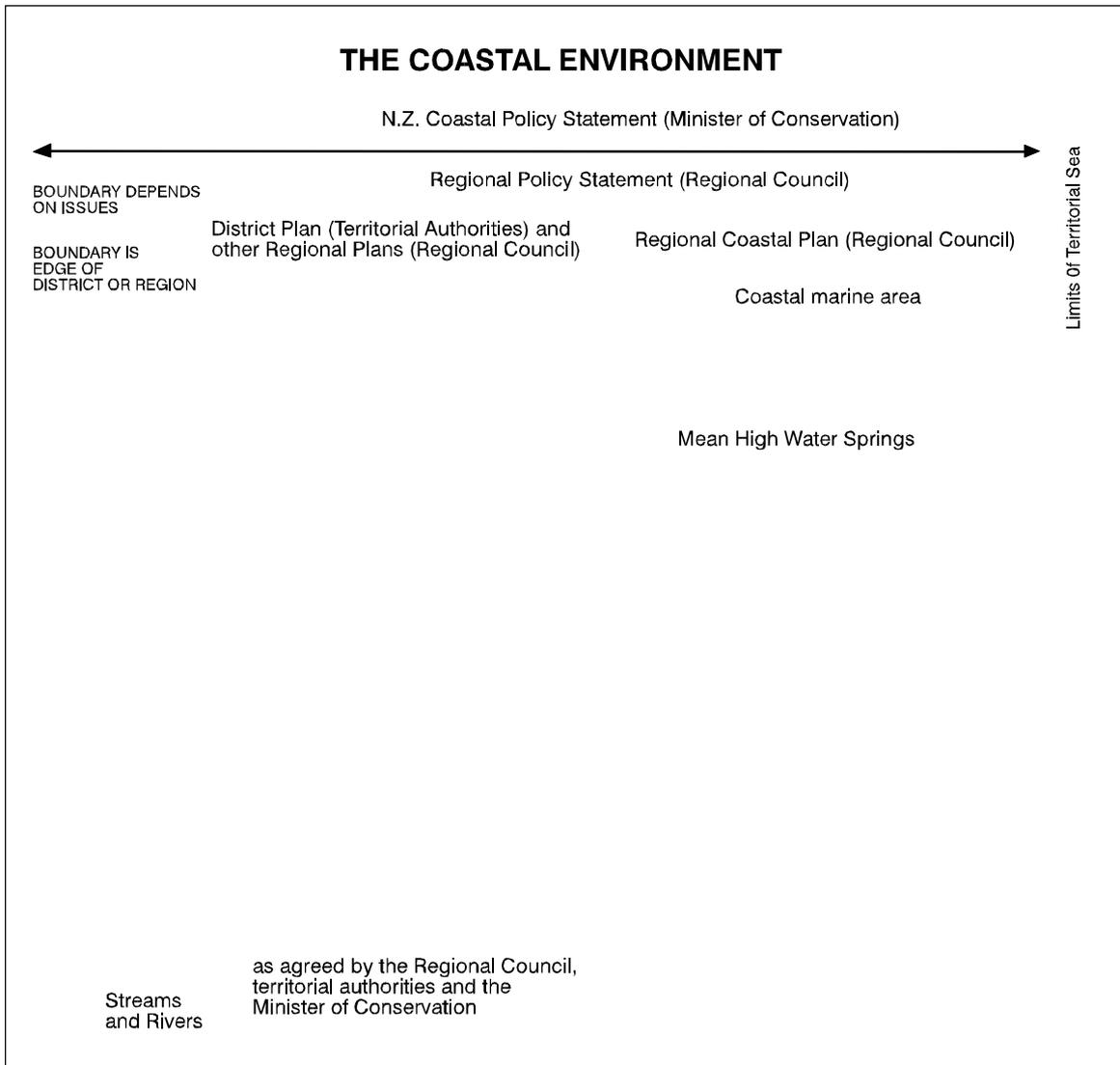


Figure 3 : The Coastal Environment

- | | | |
|----------------|---|--|
| Issue 2 | <p>Conflict arises from the need to maintain and enhance public access to and along the coastal marine area, and the need to protect certain areas or rights. Restrictions on public access may be necessary to protect ecologically sensitive areas, for security and Customs requirements, and for the safety of people.</p> <p>Access may be restricted because of private ownership of stretches of coastal land. Such restriction may result in problems relating to public expectation for access to and along the coast. Access may also need to be limited in order to reduce conflict between coastal activities at particular times or in certain places.</p> | Coastal Environment Objective 2. |
| Issue 3 | <p>There is a problem in balancing the needs of activities requiring finite coastal resources (e.g., those needing waterfront land or space in sheltered waters). Some activities, because of their inherent nature, require a coastal location. For other activities a coastal location is merely desirable. Consideration also has to be given to the direct and indirect adverse effects of those activities that do have to be located in the coastal environment.</p> | Coastal Environment Objective 1. |
| Issue 4 | <p>A variety of human activities, in the coastal environment and further inland, are causing degradation of coastal water quality, contamination of sediments and biota, and disruption to natural processes. Specific examples include the pollution of the Waiwhetu Stream, sewage discharges off the south Wellington coast and degradation of water quality in the Pauatahanui Inlet as a result of silt discharge from upstream subdivisions. Silt from catchments surrounding Pauatahanui has smothered filter feeders and exacerbated infilling of the inlet. There is potential for this to continue where land development occurs without careful run-off management.</p> | Coastal Environment Objectives 1 and 3. |
| Issue 5 | <p>There is quite limited knowledge of the nature and functioning of coastal ecosystems and coastal processes, particularly in the coastal marine area. The lack of knowledge makes for difficulties when local authorities need to make decisions about the potential effects of subdivision, use and development in the coastal environment whilst providing for the preservation of the natural character of that environment.</p> | Coastal Environment Objective 1.

See also Ecosystems Issue 9. |
| Issue 6 | <p>There is potential for significant adverse effects on the coastal environment as a result of catastrophic events. These events may have a low probability of occurring, but when they do occur they have significant impacts. This is particularly a problem with vessels containing liquid fuels or other hazardous and dangerous materials. Similarly, hazards such as tsunamis, earthquakes and sea level rise may have a low probability of happening or occur over a long period of time, but they can cause significant impacts.</p> | Coastal Environment Objectives 1, 3 and 4. |

Issue 7

There is a need to recognise and provide for **the relationship of Maori and their culture and traditions with the coast**. Considerations include water quality, access to waahi tapu, tauranga waka, mahinga maataitai and areas of taonga raranga, and the provision for papakainga housing and marae development.

Coastal
Environment
Objective 4.

7.3 Objectives

Objective 1

The natural character of the coastal environment is preserved through:

- (1) *The protection of nationally and regionally significant areas and values;*
- (2) *The protection of the integrity, functioning and resilience of physical and ecological processes in the coastal environment;*
- (3) *The restoration and rehabilitation of degraded areas; and*
- (4) *The management of subdivision, use and development, and the allocation of resources in the coastal environment so that adverse effects are avoided, remedied or mitigated.*

Coastal
Environment
Policies 1-3
and
6.

Objective 1 seeks to preserve the natural character of the coastal environment in the Wellington Region. The term "natural character" is not defined in the Act or the New Zealand Coastal Policy Statement 1994. Natural character can be thought of as the extent to which the naturally occurring ecology and/or physical processes of a place or resource remain intact. It does not exclude structures or other human induced changes — a place may retain some of its natural character even with a building on it — but it is reduced by their presence.

As natural character is not an absolute concept, its absolute preservation is not required in every case. It is appropriate therefore that the policy prescription of "avoid, remedy or mitigate" should apply, depending on the degree of natural character of the area or site in question. In places where the natural character is largely intact the emphasis of management should be on avoiding adverse effects. Where human activities have already modified the natural character, a more flexible approach may be appropriate. Where substantial deterioration of natural character has occurred, some effects might still need to be avoided but remedying or mitigating adverse effects may have a more prominent role.

The objective recognises that specific sites and particular values help make up natural character in the Wellington Region. Clauses (1)-(3) seek to protect these places, values and physical and biological processes, and to restore or rehabilitate them where they have been diminished in some way.

The wording of clause (4) of the objective is intended to convey a message that the coastal environment should also be available for use. There are particular areas that do warrant higher levels of protection. However, there are also areas where the qualities and values that help comprise natural character would not be seriously compromised by use or development, so long as any adverse effects can be properly managed. Clause (4) also acknowledges the fact that land and other resources in the coastal environment are limited, and that there is a need to allocate these resources.

Objective 1 is necessary because preservation of the natural character of the coastal environment is identified as a matter of national importance in s. 6 of the Act. The objective is also needed for consistency with the New Zealand Coastal Policy Statement 1994.

Objective 2

Existing provisions for public access to and along the coastal marine area remain and appropriate opportunities are taken to enhance public access.

Coastal
Environment
Policy 4.

There are a variety of ways to provide public access to and along the coastal marine area, and "access" can take a number of forms. Pedestrian access and vehicular access (e.g., to launch boats, fish, and for various forms of active or passive recreation) are familiar forms of access. Other aspects of access relate to tangata whenua use of coastal resources, and to visual access — access to views of the sea from the coastal environment, and views of the coast from offshore. These are all forms of "access" which people would like to have, but which may not always be possible or appropriate. Exceptional circumstances when access may need to be limited are set out in the explanation of Coastal Environment Policy 4.

Objective 2 seeks to retain, as a minimum, the quality of existing legal access to and along the coastal marine area. "Quality" is interpreted in the explanation of Coastal Environment Policy 4. The objective also seeks to provide for improvements to access by taking appropriate opportunities. Improved access could take the form of an increased number of access points. It might also find expression in a lower number of more convenient access points to

and along the coastal marine area but, subject to Policy 4, the quality of existing legal access must be retained.

Objective 2 is necessary because s. 6 of the Act identifies as a matter of national importance the need to recognise and provide for public access to and along the coastal marine area. While public access is a matter of national importance, there is also a need for those enjoying such access to avoid, remedy or mitigate effects of their access that threaten the preservation of the natural character of the coastal environment. Preservation of natural character and the maintenance and enhancement of public access to and along the coastal marine area are both requirements of the New Zealand Coastal Policy Statement 1994 that together need to be met.

Objective 3

Coastal water quality is of a high standard.

Coastal
Environment
Policy 5.

Objective 3 recognises that clean unpolluted water is a key component of the sustainable management of the coastal environment. High quality water will safeguard life supporting capacity and allow full recreational, aesthetic and commercial use of the coast.

Objective 4

There are increased opportunities for the aspirations of the tangata whenua for the coastal environment to be met.

Coastal
Environment
Policy 7.

Objective 4 explicitly acknowledges tangata whenua aspirations for the coastal environment in the Wellington Region. Amongst these aspirations are that the coastal marine area and its resources are accessible to tangata whenua, and that the sea continues to be a source of sustenance for the whole community.

Because of its cultural significance, the quality of water in the coastal marine area (Objective 3) is a fundamental issue affecting the viability of the relationship between Maori and the coastal environment in the Wellington Region. **Objective 4** also recognises aspirations for papakainga housing and marae development on Maori owned land and reserves in the coastal environment.

The principal reasons for adopting **Objective 4** are to fulfil the requirements of the Act and the New Zealand Coastal Policy Statement 1994.

7.4

Policies

Coastal
Environment

Policy 1

To give effect to the following matters when planning for and making decisions on subdivision, use and development in the coastal environment:

- (1) *Protection, from all actual or potential adverse effects, of areas of nationally or regionally significant indigenous vegetation and significant habitats for indigenous fauna, including those listed in table 8;*
- (2) *Protection of the values associated with nationally or regionally outstanding landscapes, seascapes, geological features, landforms, sand dunes and beach systems and sites of historical or cultural significance, including those listed in tables 9 and 10;*
- (3) *Protection of sensitive, rare or unusual natural and physical resources, habitats, amenity values and ecosystems which are unique to the coastal environment (including estuaries, coastal wetlands, mangroves and dunes, and their margins) by avoiding, remedying or mitigating adverse effects so as to preserve the natural character of the coastal environment.*
- (4) *Protection of the integrity, functioning and resilience of the coastal environment in terms of the:*
 - (a) *Dynamic processes and features arising from the natural movement of sediments, water and air;*
 - (b) *Natural movement of biota;*
 - (c) *Natural substrate composition;*
 - (d) *Natural water quality and quantity, and air quality;*
 - (e) *Natural biodiversity, productivity and biotic patterns; and*
 - (f) *Intrinsic values of ecosystems.*

See also chapter 10, Landscape and Heritage.

Policy 1 provides guidance for district and regional plans and for resource consent decisions to ensure that important aspects of the coastal environment are recognised and potential adverse effects are avoided, remedied or mitigated.

The policy distinguishes in clause (1) those areas where, because of their national or regional significance, all adverse effects have

to be avoided and not simply remedied or mitigated. The policy does not aim to prevent all use or development in these areas. By requiring that adverse effects must be avoided, the policy is acknowledging that such areas can be used, but with great care.

Clause (2) identifies landforms, landscapes, seascapes, natural features and sites of historical or cultural significance that have special values associated with them. The policy aims to ensure that if any subdivision, use or development takes place, that the values that make the features significant in some way are protected from any adverse effects that may arise.

Clauses (3) and (4) provide a general requirement for the protection of specific components of natural character through the management of adverse effects of activities in all parts of the coastal environment.

The areas, sites and features currently listed in tables 8 to 10 are derived from a variety of sources.¹⁴ Some of these sources have used databases that are periodically updated and other sites or features may be identified to which the provisions of **Policy 1** would also apply. The number of sites and features listed in the tables may therefore be added to and amendments will be incorporated in future reviews or changes to the Regional Policy Statement.

Policy 1 is included to give effect to s. 6(a) of the Act and policies for the preservation of the natural character of the coastal environment set out in the New Zealand Coastal Policy Statement 1994.

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- ¹⁴ (1) Department of Conservation, 1993, *The Protected Natural Area Programme*, Department of Conservation Database, Wellington Conservancy, Wellington.
- (2) Department of Conservation, 1993, *Wetlands of Ecological and Representative Importance*, Department of Conservation Database, Wellington Conservancy, Wellington.

Table 8 : Sites of National or Regional Significance for Indigenous Vegetation or Significant Habitats for Indigenous Fauna

- | |
|--|
| <ul style="list-style-type: none"> • Kapiti and Mana Island Nature Reserves (N) (3) • Mana "Bridge" (Between the island and the mainland) (N) (8) • Motungarara, Tokomapuna, Tahoramaurea, Taputeranga, Somes, Mokopuna, Ward and all smaller islands and rocks, such as Kahau Rocks (R) (6) • Kapiti Marine Reserve (N) (6, 8) • Coastal Escarpments between Pukerua Bay and Wairaka Point (R) (3) |
|--|

- Plimmerton — remnants of coastal forest and the Taupo Swamp **(N)** (2, 3)
 - Pauatahanui Inlet (Wildlife Refuge, Wildlife Management Reserve), and Horokiri (Wildlife Management Reserve) **(N)** (1, 2, 3)
 - Makara Stream Estuary **(R)** (6)
 - Black Point **(R)** (3)
 - Red Rocks (Scientific Reserve) **(N)** (1, 4, 8)
 - Sinclair Head (Scientific Reserve) **(N)** (3, 4)
 - Kohangapiripiri Lake **(R)** (2)
 - Kohangatera Lake **(N)** (2, 3)
 - Turakirae Head (to Barneys Stream) **(N)** (3)
 - Cape Palliser (Haurangi State Forest Park) **(R)** (3)
 - Honeycomb Rock (foreshore and sea bed) **(R)** (8)
 - Castlepoint Scenic Reserve **(R)** (3)
- "N" denotes sites of national significance and "R" denotes sites of regional significance

- ¹⁴ (contd)
- (3) Department of Conservation, 1993, *Sites of Special Wildlife Interest*, Department of Conservation Database, Wellington Conservancy, Wellington.
- (4) Kenny J A and Hayward B W, 1993. op. cit.
- (5) Partridge T, 1992, *The Sand Dune and Beach Vegetation Inventory of New Zealand*, DSIR Land Resources Scientific Report No. 15, Christchurch, pp. 253.
- (6) Department of Conservation, 1990, *The Coastal Resources Inventory : First Order Survey*, Wellington Conservancy, Department of Conservation, Wellington, pp. 103 + maps.
- (7) Historic Places Trust pers. com., 13 July 1993.
- (8) Stevenson M L, Field K D, Holton A L and Baxter A S, 1987, *Regional Background Discussion Paper on Areas to be Investigated for Proposed Marine Protected Areas in the Central Fishery Management Area*, Unpublished report, Ministry of Agriculture and Fisheries, Wellington, pp. 98.
- (9) Wellington Regional Planning Authority, 1979, *Coastal Maritime Objectives and Policies*, Wellington Regional Planning Authority, Wellington, pp. 159 + appendices.
- (10) Wellington Harbour Maritime Planning Authority, 1988, *Wellington Harbour Maritime Planning Scheme*, Wellington.

Table 9 : Landscapes and Seascapes of National or Regional Significance

- Kapiti, Motungarara, Tokomapuna, Tahoramaurea, Mana, Taputeranga, Somes, Ward and all smaller islands and rocks (such as Kahau Rocks) as viewed from the sea and the mainland. **(N)** (6)
- Coastal escarpments and small beaches from Paekakariki to Owhiro Bay (excluding Pukerua Bay settlement, Porirua Harbour and Plimmerton). **(R)** (6, 9)
- Pauatahanui Inlet, Cape Terawhiti, Sinclair Head **(R)** (6)
- Baring Head - Turakirae Head **(R)** (6)
- Cape Palliser, including the lighthouse, "Kupe's Sails" and views of the South Island. **(R)** (6)
- Castlepoint scenic reserve, including the lighthouse. **(N)** (6)

"N" denotes sites of national significance and "R" denotes sites of regional significance

Table 10 : Outstanding Natural Features, Landforms and Sites of Historical Importance

1. Geological Features and Landforms

- Otaki Beach ridges **(R)** (4)
- Kapiti, Motungarara, Tokomapuna, Tahoramaurea, Mana, Taputeranga, Somes, Ward and all smaller islands and rocks (such as Kahau Rocks) **(R)** (4)
- Titahi Bay: fossil forest in beach **(R)** (4,6)
- Rock Point: fossils **(N)** (4,6)
- Tongue Point: marine terraces **(N)** (4,6)
- Makara Stream Flats **(R)** (6)
- Red Rocks: volcanic intrusions **(N)** (6)
- Island Bay lawsonite **(N)** (4)
- Lakes Kohangapiripiri and Kohangatera : raised beach **(N)** (4)
- Turakirae Head: uplifted beach ridges **(N)** (4, 6)
- Honeycomb Rock and Kahau Rocks **(R)** (R)
- Castlepoint Scenic Reserve: nationally significant marine benches of limestone and marine fossils **(N)** (6)
- White Rock : amuri limestone **(R)** (4)
- Whakataki-Mataikona coast: tongue and groove erosion patterns. **(R)** (6)

Table 10 (contd)

- Kaiwhata River Mouth fossil forest **(N)** (6)
- 2. Sand Dune and Beach Systems with National or Regional Biological Values**
- The dunes north of Otaki **(R)** (5)
 - The dunes north of Peka Peka **(R)** (5)
 - Coastal forest fragments at Paekakariki **(R)** (5)
 - Dune system at Te Humenga Point **(N)** (5,6)
 - Dunes from Whareama River to Riversdale **(R)** (5)
 - The dunes at Ocean Beach, Castlepoint, White Rock and Uruti Point **(R)** (5)
 - Dunes west of Cape Palliser **(R)** (6)
- 3. Historical Features**
- Wellington Harbour, Sheds 7, 11-13 and 21 (10)
 - Massey Memorial, Point Halswell (10)
 - Paiaka shipwreck (7)

- Fitzroy Bay - concentration of archaeological sites (7)
- Pencarrow lighthouses (7)
- White Rock to Oroi - concentration of archaeological sites (7)

"N" denotes sites of national significance and "R" denotes sites of regional significance

Policy 2

To consider, where relevant and to the appropriate extent, the following matters when planning for and making decisions about subdivision, use or development in the coastal environment:

Coastal
Environment
Methods 1-3.

- (1) *The degree to which the proposed activity will impose effects additional to those resulting from existing subdivision, use and development, and the extent to which such cumulative adverse effects on natural character may be avoided, remedied or mitigated;*
- (2) *The extent to which natural character has already been compromised in an area and the need to avoid sprawling or sporadic subdivision, use or development;*
- (3) *The efficient use of finite resources in the coastal environment and the viability of alternative sites outside the coastal marine area and outside of the coastal environment for the proposed activity;*
- (4) *The potential impact of projected sea level rise;*
- (5) *The actual or potential adverse effects of subdivision, use or development on areas of cultural or spiritual significance, heritage resources and on scenic, scientific, recreation, open space or amenity values; and*
- (6) *The adequacy of provision of infrastructure services (particularly for the disposal of waste).*

Policy 2 identifies some matters for consideration when planning for or making decisions about subdivision, use and development in the coastal environment. The policy recognises that the provision of adequate information is crucial, if the evaluation of adverse effects on the natural character and the integrity, functioning and resilience of the coastal environment is to be effective.

The considerations identified are not exclusive. They relate to the qualities and characteristics that have been noted in the New Zealand Coastal Policy Statement 1994 and this Regional Policy Statement as being part of natural character. The matters listed also indicate the need to recognise that land and other resources in

the coastal environment are limited in their extent or quantity.

Clause (2), for example, highlights the need to consider how far natural character may already have been compromised and the need to avoid sporadic or sprawling development. Clause (3) points to the requirement for proposals that involve activities in the coastal marine area to include an assessment of alternative sites. Such sites may be outside of the coastal marine area but in the coastal environment or they may need to be inland of the coastal environment. All assessments should be clear in identifying how any adverse effects are to be avoided, remedied or mitigated.

Clause (5) recognises the importance of areas of historical, cultural or spiritual significance and of scenic, scientific, recreation, open space and amenity values in the coastal environment, and the need to give such areas and values appropriate protection.

The principal reason for adopting **Policy 2** is to encourage better estimation of adverse effects on coastal processes, systems, and values, and assessment of the degree to which it is necessary to locate an activity in the coastal environment.

Policy 2 is consistent with and helps implement the provisions of the New Zealand Coastal Policy Statement 1994.

Policy 3

To restore and rehabilitate the natural character of the coastal environment where appropriate.

Coastal
Environment
Methods 1-3.

Policy 3 seeks to repair significant damage to the natural character of the coastal environment caused by existing or past activities. Examples include damage to coastal dune systems from development, inappropriate vehicular use, and modification of vegetation.

However, the policy also acknowledges in the use of the words "where appropriate" that certain significant changes may have legitimately taken place in the past. An example would be changes brought about through the development of port facilities. The policy is not intended to enforce or require restoration or rehabilitation in such circumstances, nor to prevent further site specific changes, including rehabilitation, associated with appropriate new uses or development.

When deciding which areas require restoration and rehabilitation, priority should be given to nationally and regionally significant areas, habitats or places and sites having special values specified

for protection in Policy 1. Matters to be considered in assessing whether other areas should be restored or rehabilitated, and their priority, will relate to the extent to which the qualities that comprise "natural character" have been modified or degraded.

Policy 3 is included to give effect to policies for restoration and rehabilitation of the natural character of the coastal environment contained in the New Zealand Coastal Policy Statement 1994.

Policy 4

To ensure, in planning for or making decisions about new subdivision, use or development, that there is no reduction in the quality of existing legal access to and along the coastal marine area; and that opportunities are taken, other than in exceptional circumstances, to enhance the amount and variety of public access to and along the coastal marine area.

Coastal
Environment
Methods 1-3.

Policy 4 deals with the issue of maintaining existing legal opportunities for access to and along the coastal marine area, and, when possible, enhancing access.

The policy recognises that there will be changes in land use that lead to situations where existing legal access points are removed or altered. In these situations, the policy requires that there is no overall reduction in the quality of access. "Quality" refers to legal access to and along the coastal marine area of a type and scale that allows users of the coastal marine area to continue to enjoy the benefits and values they derive from the coastal marine area and from existing legal access to it. The policy also indicates that if opportunities arise for enhanced access, whether through the statutory resource consent process or through some other means, these opportunities should be recognised and provided for where possible.

However, the policy also acknowledges that there will be situations where improved access will not be possible or may be inappropriate. These circumstances may apply when there is:

- A need to protect the special characteristics of the sites and values identified by Policy 1, including those listed in tables 8 to 10, or sites and values identified through the implementation of Policy 7 of this chapter;
- A need to provide for public health and safety;
- A need to provide for security on private property;
- A need to protect the rights of property owners, including the protection of crops and stock;

- A need to meet the security requirements of the Department of Customs; or
- A need to provide for quarantine facilities.

The principal reasons for adopting **Policy 4** are to meet the requirements of the Act and the New Zealand Coastal Policy Statement 1994, and to alleviate community concerns that existing opportunities for public access to and along the coastal marine area could be limited by policies in plans or as a result of resource consent decisions.

Policy 5

To maintain or improve the quality of coastal water by:

- (1) *Improving, where necessary, the quality of fresh water entering the coastal marine area;*
- (2) *Avoiding, remedying or mitigating the effects of activities in the coastal environment that can degrade coastal water; and*
- (3) *Avoiding, remedying or mitigating the effects of point discharges that directly enter the coastal marine area so the effects do not render any water in the coastal marine area unsuitable for any purpose specified in a Regional Coastal Plan for the Wellington Region.*

Coastal
Environment
Methods 1-3.

See also
Fresh Water
Policy 6 and
Methods 17-
33.

Policy 5 seeks to improve coastal water quality in the future and to prevent further degradation of coastal water quality as a result of current human activities. Clause (1) seeks to improve the quality of fresh water entering the coastal marine area from rivers, streams or other watercourses. The clause also recognises, in the phrase "where necessary", that water quality may be generally acceptable and would only need improving in those areas where quality is unacceptable.

There is wide recognition and acceptance amongst people and communities in the Wellington Region, particularly tangata whenua, that water has been degraded in many areas and that degraded quality places restrictions on many coastal activities. A high standard of water quality is desired by, and is beneficial to, the community. Temporary degradation of water quality will occur. However, such degradation is only acceptable as long as there are no long-term, unsustainable environmental effects arising from the activity causing the degradation.

Policy 5 is included because of public concern about water quality and for consistency with provisions in the New Zealand

Coastal Policy Statement 1994.

Policy 6

To adopt a precautionary approach to the evaluation of risk in making decisions that affect the coastal environment, recognising that there will be situations where there is a low probability of an event occurring, but that such an event has the potential to create major adverse effects. Such events include:

- (1) *Earthquakes and tsunami;*
- (2) *Maritime shipping disasters; and*
- (3) *Accidents involving release of contaminants into the coastal marine area.*

Coastal
Environment
Methods 1-3.

See also
Natural
Hazards
Policy 3.

Policy 6 requires decision makers to adopt a precautionary approach when making decisions about activities that may be significantly affected by events that may occur in the coastal environment. The policy identifies some of the possible events that would need to be considered when assessing possible risks.

The Act, in s .3, recognises that "effects" can include those that have a low probability of occurrence but a high potential impact and it is these types of effects to which the policy refers. The policy will require decision makers to place a considerable amount of emphasis on low probability, high impact events.

Another example where caution is required is the berthing or anchoring of ships containing hazardous and dangerous materials in close proximity to large population centres. In both examples **Policy 6** directs decision makers to consider explicitly the question of risk.

Policy 6 is included for consistency with the provisions of the New Zealand Coastal Policy Statement 1994.

Policy 7

To protect, where appropriate, the characteristics of the coastal environment of special value to the tangata whenua including waahi tapu, tauranga waka, mahinga maataitai and taonga raranga.

Coastal
Environment
Methods 1-3.

Policy 7 requires that policies and plans which seek to promote sustainable management of natural and physical resources in the coastal environment recognise Maori values and the traditional uses which Maori make of coastal resources.

Information relating to the sites identified in **Policy 7** are held by iwi. The Policy points to the need for information concerning the location and values associated with sites of significance to tangata

See also Iwi
Method 4.

whenua to be considered in the consent granting process.

The principal reasons for adopting **Policy 7** are to recognise the aspirations of tangata whenua in the Wellington Region and to fulfil the requirements of the Act and the New Zealand Coastal Policy Statement 1994.

7.5 Methods

Method 1

The Wellington Regional Council will prepare a Regional Coastal Plan.

Coastal
Environment
Policies 1-7.

The Wellington Regional Council, in conjunction with the Minister of Conservation, is responsible for promoting the sustainable management of natural and physical resources in the coastal marine area. The Regional Council is required to prepare a Regional Coastal Plan to assist it to achieve this purpose.

The Plan will contain detailed issues, objectives, policies and methods (including rules) which will provide the framework for decision making in the coastal marine area.

The Regional Coastal Plan will be the principal method by which **Policies 1-7**, where they deal with the coastal marine area, will be implemented.

Method 2

District plans would be an appropriate means of implementing Coastal Environment Policies 1-7.

Coastal
Environment
Policies 1-7.

District plans are the principal means available to implement policies concerning the use of land above mean high water springs.

District plans could specify the criteria in **Policy 2** as appropriate information to accompany resource consents for proposals on the "dry" part of the coastal environment.

In relation to **Policy 4**, plans could provide direction on when esplanade strips or access strips would be appropriate for access, or for the protection of sensitive ecosystems.

District plans could also help in the implementation of **Policy 5** by containing provisions (e.g., run-off controls) that improve the quality of fresh water entering the coastal marine area.

The principal reason for **Method 2** is that district plans are statutory documents which will complement the Regional Coastal

Plan by offering coverage of the land component of the coastal environment, and land inland of the coastal environment.

Method 3

To achieve integrated management, other means which could be used to implement Coastal Environment Policies 1-7 include:

Coastal
Environment
Policies 1-7.

- (1) *Development and implementation of management plans and other non-statutory plans by territorial authorities for areas and issues that impact on the coastal environment;*
- (2) *Liaison between the Wellington Regional Council, territorial authorities, iwi and the Department of Conservation to identify projects in the coastal environment of the Wellington Region where voluntary organisations, companies and individuals may assist in caring for the coastal environment; and*
- (3) *Liaison between the Regional Council, Department of Conservation and Ministry of Agriculture and Fisheries.*

Method 3 identifies other means by which territorial authorities and other relevant organisations and authorities could help implement coastal environment policies.

Clause (1) of **Method 3** acknowledges that there may be non-statutory plans and documents that help implement coastal environment policies.

Clause (2) of **Method 3** gives recognition to the fact that primary responsibility for management of the coastal environment falls to a few authorities, but that a number of other groups, organisations and individuals are also interested in carrying out a variety of roles, both individually and in partnerships, in maintaining and enhancing environmental values.

Fisheries conservation and management is excluded from the functions of the Regional Council and the Department of Conservation under s. 30(2) of the Act. The Ministry of Agriculture and Fisheries is responsible for management strategies under the Fisheries Act 1983. However, there is an important interface between the provisions of the Fisheries Act 1983 and resource management legislation. Integrated management can be enhanced through liaison between the respective administering authorities and this is recognised in clause (3).

The principal reason for adopting **Method 3** is that statutory plans are not the only way to put the coastal environment policies

into effect. The method acknowledges that involving people and communities in coastal management can be a cost effective way of mitigating and remedying adverse effects. It is also an effective way of generating public support, providing publicity and assisting in changing attitudes to the environment, all of which are critical if the coastal environment objectives are to be achieved.

7.6 Anticipated Environmental Results

- (1) The natural character of the coastal environment is preserved and protected from the adverse effects of inappropriate subdivision, use and development; where appropriate, sites of national and regional significance are protected and degraded areas are restored.
- (2) Public access to and along the coastal marine area is maintained and enhanced, except in those circumstances in which access is constrained to protect ecological or cultural values, provide for property rights and security for property, meet the requirements for Customs or quarantine facilities, or to provide for the safety of people.
- (3) There is no further degradation of the quality of water in the coastal marine area and, where possible, water quality is improved.
- (4) Finite coastal resources are used efficiently.
- (5) The characteristics of the coastal environment of special value to the tangata whenua are protected, where appropriate.

8. Air

8.1 Introduction

The atmosphere performs a variety of functions which are vital to the survival of life on the planet. At an individual level, humans need air to breath. For communities, weather and climate are key factors in the successful production of food to eat and in the supply of water to drink. In a wider sense, the insulation of the earth by the atmosphere provides a thermal control and a protective barrier to incoming cosmic radiation.

Atmospheric processes are ceaseless and complex. Chemicals and energy are constantly discharged into the air from natural and human based sources. As with the other natural resources of water, soil and ecosystems, humans have used the chemical and physical properties of the atmosphere — in industrial processes, in synthesising new products and materials, and as a repository for waste products.

Pollution of the global atmosphere through human activity (referred to as "anthropogenic" sources) has increased significantly over the last 300 years. Industrialisation, the expanding use of fossil fuel energy sources, increasingly intensive agricultural production, the manufacture and use of new chemical compounds, and the disposal of wastes from all these activities place heavy demands on the assimilative capacity of the atmosphere.

The impacts of atmospheric pollution can be broadly considered in terms of effects on human health and the adverse effects on soil, water, plants, animals, and on buildings and structures. Other impacts include those related to levels of personal comfort and to appreciation of the overall quality of the environment, including such matters as visibility.

A special appreciation of air and atmospheric pollution is held by tangata whenua. Air is taonga and to despoil or diminish the resource is an act of deep offensiveness, a breach of the law of stewardship or kaitiakitanga. Pollution of air and airspace is as abhorrent as putting raw sewage into the sea. One traditional means of helping to purify air is through tree planting.

To a large extent, the Wellington Region and New Zealand have

been fortunate to have avoided some of the major transboundary air pollution problems (e.g., acid rain) that have been most apparent in the northern hemisphere.

The general perception of local conditions is that the Wellington Region is well ventilated and has few, if any, problems of air pollution. The prevalent winds are seen to either disperse pollutants or transport them elsewhere for environmental assimilation. However, the Region does have its own set of local and more widespread air pollution problems. Problems can arise from four types of emission sources:

- **Point** sources, such as large individual combustion sources, manufacturing premises or processing works;
- **Area** sources, such as emissions from domestic heating systems in urban and rural areas or general emissions from industrial areas;
- **Mobile** sources, such as motor vehicles, ships, aircraft (including aerial spraying) or trains; and
- **Natural** sources, arising from biological, ocean and fresh water and volcanic processes, and including naturally occurring substances such as salt, dust and pollens.

The Wellington Region is also subject to atmospheric pollution from sources outside the Region and these sources are likely to increase.

The air objectives and policies included in this chapter deal with these sources of emissions, and relate closely to policies in the Energy, Waste Management and Hazardous Substances, and Built Environment and Transportation chapters in particular.

See also Objectives and Policies in chapters 12 (Energy), 13 (Waste) and 14 (Built Environment)

8.2 Issues

Issue 1

There is **very little data** on which to base an understanding of the current, or historical, status of air quality in the Region. Information about ambient (general) air quality is almost totally lacking. Information about emissions is very patchy and dated. Studies are limited to surveys of air quality in Upper Hutt during the winter in 1977-79, a survey at Kiwi Point Quarry in 1978-79, a survey of motor vehicles and air quality in Mount Victoria Tunnel in 1981-82 and some ambient air quality monitoring in Newtown and Naenae during the mid-1980s as part of the National Lead in Air Survey. The Baring Head Clean Air Facility is a potential source of information on relatively

Air Policies 1-4.

unmodified air quality in the Region.

Issue 2

While commonly recognised as a global or national issue, **climate change** is also an issue of regional concern. The Wellington Region contributes to greenhouse gas emissions (including carbon dioxide from transport sources and methane from agricultural production) and increased levels of greenhouse gases in the atmosphere have potential effects on the Region's climate.

Air Objective
4.

Although good information on the Region's contribution to greenhouse gas emissions is not available, it is likely that the Region's per capita contribution is high on a global basis, as New Zealand has 0.07 percent of the world's population but contributes between 0.15 and 0.3 percent of human induced greenhouse gas emissions. The Region's contribution is also likely to be high on a national basis because of its high traffic levels and relatively high socioeconomic characteristics. However, this may be offset, to an extent, by the relatively high levels of afforestation in the Region.

Although some scientific uncertainties remain, the current international scientific consensus¹⁵ on the effects of increased levels of greenhouse gases indicates that the anticipated levels of greenhouse gases are likely to have effects on climate. In the Wellington Region these effects are likely to include an increased incidence of storms, wider temperature variations, more extreme rainfall levels and greater rainfall intensity, etc. Effects may be felt on sea levels, coastal settlements and activities, the costs of managing river and coastal flooding, and on horticultural production.

See also
Natural Hazards Issue
5.

The emission and management of **ozone depleting substances** (CFCs, halons, etc.) are also still seen to pose problems. Effects of ozone depletion for the Region include an increased incidence of ultraviolet radiation, with effects on human health, on horticulture, and on ecosystems.

Air Objective
3.

¹⁵ The best available analysis is that of the First Assessment Report (1990) of the Intergovernmental Panel on Climate Change (IPCC), as reported in *Exploring the Options for Reducing Net Emissions of Carbon Dioxide*, Ministry for the Environment, March 1994.

Issue 3

An important amenity issue in the Wellington Region is the assessment and management of **odours**. The general public is much less tolerant of odour production than in the past, be it from industry, agricultural production or domestic sources. There is an enhanced expectation that odour emission will be controlled.

Air Objectives
1-
3.

However, this can pose problems of enforcement, mainly because odour assessment is very much a subjective matter and not amenable to scientific quantification. It is also often difficult to trace ambient odours back to specific sources. Additionally, the topography of the Region means that there can be unusual localised effects (e.g., in valleys), and normal dispersion patterns can be distorted.

- | | | |
|----------------|--|---|
| Issue 4 | Another important amenity issue is the effect of smoke, dust and other particulate matter . Smoke is an issue in relation to rural and forestry burn-off in the Region and the cumulative effects of backyard or other domestic burning can also create nuisance effects in some areas. Dust and other particulates are typical contaminants from rural activities and are also associated with subdivision and mining activities. Particulates can cause damage to materials, nuisance effects and human health effects. They can also affect visibility (an important amenity value for residents and visitors to the Region) and are an obvious sign of deteriorating air quality. | Air Objectives
1-
3 |
| Issue 5 | Some of the larger stationary or point sources of emissions in the Wellington Region have the potential to cause significant adverse impacts on air quality. Manufacturing premises and processing works (e.g., meat works or fish processing) are specific sites with activities where more effective control of emissions is needed. | Air Objectives
2-
3. |
| Issue 6 | The principal mobile sources of emissions are motor vehicles and aircraft, causing both local and global air pollution problems. Localised effects can be found in the vicinity of major transport routes (high carbon monoxide levels are commonly found near major roads during rush hour traffic and areas with poor dispersion, e.g., tunnels, may be particularly vulnerable to these effects). Other impacts are felt more widely throughout the Region, for example, airborne particulates from vehicle exhausts finding their way into waterways and other ecosystems. | Air Objectives
2-4.

See also Built Environment Issue 6. |
| Issue 7 | Domestic energy and fuel use are a primary source of area emissions and can be found in various forms in most of the Region's settlements. Individually, domestic heating appliances that use wood, gas or coal are not a major air pollution problem. However, when whole neighbourhoods in urban areas collectively emit pollutants from such activities, the cumulative effects can create problems of a different scale. As with problems of odour, these effects can be worsened by local topography, with valleys not only concentrating the pollutants but also restricting dispersion. | Air Objectives
2-
3. |
| Issue 8 | Contaminants are released to the air as a result of many industrial | Air Objectives
1-4. |

and commercial production processes, and from **waste disposal practices**. Underlying this issue is a broader concern about how to determine which method of disposal and which receiving environment (land, water, air) ensures the least adverse environmental effect. For example, is it better on balance to incinerate particular wastes, causing pollutants to be released to the air, or to bury that waste, with longer-term impacts on soil and water? This is a Region-wide issue and concerns the sustainable use of all environmental systems.

See also
Waste
Issues 7-8.

Issue 9

A major issue of public concern in the Region is the effect of **spray drift** from the spray application of agrichemicals on non-target areas and neighbouring land uses. Chemicals used in agriculture, forest management and the control of plant and animal pests on roadsides and in parks are all of concern. The aerial application of agrichemicals is a particular concern. The regional population is becoming increasingly sensitive about the use of agrichemicals, although little study has been done in the Wellington Region of the actual adverse effects of spray drift.

Air Objective
3.
See also Soil
Issue 11.

8.3 Objectives

Objective 1

High quality air in the Region is maintained and protected, and there is no significant deterioration in air quality in any part of the Region.

Air Policies 1-5.

Objective 2

Air quality is enhanced in those areas with degraded air quality.

Air Policies 6-7.

Objective 3

The adverse effects of the discharge of contaminants into air on human health, local or global environmental systems and public amenity are avoided, remedied or mitigated.

Air Policies 8-12.

Objective 4

The output of gases which potentially promote climate change is at a level which is consistent with central government climate change policy.

Air Policies 7 and 9.

The **objectives** are concerned with protecting and maintaining air quality where it is good, enhancing it where it is not so good, preventing further deterioration in all areas and avoiding or reducing the effects of air pollution on a range of human and environmental values.

Air quality in the Region is generally assumed to be high. Whilst knowledge of atmospheric processes and changes brought about by human activities has increased in recent years, much is still unknown. Given the life supporting significance of clean air and the limited availability of data, it is appropriate to adopt a

cautious approach to decisions that could have significant impacts on air quality.

Objective 1 recognises that insofar as it is possible to identify areas of high quality air, there is a need to ensure that as a minimum, such areas of high quality are maintained and protected.

Objective 1 also reflects a public desire for high air quality in all locations and at all times. However, the objective also acknowledges through the use of the word "significant" that there may be circumstances and occasions when a minor or short-term deterioration of quality is a necessary and acceptable cost for the achievement of other objectives.

Objective 2 is based on the understanding that, as information is progressively obtained, it may prove to be desirable to enhance air quality in certain geographical areas of the Region by reducing the quantities or eliminating the types of emissions that are degrading the quality of air in that area.

Objective 3 concerns avoiding or reducing adverse effects arising from the discharge of contaminants into air. In assessing such effects, consideration needs to be given to three closely related areas:

- Adverse effects on **human health**;
- Adverse effects on **environmental systems**, including effects on soil, water, plants and animals; and
- Adverse effects on **personal and public amenity**, including effects on personal comfort and aesthetic enjoyment, and general environmental well-being.

Objective 4 specifically addresses the issue of climate change and the reduction of greenhouse gases from sources in the Region. The nature of climate change makes it difficult to choose appropriate targets for reductions in greenhouse gas emissions and enhancement of greenhouse gas sinks. For this reason the target adopted is expressed in terms of national objectives. In the short-term, central government's objective is to reduce New Zealand's total carbon dioxide emissions by 3-4 percent below the level that they would otherwise reach by 2000. This will contribute to central government's primary target of reducing net carbon dioxide emissions to 1990 levels by the year 2000.

Collectively, **Objectives 1-4** set a direction for air quality management which recognises and aims to protect the value of an

important natural asset in the Wellington Region.

8.4 Policies

Policies for Establishing Information About Air

Policy 1	<i>To identify and describe the existing air quality of the Wellington Region.</i>	Air Methods 2-5.
Policy 2	<i>To identify pollution sources that currently degrade, or have the potential to degrade, air quality in the Region.</i>	Air Methods 1-4.
Policy 3	<i>To identify and improve understanding of the links between atmospheric processes, air quality and the range of human activities that occur in the Region.</i>	Air Methods 1-5.
Policy 4	<i>To develop, enhance and maintain systems for measuring air quality in the Region, for storing and analysing air quality information, and for assessing the effects of poor air quality on human health, environmental systems and public amenity.</i>	Air Methods 1-5.

These policies contribute to establishing an information base in order to understand the current situation and to provide a baseline against which to assess future changes in air quality. At present there is very little relevant data.

The absence of data means that it is difficult to establish priorities for action or to assess the costs and benefits of various courses of action in response to particular sources of air pollution. Developing an information base can therefore be seen as an urgent task and **Policies 1-4** identify the necessary elements of such a base.

Information is needed about general (ambient) air quality, and about pollution from specific activities. **Policies 1 and 2** deal with these information deficiencies.

The effects of different activities on air quality and the impacts of air quality on other parts of the environment have not been systematically addressed in the past. Both sorts of assessment are now required under the Act, as part of the requirement to ensure that the life supporting capacity of environmental systems is maintained. **Policies 3 and 4** deal with related aspects of information needed to link causes and effects.

Policy 3 is concerned with acquiring a better understanding of

atmospheric and microclimatic processes and their relationship with human activity in the Wellington Region. The topography, meteorology and economy of the Region mean that a more specific understanding of local air movement and chemistry and changes in the characteristics and condition of air quality and atmospheric processes is needed as a basis for implementing the air policies.

Policy 4 highlights the need for coherent and comprehensive systems of measurement, data storage, and assessment to be established. Data that is currently available is largely ad hoc and often dated, having been collected for one-off purposes. A more directed and purposeful programme of data collection is indicated by the policy.

Policy for Setting Guidelines on Air Quality

Policy 5

To establish and promote air quality guidelines for setting desirable ambient air quality and for the control of activities which cause discharges to air.

Air Method 6.
See also Soil
Policy 2.

Policy 5 acknowledges the need to put in place some targets against which existing air quality may be assessed. With such guidance in place, and with information about air quality, priorities for future improvements can be established and success monitored.

Air quality guidelines are central to the air quality management approach of the Act. The National Ambient Air Quality Guidelines will be used as a basis for developing appropriate regional guidelines.

Guidelines (for both ambient air quality and for managing pollution sources) do not have to be applied in the form of rules or regulations. The establishment, promotion and implementation of guidelines can be undertaken on a voluntary or co-operative basis.

Policies for Avoiding Air Pollution at Source

Policy 6

To avoid or minimise, where appropriate and practicable, the discharge of contaminants to air at their source by the development and implementation of improved control technology and by good pollution control practice.

Air Methods 7-10.

Policy 7

To promote the use of energy sources and transport fuels that are low or non-polluting of the atmosphere.

Air Methods 7, 10, 11 and 12.
See also
Energy
Policies 5 and 6,
and Energy
Method 4.

Air quality in the Wellington Region was previously administered under the Clean Air Act 1972. This legislation focused on

minimising emissions and was primarily orientated towards the **process** that produced the emissions.

The Resource Management Act 1991, however, is based on an "air quality management" approach, which is orientated towards **effects**. Under this approach, desired air quality in an area is defined within certain parameters. Emission sources are managed to maintain the air quality within these parameters. Regardless of the approach, control of processes and sources of emissions is an important means of managing adverse effects on air quality.

Policies 6 and 7 focus on ways to manage air pollution at source. While the establishment of air quality guidelines (Policy 5) reflects the merits of the air quality management approach, these complementary policies draw on the beneficial experience gained under previous legislation of using control technology to minimise emissions. The words "where appropriate and practicable" in this policy indicate that in some situations alternative ways of avoiding, remedying or mitigating the adverse effects of air pollution may be more appropriate than avoiding or minimising emissions at source (e.g., setting emission limits or establishing buffer zones). The circumstances in which avoiding or minimising emissions at source (including, where this is the most effective and efficient means of control, using the best practicable option) will be clarified in the Regional Air Quality Management Plan.

The philosophy of preventing or minimising emissions at source is consistent with the concepts of waste minimisation and cleaner production, and is one way of avoiding, remedying or mitigating adverse effects of discharges.

Together, **Policies 5, 6 and 7** represent a mix of the air quality management approach allied to best practice.

Waste Policy 5.

Policies for Protecting Human Health, Local and Global Environmental Systems, and Public Amenity

Policy 8 *To avoid, remedy or mitigate the adverse effects of local and global air pollution on human health.*

Air Methods 6-14.

Policy 9 *To promote measures that achieve a net reduction in the emission of greenhouse gases and ozone depleting substances.*

Air Methods 7, 10 and 11-13. See also Waste Policy 6.

Policy 10 *To avoid, remedy or mitigate the adverse effects of air pollution on surface and groundwater, soil, plants and animals.*

See also Soil Policy 6 and Ecosystems Policy 4.

Policy 11 *To avoid, remedy or mitigate the adverse effects of air pollution*

Air Method 14.

on public amenity values.

Policy 12

To avoid, remedy or mitigate the adverse effects of odours on public amenity.

Air Methods 7,
8, 10 and 14.

Several Issues identified earlier in this chapter relate to the actual or potential impact of various forms of air pollution, including naturally occurring substances, on human health. **Policy 8** specifically deals with this set of effects.

Policies 9 and 10 are concerned with the effects of air pollution on global and local environmental systems. The wording in **Policy 9** points to the need to reduce the release of gases that contribute to the greenhouse effect. **Policy 9** is consistent with central government climate change policy, that is, that there is a reduction in net additions of greenhouse gases to the atmosphere. This approach takes account of both sources of greenhouse gas emissions and sinks which remove greenhouse gases from the atmosphere.

Policy 9 also refers to a reduction in the release of ozone-depleting substances. The policy is included to indicate regional support for central government's international commitments concerning ozone depleting substances. Specific reference to ozone depletion is also made to emphasise the value of local actions that complement national policies.

Policy 10 deals with a range of environmental effects that arise from air pollution. It seeks to avoid, for example, unintended damage to plants and animals from spray drift, or the deposition of lead from vehicle exhausts in waterways. This policy is augmented by Policy 6, which seeks to reduce air pollution through good practice. **Policy 10** is also supported by specific policies in the Fresh Water, Soil, Ecosystems and Coastal Environment chapters of the Regional Policy Statement.

Policy 11 identifies the need to protect a range of amenity values from the adverse effects of air pollution. In the Act, amenity values are interpreted as:

.... those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.

The policy therefore deals with concerns about the effects of air pollution on visual quality, on the damage that chemical erosion can have on the appearance and structural integrity of important buildings, and on tangata whenua perceptions of the value of air

as taonga.

Policy 12 specifically distinguishes odour as one important facet of amenity, and aims to tackle the problematical area of odour management. The variability of tolerance between individuals, and technical difficulties in measuring odours means that a range of perceptions and flexibility in interpretation will need to be accommodated in managing odours.

8.5 Methods

Method 1

The Wellington Regional Council will prepare a Regional Air Quality Management Plan.

Air Policies 1-12.

A Regional Air Quality Management Plan will enable the Regional Council to establish the statutory basis for carrying out its functions in relation to management of the air resource. The use of the Plan for setting air quality guidelines, for providing rules for the management of activities that require discharge permits, and for monitoring compliance, etc., are discussed more fully in relevant methods below.

Methods for Establishing Information about Air

The Wellington Regional Council will:

Method 2

- *Implement Air Policies 1-4 through the inclusion of provisions in the Regional Air Quality Management Plan that:*
 - (1) *Identify key information areas relevant to improving knowledge of the atmosphere, air quality and emissions in the Wellington Region and determine the extent and deficiencies of information available in these areas; and*
 - (2) *Determine primary indicators of air quality and any other significant contaminants.*

Air Policies 1-4.

Method 3

- *Monitor and gather information on air quality in the Region by:*
 - (1) *Developing an ambient air quality monitoring programme;*
 - (2) *Developing an emissions inventory on sources of discharges; and*

Air Policies 1-4.

(3) *Investigating the factors that influence the dispersion and transport of contaminants.*

Method 4

- *Require those industries and activities that require a resource consent to discharge contaminants to air to carry out emission monitoring as part of the resource consent requirements where appropriate.*

Air Policies 2, 5 and 6.

Method 5

To achieve integrated management, other means which could be used to implement Air Policies 1-4 include:

Air Policies 1-4.

- (1) *National co-ordination of air quality data by central government; and*
- (2) *Technical and quantitative input to the Regional Council's air quality monitoring programme by central government, Crown Research Institutes and the Ministry of Health.*

This group of methods relates to **Policies 1-4**, which are all concerned with developing an information base in order to assess air quality and determine priorities in air quality management decisions.

A Regional Air Quality Management Plan (**Method 2**) will have an important role in specifying the necessary level of knowledge about air quality and sources of emissions.

Because of the orientation of the Clean Air Act 1972 towards the management of **processes** that produced emissions, little or no ambient monitoring has been carried out in the Wellington Region. However, the need to assess **effects** under the Resource Management Act 1991 requires some form of quantification of the existing air quality. It also requires an understanding of the relationship between existing air quality and the natural and anthropogenic processes that affect quality. This means that data is needed about ambient quality and emissions (**Method 3**).

Monitoring of ambient air quality is primarily directed at observation of long-term trends (**Method 3**). However, ambient monitoring also helps provide valuable information in determining likely effects of granting a discharge permit for an activity that could have impacts on surrounding air quality.

As the consent granting authority, the Regional Council could complement its monitoring programme by requiring permit holders to monitor emissions from the premises that are the subject of the permit (**Method 4**). This would be appropriate if information about the specific quantity, composition or effects of

the discharge would assist in avoiding, remedying or mitigating any adverse effects of the discharge.

Given New Zealand's small population base and the limited resources available over the country as a whole, it would be helpful if central government co-ordinated monitoring programmes and data dissemination (**Method 5**). The Ministry for the Environment already has some responsibilities in this area with state of the environment reporting, and could be the logical holders of a national data base.

Other organisations that could play a role include the Crown Research Institutes (which have traditionally carried out this work) and the Ministry of Health (which has previously co-ordinated ambient monitoring).

Methods for Setting Guidelines on Air Quality

Method 6

The Wellington Regional Council will implement Air Policy 5 through the inclusion of ambient air quality guidelines which are appropriate to the Wellington Region in the Regional Air Quality Management Plan.

Air Policy 5.

Method 6 is concerned with the development and inclusion of air quality guidelines in the Regional Air Quality Management Plan. The method builds upon, but is not dependent upon, the information base provided through the implementation of **Methods 2-5**.

Air quality guidelines are central to the air quality management approach of the Act and the Regional Air Quality Management Plan. National Ambient Air Quality Guidelines were released in 1994.

The national guidelines may be most suitable for defining minimum acceptable air quality in the Region. The Regional Air Quality Management Plan may adopt higher targets designed to protect existing air quality, where this is already better than the acceptable level.

The preparation of guidelines will need to involve groups and organisations affected by the adoption of ambient air quality guidelines.

Methods for Avoiding Air Pollution at Source

The Wellington Regional Council will:

Method 7

- *Implement Air Policy 6 by including provisions in the*

Air Policy 6.

Regional Air Quality Management Plan that:

- (1) *Set appropriate emission guidelines and promote strategies to reduce emissions;*
- (2) *Define prohibited, non-complying, discretionary, controlled and permitted activities;*
- (3) *Control activities that do not require a discharge permit through rules, where appropriate;*
- (4) *Ensure compliance with discharge permits; and*
- (5) *Control the effects of domestic emissions to air.*

Method 8

- *Develop guidelines for information to be provided with resource consent applications for developments that could affect air quality.*

Air Policies 1-12.
See also Soil Method 4.

Method 9

- *Implement a monitoring programme for all activities subject to a discharge permit, both to ensure compliance with that permit and also to monitor the effects, including cumulative effects, that discharges have on the receiving environment.*

Air Policies 2, 3
6 and 8-12.

Method 10

To achieve integrated management, other means which could be used to implement Air Policies 6 and 7 include:

Air Policies 6-7

- (1) *Advocacy and promotion of improvements to current air quality management practice and technology by authorities and organisations with responsibilities for air quality management;*
- (2) *Integration of air management policies with policies for the management of energy, transportation and waste management by relevant authorities and organisations;*
- (3) *Investigation of the use of economic instruments to avoid or minimise air pollution at source;*
- (4) *Development of design guides and codes of practice by industry groups, central government and other appropriate organisations;*
- (5) *Promotion by the Regional Council through the Regional Land Transport Strategy, and by other relevant organisations, of the use of cleaner transport fuels, improved efficiency in the use of all transport fuels, and the greater use of public transport systems; and*

See also
Energy
Method 6.

See also
Energy
Methods 2-5
and
Built
Environment
Method 3.

(6) *Development and implementation of motor vehicle emission control strategies by central government.*

This group of methods is collectively concerned with managing emissions by preventing or reducing them at source. The emissions covered by these methods include, where appropriate, discharges from industrial or trade premises, domestic sources such as domestic heating appliances, mobile sources such as motor vehicles and other sources such as the spray application of chemicals for weed and pest management. Success in controlling emissions will largely determine the overall effectiveness of air quality management.

The Regional Air Quality Management Plan (**Method 7**) will have a central role in setting emission limits and providing rules as the basis for resource consent requirements. It will spell out those activities which are permitted and those where some form of control is needed.

The chief instrument available to control discharges of contaminants to the atmosphere is through the granting of resource consents. This process would be a good opportunity for giving guidance to applicants about the range of matters that need to be addressed in order to reduce or avoid emissions (**Method 8**).

An effective monitoring programme is essential to ensure that the conditions of the permit are complied with or that the activity is being carried out within the parameters set out in any regional rule (**Method 9**).

There are other ways of achieving a reduction in discharges, besides the controls available through a regional plan. Alternative means include education and advocacy through providing design guides and codes of practice, promoting greater efficiency for fuel burning equipment, encouraging (and upgrading) public transport systems, and using economic instruments to modify behaviour (**Method 10**). The Act itself restricts discharges to air from industrial or trade premises in s. 15.

The Regional Land Transport Strategy (**Method 10**) is prepared by the Regional Council under the Transit New Zealand Act 1989 and is a mechanism by which roading and passenger transport priorities are set. The Strategy can include policies which promote:

- The use of cleaner transport fuels (such as unleaded petrol, CNG and LPG);

- Improved efficiency in the use of fuels (i.e., achieving the same level of output with reduced fuel use or a greater level of output for the same fuel use, for example, through better driving habits or less traffic congestion); and
- Greater use of public transport systems.

Methods for Protecting Human Health, Local and Global Environmental Systems and Public Amenity

The Wellington Regional Council will:

Method 11

- *Support and promote Government initiatives to reduce emissions of greenhouse gases and ozone depleting substances.*

Air Policy 9.
See also
Energy
Method 5.

Method 12

- *Through the Regional Land Transport Strategy, encourage energy efficiency, changes to fuels that contribute less emissions of greenhouses gases and the utilisation of public transport systems in order to reduce greenhouse gas emissions.*

Air Policy 9.
See also
Energy
Method 4.

Method 13

- *Discourage the use of ozone depleting substances in the Region and promote the recovery of such substances by encouraging the provision of appropriate collection facilities.*

Air Policy 9.

Method 14

- *Implement Air Policies 11 and 12 by including objectives, policies and where appropriate, rules or other methods relating to the control of nuisance (particularly due to odours) and loss of public amenity, in the Regional Air Quality Management Plan.*

Air Policies 11
and 12.

This set of methods is concerned with air quality as it affects global and local environmental conditions and aspects of public amenity, particularly the management of odour.

Protecting human health is implicit in many of the policies and methods for air management, and so no additional methods have been included here for putting **Policy 8** into effect. Similarly, methods for the protection of local environmental systems from the effects of air pollution (**Policy 10**) can be found in other parts of the Regional Policy Statement and are not repeated here.

The impact of contaminants on global environmental systems is covered by methods in this chapter (**Methods 11-13**). New

Zealand's role in minimising the release of greenhouse gases and ozone depleting substances to the atmosphere is primarily a national issue. Many initiatives will be co-ordinated at a national level and it is important that any policies adopted by the Council are consistent with Government initiatives (**Method 11**).

As part of the need to establish a picture of air quality and emission sources in the Region (**Method 3**), an emissions inventory is suggested. The inventory could include information about greenhouse gas emissions and ozone depleting substances.

It is likely that the primary sources of greenhouse gases in the Wellington Region are fossil fuels used for domestic energy services and for transportation. Initiatives adopted by the Council to reduce greenhouse gas emissions should be closely integrated, therefore, with both regional and national energy and transport policies (**Method 12**).

Discouraging the use of ozone-depleting substances (**Method 13**) flows from national policy and international protocols.

Questions about the protection of amenity values are difficult to answer. Quantification is very difficult because of the subjective nature of community responses to perceived degradation of amenity. Of all discharges to the atmosphere, the most common (and often most intractable) source of public complaint is effects due to odour. While the Act contains a definition of amenity, this is not particularly specific. The question of how the Regional Council is to determine loss of amenity, and what guidelines are to be used, will be considered in the preparation of the Regional Air Quality Management Plan (**Method 14**).

8.6 Anticipated Environmental Results

- (1) There is up-to-date and relevant information available about the characteristics and condition of air quality for the Wellington Region.
- (2) High quality air is found in all parts of the Region. For those areas which do not already meet the desired air quality, air quality improves to at least an acceptable standard within 10 years of the Regional Air Quality Management Plan being operative.

- (3) Human health, environmental systems and public amenity in the Region are not adversely affected by ambient or local air quality.
- (4) The net amount of greenhouse emissions produced by activities in the Wellington Region is reduced so that levels are consistent with, or below, national and international requirements.
- (5) Ozone depleting substances are safely collected and disposed of, and eventually are no longer used in the Wellington Region.

9. Ecosystems

9.1 Introduction

The Wellington Region has many different types of ecosystems, including forests, mountain ecosystems, wetlands, fresh water ecosystems such as lakes and rivers, coastal ecosystems and marine ecosystems. Some regional ecosystems are relatively unmodified, but most have been modified by human activities, such as agriculture, urban development and the introduction of new species.

This chapter of the Regional Policy Statement is not the only section which is relevant to ecosystems. Policies aimed at avoiding adverse effects on ecosystems can be found throughout the document.

What is an Ecosystem?

One of the difficulties of developing policy for ecosystems is how to define an ecosystem. The following examples indicate the range of views which are held.

- A legal definition of an ecosystem, in the Environment Act 1986, is "any system of interacting terrestrial or aquatic organisms within their natural and physical environment".
- Scientists describe an ecosystem as a community of plants, animals and micro-organisms of different species interacting with each other and with their surrounding environment. Ecosystems are characterised by a constantly changing network of biological, chemical and physical interactions which sustain the community of plants and animals. Biological interactions include food webs and relationships between different species in the ecosystem. Chemical interactions include the cycling of nutrients and elements (such as the water cycle), and physical interactions include things such as the effect of the non-living parts of an ecosystem (e.g., sunlight, salinity) on the plants and animals.
- The size of an ecosystem is arbitrary and is normally defined by what is being studied, for example, an ecosystem can be an entire forest or a single fallen log in a forest. Ecosystems are difficult to designate on maps because they

See also chapters 5 (Fresh Water), 6 (Soil and Minerals), 7 (Coastal Environment) and 10 (Landscape and Heritage).

are multi-dimensional and do not exist in isolation from the wider environment.

- To some people, "ecosystem" implies a relatively natural system with a diversity of species (e.g., a wetland) but does not include a cultivated field. Others say that any community of organisms and their environment is an ecosystem.

The challenge is to take these relatively abstract and uncertain definitions of ecosystems, and apply them in a meaningful way in the development of policy. To do this, it is necessary to limit the broad definitions of ecosystems given above.

In this Policy Statement, "ecosystem" does **not** include highly modified biological systems which are managed primarily for production (e.g., a cultivated field or a marine farm). In terms of size, an holistic approach is taken; an ecosystem is generally taken to be a forest or forest remnant rather than a single tree, or a rocky shore rather than a single rock pool. As a spatial tool for planning, the concept of "habitat" may be more useful to work with as a substitute for "ecosystem" when areas need to be clearly defined.

This chapter describes ecosystems in terms of the predominant character of the environment in which they are located (natural, rural or urban), and the type of species in the ecosystem. An **indigenous ecosystem** is one with a high proportion of indigenous species. Although all ecosystems are important, indigenous ecosystems are particularly valued in the Region.

The objectives and policies in this chapter recognise that:

- Ecosystems are **dynamic**. Policies for the protection of ecosystems have to allow for the fact that ecosystems are in a natural state of constant change. Protection is not the same thing as preservation;
- The **processes** which occur in an ecosystem are just as important as the species and other ecosystem components. Ensuring that ecosystem processes are maintained is therefore an important aspect of ecosystem policy;
- Everything is **interconnected**. The species which make up an ecosystem, including humans, cannot exist in isolation from the other species and non-living parts of the ecosystem. An ecosystem itself does not exist in isolation from its wider environment and the activities which occur in that environment;

- **Human survival is reliant on the maintenance of healthy ecosystems.** Ecosystems sustain the vital life supporting processes of the natural environment, and are also valued for their productivity, their assimilative capacity and their aesthetic, cultural or spiritual values; and
- Ecosystems also have **intrinsic value**, that is, value independent of any values placed on them by humans.

9.2 Issues

Issue 1

The **number and total area** of certain types of indigenous ecosystems has declined dramatically in the Region. For example, 90 percent of the area of wetlands that existed in the Wellington Region as recently as 1840 no longer exist.¹⁶ There is also particular concern about the loss of areas of indigenous forest and sand dune communities.

Ecosystems
Objective 3.
See also
Fresh Water
Issue 7.

Issue 2

The **quality of the Region's ecosystems** is also deteriorating as a result of the impacts of pollution, human activities and introduced species. For example, many ecosystems near cities are severely degraded by pollution (e.g., Moa Point) and forest ecosystems have been badly damaged by introduced animals. There are probably no completely unmodified ecosystems in the Region.

Ecosystems
Objective 1.
See also
Coastal
Environment
Issue 1
and
Landscape
and Heritage
Issue 4.

Issue 3

Partly as a result of the loss of area and quality of indigenous ecosystems, the **diversity of indigenous species** is declining and there is a growing list of plants and animals that are becoming rare or endangered in the Region. For example, many breeding populations of sea birds are now restricted to island ecosystems in the Region.

Ecosystems
Objectives 3
and
4.

Issue 4

Modified urban and rural ecosystems, such as town belts, urban estuaries and bush remnants on farms, have not in the past

Ecosystems
Objective 2.
See also Built
Environment
Issue 11.

¹⁶ Wellington Regional Council, 1993, Wetlands in the Wellington Region, op. cit.

been accorded a high priority in terms of restoration and protection. Yet these are the ecosystems which most of the Region's population experience every day. The Hutt River estuary is an example of a degraded urban ecosystem which, if restored, could sustain many of its existing uses and also be a valuable ecological asset for the Region.

Issue 5

Some **special ecosystems and species** in the Region are not

Ecosystems
Objective 5.

protected at all. Others are not accorded an appropriate level of protection, or once protected, are not properly managed to protect or enhance their ecosystem values. For example, some protected areas are too small to be viable and others have been badly damaged by introduced plants or animals. In some cases reserve boundaries no longer encompass the location of the population of the species to be protected (e.g., the Cook Strait Weevil Reserve near Long Gully Stream mouth).

See also Fresh Water Issue 8.

Issue 6

The protection and management of **remnant ecosystems on private land** can be difficult to implement, especially in agricultural areas. This is of particular concern in relation to indigenous forest, wetlands and shrublands. For example, farmers whose land includes significant remnant ecosystems may not recognise that benefits may result from retirement of the land which may offset its loss as a grazing area.

Ecosystems Objective 5.

Issue 7

There is concern that if we manage only protected areas, rather than the **wider environment surrounding special ecosystems**, the health of both the special ecosystems and the surrounding environment will be threatened. As many remnant indigenous ecosystems are small and dispersed, their viability, and the viability of the species within them, is endangered. Inappropriate developments have been allowed to further fragment and isolate ecosystems. For example, the Waikanae River estuary is threatened by development right up to its borders.

Ecosystems Objective 1.

Issue 8

A number of **introduced plants and animals** in the Region are environmentally damaging. The main problems include Old Man's Beard, (*Clematis vitalba*), deer, goats, rabbits, feral cats, rodents, mustelids, hedgehogs and possums. The latter are of particular concern. Possums have caused, and continue to cause, major damage to native forests and most other terrestrial indigenous ecosystems in the Region (e.g., Tararua Ranges, Kaitoke, Orongorongo Catchment). They have caused local and widespread extinction of species such as mistletoe and northern rata. In addition to their effects on ecosystems, possums carry bovine tuberculosis, a disease which can affect cattle and venison herds and which is found in much of the Region.

Ecosystems Objective 1.

Issue 9

There is a relative **lack of information** about the dynamics of the Region's ecosystems and in many cases there is insufficient information to determine the biophysical limits of a system and to set "environmental bottom lines". This is particularly so for marine ecosystems in the Region.

Ecosystems Policy 1. See also Coastal Environment Issue 5.

Issue 10

Individuals and organisations do not in general act with a high **level of awareness** of ecological processes and environmental issues. People often neglect to consider the effects of their actions on ecosystems and forget that humans are part of the ecosystems

Ecosystems Policy 2.

which surround them and upon which they are dependent for their well-being.

9.3 Objectives

The ecosystems objectives are derived from asking the question "what condition do we want our Region's ecosystems to be in for future generations?" Objectives 1 and 2 apply to all ecosystems in the Region, whereas Objectives 3, 4 and 5 apply specifically to indigenous ecosystems.

Objective 1

The overall quality of ecosystems in the Region is increased.

Ecosystems
Policies 1-10.

Objective 1 refers to the quality or health of **all** ecosystems in the Region, indigenous and modified. A healthy, high quality ecosystem will have all or some of the following characteristics:

- (1) The links between various ecosystem components, and between the ecosystem and the surrounding systems, will be intact and functioning;
- (2) Ecosystem processes, such as regeneration or succession, the cycling of nutrients and the flow of energy through the ecosystem, will be functioning properly;
- (3) The non-living components of the ecosystem (e.g., decaying plant and animal remains, soil, water and air) will retain their natural characteristics (e.g., contain appropriate minerals, maintain their natural processes); and
- (4) The ecosystem will have a high species diversity appropriate to the type of ecosystem, recognising that some ecosystems have a naturally low level of diversity and that diversity may change through time as a result of natural processes; and
- (5) The ecosystem will be resilient, or able to adapt to change, within limits, in response to environmental stress.

This objective reflects the emphasis which the Act places on the quality of ecosystems and the environment generally. The purpose of the Act (s. 5(2)) includes:

- Safeguarding the life supporting capacity of ecosystems; and
- Avoiding, remedying or mitigating any adverse effects of

activities on the environment.

The intrinsic values of ecosystems and the maintenance and enhancement of the quality of the environment are both matters to which regard must be given in s. 7(d).

Objective 2

Healthy, functioning ecosystems are distributed throughout the Region, including the rural and urban environments.

Ecosystems
Policies 1-10.

Whereas **Objective 1** concentrated on the **quality** of the Region's ecosystems, the focus of **Objective 2** is on the **location** of healthy ecosystems. Location is an important factor for ecosystems in the Region because 94 percent of the Region's population live in urban areas, and therefore urban ecosystems, such as town belts or urban streams, are often the only contact that many people have with plants, animals and their habitats. Rural ecosystems such as roadside strips, shrubland and remnant forests are similarly undervalued.

This objective therefore acknowledges that it is not just "natural" ecosystems in relatively remote locations which are worthy of our attention. Healthy ecosystems of all types should be valued, regardless of their degree of modification and regardless of whether they are in predominantly natural, urban or rural locations. Even relatively modified ecosystems can serve as habitats for indigenous species, and can act as buffers and corridors for more significant ecosystems.

Objective 3

The area and quality of indigenous ecosystems in the Region is increased.

Ecosystems
Policies 1-10.

Objective 3 refers specifically to ecosystems with a high component of indigenous species.

Area and quality are two important criteria for monitoring the state of the Region's indigenous ecosystems. Criteria for quality are given under **Objective 1**. For indigenous ecosystems, the degree of modification (e.g., by introduced species, diseases, pollution or physical fragmentation) is also a measure of ecosystem quality.

The size of an ecosystem has a large impact on its ability to function and the health of its component species. An increase in the area of indigenous ecosystems in the Region will maintain indigenous biodiversity and have positive spin-offs for the protection of rare species, as well as for soil and water conservation values.

Objective 4

The Region has a diversity of healthy ecosystems which

Ecosystems
Policies 1-5, 7,

represent the full range of regional flora, fauna and habitats.

9 and 10.

Objective 4 acknowledges the unique qualities and intrinsic values of the Region's ecosystems. It encompasses the concept of biodiversity and the need to maintain and enhance the diversity of indigenous species and habitats in the Region. Protecting and enhancing species which are unique to New Zealand makes the greatest contribution to the preservation of global biodiversity.

Objective 5

Special ecosystems in the Region are actively protected and appropriately managed.

Ecosystems
Policies 4, 5
and
7-9.

The Act requires that "the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna" be recognised and provided for as a matter of national importance (s. 6(c)). This requirement is reflected in **Objective 5**. Active protection of ecosystems refers to the deliberate maintenance and protection, through appropriate management, of the species, structure and processes of a particular ecosystem.

See also
Fresh Water
Objective 3
and
Coastal
Environment
Objective 1.

There are two elements to this objective. It requires first, that special ecosystems are identified and secondly, that they are protected through appropriate management. Criteria for the identification of special ecosystems with a high priority for protection are given in Ecosystems **Policy 5** below. Although this objective refers mainly to indigenous ecosystems, some modified ecosystems may meet the criteria for special ecosystems for reasons of historic or cultural significance. Active protection of special ecosystems can be distinguished from protection from adverse effects which refers to avoiding, remedying or mitigating the adverse effects of activities on **all** ecosystems.

9.4 Policies

The policies for achieving the ecosystems objectives have been arranged in three groups:

- (1) Policies for adopting an "ecosystem approach" to the management of natural resources in the Region;
- (2) A policy for avoiding, remedying or mitigating adverse effects on all ecosystems; and
- (3) Policies for restoring and protecting special ecosystems.

Policies for Adopting an Ecosystem Approach in

Resource Management

Policy 1	<i>To increase understanding of the Region's ecosystems to a level to enable the effective monitoring of change.</i>	Ecosystems Methods 1-3 and 6.
Policy 2	<i>To encourage a greater awareness of the importance of ecosystems to human survival and well-being in all sectors of the regional community.</i>	Ecosystems Methods 4 and 6.
Policy 3	<i>To integrate ecological principles, derived from Maori and western environmental thought and practice, throughout resource management policy, planning and practice.</i>	Ecosystems Methods 5 and 6.

Ecosystems Policies 1-3 underpin the successful implementation of all other ecosystems policies. In order for ecosystem considerations to be taken into account in resource management, there needs to be a fundamental shift in attitude. Ecosystems do not belong to us to use as we wish — humans belong to ecosystems; we are part of ecosystems and we are dependent on their continued health for our survival.

A shift in attitude requires better knowledge of ecosystems and greater awareness of ecosystems and ecological principles throughout the community. **Policy 1** addresses the need for better information. **Policy 2** focuses on raising awareness throughout the regional community. Examples of **Policy 3** are the inclusion of the iwi environmental system in chapter 3 of the Regional Policy Statement and the ecosystems principles discussed in the introduction of this chapter.

Policy 3 recognises that an ecosystem approach to resource management in New Zealand derives from the dual basis of western thought (western science, religion and philosophy) and Maori thought. The strong ecological basis of Maori environmental philosophy and practice is reflected in the concept of whakapapa, which describes the interrelatedness of all elements of te Taiao (the environment), including people. Specific ecosystems such as maunga (mountains) or awa (rivers) are often personified in tribal histories, so that the ecosystem is also a personality closely connected to the well-being of the iwi that identifies with it. Kaitiakitanga is also central to the integrated approach to ecosystem management. These matters are discussed in more detail in chapter 3, and indicate that there is more than one way of achieving positive outcomes for ecosystems in the Region.

Policy for Avoiding, Remedying or Mitigating Adverse Effects on Ecosystems

Policy 4

To avoid, remedy or mitigate the adverse effects of activities on ecosystems, and in particular, to avoid, remedy or mitigate any of the following effects:

- (1) *Reduction in the indigenous biodiversity of an ecosystem;*
- (2) *Prevention of the natural processes of an ecosystem, including nutrient cycles and energy flows, from operating effectively;*
- (3) *Simplification of the structure of indigenous ecosystems; and*
- (4) *Reduction in the quality or quantity of the non-living parts of an ecosystem (e.g., decaying plant and animal remains, water, air, soil) to a level which adversely affects the life-supporting capacity of the ecosystem.*

Policy 4 reflects the general duty that the Act places on people to avoid, remedy or mitigate the adverse effects of their activities. This policy is not about managing or protecting particular ecosystems. Rather, it refers to managing activities, substances and organisms in a manner which avoids, remedies or mitigates adverse effects on ecosystems. **Policy 4** has been adopted to help safeguard the life supporting capacity of ecosystems and to increase the quality of all of the Region's ecosystems.

The policy applies to all activities which could have adverse effects on ecosystems, including:

- (1) Discharges of contaminants into air, water and land;
- (2) The deliberate or accidental introduction of organisms;
- (3) The extraction of resources such as sand, water or biological resources; and
- (4) Other activities that do not add contaminants or extract material from ecosystems, but can nevertheless have adverse effects on ecosystem values.

Policies for Restoration and Protection of Ecosystems

Policy 5

To prioritise ecosystems for restoration and protection in the Region, on the basis of the following criteria:

- (1) *Ecosystems with a high priority for protection:*

Ecosystems
Methods 7, 8
and 9.

See also
Fresh Water
Policies 1, 4
and
10, and
Coastal
Environment
Policy 1.

See also Air
Policy 10, and
Energy Policy
8.

Ecosystems
Method 10.

- (a) *are currently or are likely to be under a high degree of threat; and*
 - (b) *are representative of the Region's natural (indigenous) diversity; or*
 - (c) *are regionally or nationally rare or vulnerable; or*
 - (d) *have special features such as regionally or nationally rare, vulnerable or unique species, populations of species known or likely to be of value as a genetic resource, an unusually high diversity of indigenous species, unique or unusual geological features, or special cultural or spiritual values.*
- (2) *Ecosystems with a high priority for restoration are degraded and:*
- (a) *are currently under a high degree of threat; and*
 - (b) *have one or more of the criteria listed under (1)(b)-(1)(d) above; or*
 - (c) *have the potential to be significant areas of indigenous vegetation or significant habitats of indigenous fauna; or*
 - (d) *have significant public support for their restoration.*

Ecosystems Policies 5-10 have been adopted to improve the quality and area of indigenous ecosystems in the Region and to meet the requirements of s. 6(a) and 6(c) of the Act.

Policy 5 recognises that it is not possible to restore every degraded ecosystem in the Region or protect every special ecosystem **immediately**. Ecosystems therefore need to be prioritised for special attention. The criteria in Policy 5 are designed to reflect community priorities as well as purely ecological factors. An ecosystem under "a high degree of threat" will have evidence of ongoing or potential loss of species, area or ecosystem processes.

The criteria for protection and restoration are weighted towards indigenous ecosystems, but highly modified ecosystems which are valued for social, cultural or historic reasons, or by reason of their proximity to large centres of population, are not excluded,

especially in relation to restoration.

Policy 6

To restore or enhance:

- (1) *Indigenous ecosystems which have been degraded; and*
- (2) *Urban and rural ecosystems which have been identified as being of high priority for restoration.*

Ecosystems
Methods 11,
14
and 17.

Policy 7

To actively protect:

- (1) *Indigenous ecosystems; and*
- (2) *Urban and rural ecosystems which have been identified as being of high priority for protection.*

Ecosystems
Methods 12
and
14-17.

Policy 8

To improve the management of protected ecosystems, where existing management regimes are not adequately safe-guarding the valued aspects of the protected ecosystems.

Ecosystems
Methods 13
and
17.

Ecosystems Policies 6-8 cover all indigenous ecosystems and those modified urban and rural ecosystems which are identified as "high priority" under Policy 5. All indigenous ecosystems are included because of the significant concerns expressed about the declining area and quality of the Region's indigenous ecosystems. However, not all indigenous ecosystems can be protected or restored immediately, so Policy 5 can be used to assess priority. Ecosystems in the urban and rural environment are specified because concerns have also been expressed about the degradation of these types of ecosystems.

These policies include ecosystems on private land, public land, and in the marine environment. Marine ecosystems, being relatively invisible and inaccessible, are often neglected for restoration and protection.

In **Policy 6** a distinction is made between restoration (which implies a return to a natural state) and enhancement (which implies a general improvement in quality, and not necessarily a return to a previous state). Enhancement may be a more appropriate and realistic option for highly modified urban and rural ecosystems and may also apply to the creation of "new" ecosystems (e.g., the creation of wetlands).

See also
Fresh Water
Policy 14 and
Coastal
Environment
Policy 3.

Policy 7 refers to "active protection", which implies more than simply a passive duty to avoid adverse effects.

Policy 8 refers to the management of protected ecosystems. If the existing management regime is not protecting the valued aspects

of the ecosystem then the policy states that management should be improved. The "valued aspects" of protected ecosystems need to be identified on a case by case basis.

Policy 9

To prevent the isolation of ecosystems by providing linking corridors and buffer zones and avoiding the fragmentation of ecosystems.

Ecosystems
Methods 18
and
19.

One of the major causes of degradation of ecosystems and loss of species at a local level is the fragmentation and isolation of ecosystems. An ecosystem surrounded by an environment of a different type (e.g., a bush remnant surrounded by farmland, or an estuary surrounded by subdivision) is effectively an island for the species that live there. A small protected ecosystem is extremely vulnerable to the environmental effects of activities in the surrounding environment. Small patches often cannot support the minimum number of individuals necessary to maintain a population, and fragmentation of ecosystems can destroy migration routes, breeding areas and food sources. **Policy 9** recognises that ecosystems cannot be managed in isolation.

Policy 10

To encourage the planting of native vegetation, and particularly, regionally appropriate species.

Ecosystems
Method 20

Policy 10 recognises the unique nature of New Zealand's native vegetation and, in particular, the vegetation of the Wellington Region. "Regionally appropriate species" are species indigenous to the Ecological District in which the planting is being done. **Policy 10** has been adopted in order to conserve and enhance the valuable genetic resource which is contained in the Region's indigenous flora.

9.5 Methods

Methods for implementing the ecosystems policies are arranged in three groups which match those used in the discussion of ecosystems policies.

Methods for Adopting an Ecosystem Approach in Resource Management

The Wellington Regional Council will:

Method 1

- *Gather information and monitor the state of the Region's ecosystems by:*

Ecosystems
Policy 1.

- (1) *Carrying out State of the Environment Reporting*

for the Region;

- (2) *Developing and maintaining a data base of the Region's ecosystems, including data on rare and endangered species;*
- (3) *Including ecosystem monitoring provisions in regional plans; and*
- (4) *Encouraging the inclusion of ecosystem monitoring provisions in district plans.*

Method 2

- *Where it is the resource consent authority, consider applying resource consent conditions which require holders to monitor ecosystems which may be affected by the resource consent.*

Ecosystems
Policy 1.

Method 3

- *Encourage the development of processes for tangata whenua and local communities to monitor the health of ecosystems.*

Ecosystems
Policy 1.

The first step in adopting an ecosystem approach in resource management is to gather information on the condition and trends of ecosystems in the Region, as set out in **Methods 1-3**. A suite of methods is envisaged, ranging from broad scale monitoring in State of the Environment Reporting, to the monitoring of specific ecosystems and the effects of activities on ecosystems through resource consent conditions. These methods build on work currently being undertaken by the Regional Council.

Method 3 is included because communities, and particularly tangata whenua, are intimately connected with local ecosystems on a day-to-day and sometimes generation to generation level. They are often in the best position to monitor and determine trends in ecosystem health and functioning. In Maori resource management practice, kaitiaki (natural as opposed to human) may act as an indicator of the well-being of an ecosystem and its surroundings.

Method 4

To achieve integrated management, means which could be used to implement Ecosystems Policy 2 include:

- (1) *Using statutory public participation processes as an opportunity to increase public awareness of ecosystem considerations (e.g., in the preparation of regional plans, district plans, and management plans);*
- (2) *Preparing publications or leaflets on local ecosystem issues;*

Ecosystems
Policy 2.

- (3) *Making opportunities for educational institutions to learn about local ecosystems (e.g., school trips);*
- (4) *Setting a good example of ecosystem awareness when carrying out operational responsibilities;*
- (5) *Providing interpretation centres at reserves and parks;*
- (6) *Developing codes of practice which incorporate sound environmental principles;*
- (7) *Carrying out environmental audits;*
- (8) *Reporting against environmental objectives in annual reports;*
- (9) *Sponsoring community ecosystem restoration and protection projects;*
- (10) *Establishing environmental education centres;*
- (11) *Including appropriate teaching modules in schools, universities and polytechnics; and*
- (12) *Using student "placements" in environmental management organisations.*

Method 4 lists 12 ways of raising ecosystem awareness in the regional community. **Many** organisations can have a role in raising ecosystem awareness both within their own organisation and in the wider community. These methods could be implemented by the Regional Council, territorial authorities, educational institutions, industries, the Department of Conservation, other Government departments or other interested groups.

Education is a major means of raising ecosystem awareness because it changes the community's attitudes towards the environment. Many of the methods in this section have the effect of raising ecosystem awareness in combination with some other function which the organisation would be carrying out in any case.

Method 5

The Wellington Regional Council will integrate relevant ecological principles derived from western and Maori environmental philosophy in all relevant policies and plans.

Ecosystems
Policy 3.

Method 6

To achieve integrated management, other means which could be

Ecosystems
Policies 1-3.

used to implement Ecosystems Policies 1-3 include:

- (1) *Liaison between all agencies with responsibilities for ecosystem research and resource management in the Region;*
- (2) *Co-ordination of ecosystem data bases and monitoring requirements across the Region;*
- (3) *Integration of research results into regional and territorial policy and plans; and*
- (4) *Co-ordination of the management of adjacent ecosystems.*

Method 5 ensures that relevant ecological principles are reflected in statutory planning. Ecological principles in policies and plans can:

- Act as a "checklist" to ensure that objectives, policies and methods are not inconsistent with the healthy functioning of ecosystems;
- Provide guidance for applicants for resource consents with respect to assessing the effects of the proposed activity on ecosystems; and
- Provide general guidance when a plan (or regional policy statement) does not state specific policies or rules about an activity.

Further explanation of ecological principles derived from western and Maori environmental philosophy is contained in the explanation of Ecosystems Policy 3.

Method 6 lists some ways in which ecosystem research and resource management responsibilities can be co-ordinated between agencies. There are a number of agencies involved in ecosystem research and management in the Region, including Victoria University of Wellington, the Museum of New Zealand, Crown Research Institutes, Government departments such as the Department of Conservation and the Ministry of Agriculture and Fisheries, the Regional Council, territorial authorities and other organisations with ecosystem management responsibilities (quangos, statutory bodies and boards, voluntary groups, private landowners, etc.). There are limited resources available for research and it is to the advantage of all groups that these limited resources are used in a manner which is efficient — avoiding duplication and focusing on priority issues.

Methods for Avoiding, Remediating or Mitigating Adverse Effects on Ecosystems

Methods for avoiding, remediating or mitigating adverse effects on ecosystems are found throughout the Policy Statement, and include a variety of mechanisms available to local authorities under the Act. These methods are not repeated in this section.

Method 7

The Wellington Regional Council will, in co-operation with the Animal Health Board, the Ministry of Agriculture and Fisheries Quality Management and the Department of Conservation:

Ecosystems
Policy 4.

- (1) *Provide control and maintenance programmes for the management of possums in specified areas; and*
- (2) *Continue to educate landowners on the control of animal pests.*

The Council shares the management of possums with the agencies specified in **Method 7**. It will continue to undertake possum control to minimise damage to ecosystems (e.g., native forests) and reduce risks to animal health through the provision of services, and the education of farmers and landowners.

Method 8

District plans would be an appropriate means of implementing Ecosystems Policy 4.

Ecosystems
Policy 4.

Method 9

To achieve integrated management, other means which could be used to implement Ecosystems Policy 4 include the use of the provisions of the Biosecurity Act 1993 and other legislation and non-statutory mechanisms, by all agencies with responsibilities for the control of substances or organisms with the potential for adverse effects on ecosystems.

Ecosystems
Policy 4.

District plans can contain provisions that allow activities to occur, provided any adverse effects on ecosystems can be avoided, remedied or mitigated.

Method 9 recognises that activities, substances and organisms (including animals and plants) which could have adverse effects on ecosystems, are managed by a range of agencies under various different statutes (including regional pest management strategies prepared by the Regional Council under the Biosecurity Act 1993).

Methods for Restoration and Protection of Ecosystems

Method 10

The Wellington Regional Council will, in consultation with the agencies with responsibility for ecosystems management and the

Ecosystems
Policy 5.

regional community, identify and prioritise ecosystems of regional significance.

Method 10 recognises that many agencies (including territorial authorities) and sectors of the community need to be involved in identifying and prioritising ecosystems for restoration and protection in the Region.

The Wellington Regional Council will:

- | | | |
|------------------|--|------------------------------|
| Method 11 | <ul style="list-style-type: none"> • <i>Restore or enhance high priority degraded ecosystems, where practicable, and where it is within the Council's powers to do so.</i> | Ecosystems Policy 6. |
| Method 12 | <ul style="list-style-type: none"> • <i>Protect indigenous ecosystems and high priority urban and rural ecosystems, where practicable, and where it is within the Council's powers to do so.</i> | Ecosystems Policy 7. |
| Method 13 | <ul style="list-style-type: none"> • <i>Review and, where appropriate, improve the management of protected and high priority ecosystems on Regional Council land, including through the preparation of management plans, where appropriate.</i> | Ecosystems Policy 8. |
| Method 14 | <ul style="list-style-type: none"> • <i>Support community initiatives for the restoration and protection of high priority ecosystems in the Region.</i> | Ecosystems Policies 6 and 7. |
| Method 15 | <ul style="list-style-type: none"> • <i>Encourage, support and facilitate the protection of high priority ecosystems on private land, and ecosystems of significance to iwi, by:</i> <ol style="list-style-type: none"> (1) <i>Acting as a source of information on the different options available to private landowners and iwi;</i> (2) <i>Investigating and co-ordinating the use of financial incentives and other available assistance; and</i> (3) <i>Adopting a flexible approach towards the use of formal and informal voluntary protection mechanisms.</i> | Ecosystems Policy 7. |

Many agencies have responsibilities for managing (including restoring and protecting) the Region's ecosystems. **Methods 11-15** relate to things which the Regional Council can do. Criteria for identifying high priority ecosystems are given in Policy 5.

The Regional Council's direct involvement in restoration and

protection of ecosystems is limited to ecosystems on Regional Council land and other ecosystems for which the Council has management responsibility (**Methods 11, 12 and 13**). Mechanisms which the Council can utilise for protecting ecosystems (**Method 12**) include:

- (1) The preparation of the Regional Coastal Plan and other regional plans, which can be prepared if there is "any significant demand for the protection of any natural or physical resources or of any site, feature or place of regional significance";
- (2) The acquisition of land under the Local Government Act 1974 as a regional park or regional reserve;
- (3) The acquisition of land by agreement under the Resource Management Act 1991, if there is a regional plan in place which has objectives or policies which relate to the protection of ecosystems;
- (4) The use of heritage protection orders under the Act to request a territorial authority to include in its district plan a Heritage Protection Order for protecting a special ecosystem;
- (5) The use of conservation covenants with private landowners or the Crown to manage land for the protection of values of the natural environment, wildlife, freshwater or marine life habitat under the Reserves Act 1977. The Council can also establish reserves on its own land with the approval of the Minister of Conservation;
- (6) The use of "local authority contributions" under the Conservation Act 1987 for the management, improvement or maintenance of any conservation area (in negotiation with the Department of Conservation);
- (7) The use of open space covenants, in conjunction with the Queen Elizabeth II National Trust, for the protection of natural features on private land;
- (8) The use of voluntary agreements between parties with an interest in the land;
- (9) The use of remission or postponement of rates for land voluntarily protected for conservation purposes (Rating Powers Act 1988).

See also
Coastal
Environment
Method 1.

Ecosystem management plans are favoured in **Method 13**

because they are forward looking and can be prepared with public input, reflecting community aspirations.

The Regional Council also supports other agencies with responsibilities for ecosystem management, including organisations with statutory responsibilities (see **Method 17** below), community groups (**Method 14**), private landowners and iwi (**Method 15**). Improved co-ordination of different ecosystem protection initiatives will bring benefits, including opportunities for joint initiatives.

The initiatives of community groups are specifically recognised in **Method 14** because it is often local communities which are best able to restore and protect local ecosystems. Examples of community initiatives include comprehensive schemes such as the Royal Forest and Bird Protection Society's Natural Wellington Programme and smaller scale less formal initiatives of local community groups.

The protection of ecosystems on private land has been identified as an issue of particular concern. **Method 15** focuses on distributing information and co-ordinating the various available mechanisms to ensure the best outcome for the landowner in question. A similar approach has been adopted for the protection of ecosystems of significance to iwi (which includes ecosystems on Maori land or land held in private ownership by iwi members, and other ecosystems of significance). It is acknowledged that the protection of ecosystems does not necessarily preclude the harvesting of resources, provided that the ecosystem can be managed in a sustainable manner.

Method 16

District plans would be an appropriate means of implementing Ecosystems Policy 7.

Ecosystems
Policy 7.

Territorial authorities also have responsibilities for protecting ecosystems on their own land or where it is otherwise within their powers to do so, through district plans or other means, as appropriate. For example, ecosystem protection can be promoted through the inclusion in district plans of appropriate policies, resource consent information requirements and conditions on resource consents.

Method 17

To achieve integrated management, other means which could be used to implement Ecosystems Policies 6-8 include:

Ecosystems
Policies 6-8.

- (1) *The use, by territorial authorities, of the esplanade reserve and strip provisions of the Act for the protection of riparian ecosystems;*

- (2) *The use of other legislation by agencies with statutory responsibilities for ecosystem restoration and protection; and*
- (3) *The use of Ecosystems Methods 10-14 above by all agencies with responsibilities for ecosystem management, where it is within their powers to do so.*

Method 18

Method 17 recognises that **all** agencies with ecosystem management responsibilities in the Region can contribute to achieving the ecosystems objectives of the Policy Statement.

The Wellington Regional Council will, in consultation with other agencies with responsibilities for ecosystem management, identify areas where linking corridors and buffer zones are needed and advocate for their establishment and protection.

See also
Fresh Water
Methods 30
and
32.
Ecosystems
Policy 9.

Method 19

District plans would be an appropriate means of implementing Ecosystems Policy 9.

Ecosystems
Policy 9.

Several agencies have responsibilities for the management of land which could provide linking corridors and buffer zones for ecosystems. Provisions in district plans have been identified as a major method for achieving Ecosystems Policy 9. For example, provisions relating to conditions on subdivisions can help avoid the fragmentation of ecosystems and reserve contribution requirements can assist in the provision of buffer zones. The mechanisms listed under Method 16 above can also be used to implement Policy 9.

Method 20

To achieve integrated management, means which could be used to implement Ecosystems Policy 10 include:

Ecosystems
Policy 10.

- (1) *Incorporating policies supporting the planting of regionally appropriate native vegetation in regional plans, district plans and other management plans, as appropriate;*
- (2) *Placing appropriate conditions on resource consents; and*
- (3) *Planting indigenous vegetation in parks, reserves and other public areas.*

Method 20 is directed largely at local authorities and other managers of parks, reserves and public areas, and is a means of maintaining and enhancing the Region's genetic resources. Clauses (1) and (2) of the Method relate to the planning and regulatory roles of those agencies, and clause (3) indicates that those responsibilities may also be backed up by practical actions.

9.6 Anticipated Environmental Results

Avoiding adverse effects on ecosystems is a key result of policies throughout the Regional Policy Statement. The anticipated results of the ecosystems policies and methods will therefore only be realised in combination with the implementation of other policies in the Policy Statement.

- (1) The area of indigenous ecosystems in the Region is increased and, in particular, there is an increase in the area of vegetation which is native to the Region.
- (2) There are healthy, functioning ecosystems throughout the urban, rural and natural areas of the Region.
- (3) Rare and endangered species in the Region are protected through protection of their habitat and the management of pests.

10. Landscape and Heritage

10.1 Introduction

The landscape we see is a combination of three components: landform, land cover and land use. Landform is made up of soil and rock, moulded and shaped by geological processes and the effects of water and wind. Landform also includes the water that moves across or lies on the surface of the land in the form of rivers and streams, wetlands, and lakes. Land cover refers to the vegetation that grows on the surface of the land (be it alpine grasslands, indigenous bush, or pasture for agricultural production) and other surface covers such as towns and cities. Land use refers to the human activities that occur on the land and water and which leave a mark on the landform and/or the land cover (from the wake of a boat on a lake to a sprawling city).

To most people the term "landscape" conjures up an aesthetically pleasing image; they see landscape as primarily something to **look** at. However, landscapes are more than just how places and things look; they **are** those places and things. Landscape management means managing the natural and physical resources which make up landform, land cover and land use so that they combine and interact with each other in ways that maintain their individual functioning, their usefulness to humans and the health of the ecosystems that are interwoven through them.

Throughout the Regional Policy Statement there are many policies directed separately at resources such as soil, water, air and ecosystems. This chapter helps to integrate these resources by suggesting their management should include consideration of their **interaction** in an holistic way. Each of these resources, however they may be combined or manifested in a particular place, is but a constituent part of a greater whole, the individual parts of which should be managed to protect their contribution to the total landscape. A river, for example, may be managed to protect its instream life or its recreational value, but it is also part of a wider landscape, and its contribution to the physical and visual functioning of that landscape needs to be recognised in decisions about its use and management.

It is a characteristic of landscapes that they do not remain static, despite the fact that, for most of us, viewing a landscape means taking a mental "snapshot" of landform, land cover, and land use while they are arranged in a particular way. However, the

components we see in our snapshot are really a cross section of a number of **processes**: the shape and form of the land is constantly changing, the vegetative cover is part of a dynamic and evolving ecosystem, and the use to which land is put varies continuously with human intervention. As time passes, the landscape changes, hillsides are eroded, forests grow, towns spread out, and city skylines are altered. While there may be a tendency to think of landscapes as snapshots, in reality humans are affected by and even measure their lives through the constant changes in the landscapes that surround them.

Policies for landscapes, therefore, should be directed towards management of processes rather than the preservation of their appearance at a particular point in time. By and large, landscapes need to be managed for use, not preserved in glass cases. (Of course, some landscapes may be so sensitive to disruption or damage that they may require protection from development or have their uses restricted.) Managing these processes means not only the management of resources (land, water, and ecosystems), but also the effects of human activity upon them.

The importance of landscapes to human wellbeing should not be underestimated. They have a vital influence over people and communities. Places or scenes bring forth responses in humans which are greater than simple appreciation of their scenic qualities. The physical settings in which people live their lives become important to them and they become concerned when those settings are threatened. Landscapes are often an important means by which communities perceive themselves. This is especially so for Maori, for whom special places are central to the exercise of the *kaitiakitanga* and *rangatiratanga* of their tribes. However, other cultures and communities also treasure their defining landscapes; it is worth considering how the identity of the Kapiti Coast would change without Kapiti Island or how Wainuiomata residents would feel without their famous hill.

Landscape policy needs to take account of human needs such as these. The policies in this chapter suggest we should take account of human values as well as ecological principles in implementing the Act. Land, water and ecosystems should be managed so that the landscape continues to contribute to people's appreciation of it and to meet human expectations of it (for the amenities it offers — recreation, spiritual uses, cultural uses etc). The Act recognises this by requiring policy makers to consider amenity values in Part II. Thus, while landscape management is primarily concerned with managing the interaction of resources to achieve various ecological ends, managing the visual amenity of a landscape remains an important aspect of landscape management.

Landscapes of the Wellington Region

The unique, rugged landscape of the Wellington Region is the result of many interrelated biophysical, climatic and cultural processes over a relatively short period of geological history. These have resulted in a wide variety of landscapes within a relatively small regional land area. These include exposed mountain ranges, undulating hill lands and broad plains, natural harbours and estuaries, rocky headlands and sand dune coastlines.

There is an enormous number of landscapes of differing scales and sizes in the Region. These may be conceptualised in several ways. On a macro-scale the Region can be seen as made up of five broad landscape areas that transcend territorial authority boundaries. These are analogous to the Department of Conservation's Ecological Districts. These areas are:

- (1) Kapiti coastal plain (part of the Foxton Ecological District);
- (2) Wellington hill country (part of the Cook Strait Ecological District);
- (3) Tararua and Rimutaka Ranges (part of the Tararua Ecological District);
- (4) Wairarapa plains (Wairarapa Plains Ecological District);
and
- (5) Wairarapa eastern hill country (Eastern Hill Country Ecological District).

Each area may be recognised by its distinctive character and features, the shape of its surface and surface cover — forest, scrub, grassland, urban and rural areas, and so on.

At the macro-level also, it is possible to identify a number of broad geographical systems — coastlines, skylines, fault lines, rivers and valleys — which have no regard for administrative boundaries and which could also be said to be of a regional, or even an extra-regional, scale.

Spread across these large landscapes are numerous smaller landscapes which can be thought of as local or community landscapes (e.g., the view of the Hutt Valley from above Totara Park; the natural setting of Wainuiomata). These landscapes are mostly only of local significance since the particular combination of resources and activities that make them up are important to, have an effect on, or are viewed by, the people who live in the

local areas. Some local landscapes, however, are of such a quality or are so widely appreciated that they achieve a wider importance. Examples of these include Wellington's Town Belt, the headlands and capes of the south coast, Kapiti Island, Kupe's Sail and Castle Point. These landscapes may be said to be of regional importance, even though they may be found within a single territorial authority's district.

Landscape management may also be concerned with intimate and other small landscapes around dwellings and workplaces (e.g., the wooden cottages of Mount Victoria), streets, suburbs, hillsides, and even individual properties. The built environment and the patterns of urban living form an important part of these smaller (and sometimes not so small) landscapes. The changing street-scapes of our cities and towns provide the most immediate and intimate landscape experience for most of the Region's population. It is little wonder, then, that people care greatly about these environments and are keen to preserve their key features and historic and cultural values. By and large, however, these smaller landscapes are not generally regionally significant.

Heritage

Heritage is a complex resource that people perceive and value from many different perspectives. The most important distinction to make is between natural heritage and cultural heritage. In broad terms natural heritage refers to the natural environment. This includes indigenous flora and fauna, terrestrial, marine and freshwater ecosystems and habitats, landscapes, landforms, geological features, soils, and the natural character of water bodies and the coast.

Throughout the Policy Statement there are many policies to manage the natural environment in a sustainable manner. In one sense the management of natural resources, according to the philosophical principles of the Act, is all about providing for heritage — maintaining living systems for future generations to inherit. It is unnecessary for this chapter to provide specific policies for the management of the natural heritage of the Region. However, it is important to ensure that our cultural heritage — valued buildings, structures, historic places and places of traditional significance to Maori — is conserved and managed in an integrated way with other natural and physical resources.

Our cultural heritage is made up of a range of buildings, structures and places associated with human activity. In the Wellington Region these cover a range of types, from the remains of long abandoned Maori settlements circa 1300 AD, to intact buildings that are still in use. These structures and places are of

value for various reasons. They provide a spiritual link with the people who occupied the Region in the past and so have value for today's and tomorrow's communities as symbols of the depth of our connection with and attachment to the land. They may have historic value or have been handed down over the generations. On a more scientific level, they provide a basis for research and for understanding former cultures and patterns of living.

The Act requires local authorities, both territorial and regional, to have particular regard to heritage values when developing policies and making decisions about resources. The Act also provides for a new system of heritage orders and deems a number of organisations to be heritage protection agencies. The Department of Conservation and the Historic Places Trust also have major roles in heritage protection. Accordingly, agencies need to co-operate to avoid any duplication of function and effort in this area.

As with landscapes, the significance of cultural heritage resources should be understood at varying levels. Local communities and districts will have many buildings or sites which provide evidence of the community's or district's past and provide a context for its present and future development. A smaller proportion of these will have a similar meaning for the wider Region. It is this regional component of our cultural heritage that policy is provided for in this Policy Statement.

10.2 Issues

- | | | |
|----------------|---|------------------------|
| Issue 1 | Throughout the Region there are a number of nationally and regionally outstanding natural features , landforms, geological features and soil sites. With use and development there is the potential for these features to be lost or damaged. | Landscape Objective 1. |
| Issue 2 | The diminution in the quality of landscapes which are regionally outstanding is also an issue. Activities which commonly give rise to a loss of quality in the landscape include subdivision, mining, topsoil mining, reclamation, land clearance, afforestation, the erection of structures, road and infrastructure development, tourism and recreation and the effects of introduced animals. Public concern about some of these activities (e.g., the erection of structures) has grown with the increasing awareness of the landscape. People have increasingly sought input into decisions about these activities through local authority planning mechanisms. | Landscape Objective 2. |
| Issue 3 | Maori are concerned about the effects of subdivision, forest | Landscape Objectives 2 |

clearance and reforestation on waahi tapu and the effects of erosion, drainage, and reclamation on the landscape. For Maori, **tribal identity** is embodied in the landscape. Changes to land and landscapes have an impact on this identity.

and
3.

- | | | |
|----------------|---|---|
| Issue 4 | The loss of natural character , and in particular remnant areas of indigenous vegetation that are subject to pressures from neighbouring land uses, is an important issue across the Region. Policy to deal with this issue is provided in the Ecosystems chapter. | Ecosystems
Objective 3
and
Policies 6, 7
and
10. |
| Issue 5 | To provide for the human need to identify with the landscape, it is sometimes necessary to preserve, or to slow the pace of change in, some aspect of the regional landscape. This may not be difficult where public land is concerned. However, in many cases the public demand for such characteristics as open space, uncluttered skylines, or the preservation of bush remnants, has implications for private landowners who may have other plans for their land. This conflict is a real one and is sometimes difficult to resolve. | Landscape
Objectives 1-4. |
| Issue 6 | The desire to protect aspects of the landscape for future generations (e.g., open space) may be in conflict with the wish to use or develop them now for social and economic reasons. | Landscape
Objectives 1-4. |
| Issue 7 | Many people are concerned about the loss of recreational opportunity (at a regional level) which occurs through land use change and alterations in the landscape. This concern expresses itself in, for example, worries about the loss of open space on Wellington's northern fringe and the town belts. It also finds expression in complaints about loss of access to rivers and the coast (access issues are dealt with in chapters 5 and 7). | Landscape
Objective 4.
See also
Fresh Water
Issue 9
and Policy 16,
and Coastal
Environment
Issue 2 and
Policy 5. |
| Issue 8 | The value of the Region's cultural heritage is only beginning to be widely appreciated. Many buildings, structures, sites and places have historical, archaeological or cultural importance which is threatened by changes in their use or in surrounding land uses. Some of these are regionally significant. | Landscape
Objective 3. |

10.3 Objectives

Landscape
Policies 1-2, 4
and 8.

- | | | |
|--------------------|---|----------------------------|
| Objective 1 | <i>Nationally and regionally outstanding geological features, landforms, soil sites and other natural features of the Region are protected from inappropriate subdivision, use and development.</i> | |
| Objective 2 | <i>Adverse effects of human activities on the Region's natural and physical resources are avoided, remedied or mitigated so that</i> | Landscape
Policies 1-3. |

the quality of any regionally outstanding landscapes which those resources contribute to is maintained.

Objective 3

The cultural heritage of the Region which is of regional significance is:

Landscape Policies 5 and 6.

- (1) *Recognised as being of importance to the Region;*
- (2) *Managed in an integrated manner with other resources; and*
- (3) *Conserved and sustained for present and future generations.*

Objective 4

The attributes of natural and physical resources which provide for regional recreational opportunity, and for the appreciation and enjoyment of those resources by the regional community, are maintained or enhanced.

Landscape Policies 2, 4, 7 and 8.

Objective 1 refers to outstanding natural and geological features. S. 6(b) of the Act requires the Regional Policy Statement to recognise and provide for the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.

The term "natural feature" is not defined by the Act, nor is its meaning differentiated from the term "landscape". In broad terms, a natural feature is likely to be more a defined entity (such as a wetland, river, dune, rock formation or bush remnant) than the combination of land, water, vegetative, and human elements that might make up a landscape. Geological features, landforms, and soil sites of an outstanding quality are "outstanding natural features" and should be provided for under s. 6(b). Such features also have scientific and educational value (i.e., amenity values) under s. 7(c) and some may have "finite characteristics" (depending on the land use proposed for them) under s. 7(g) of the Act. Policy 2 in this chapter identifies the nationally and regionally outstanding landforms, geological features, and soil sites to which this objective applies.

The term "outstanding" is also not defined by the Act. An outstanding landscape or natural feature is one which, more than others, has a value (e.g., rarity, educational value, cultural value, scientific value) which is special and requires recognition at the relevant level of planning (i.e., local, regional, national). As the natural and geological features in **Objective 1** are land based entities, the Regional Policy Statement may only contain objectives and policies in relation to them where any adverse effect on them would be of significance to the Region (or, by

implication, to the nation).

In the Wellington Region there are many nationally or regionally outstanding geological features (e.g., the beach terraces at Turakirae Head and the Putangirua Pinnacles). Their protection from inappropriate use is important for a number of reasons. In addition to meeting recreational and other amenity needs for people, these sites contribute to our understanding of the geological history of the Region and the evolution of its biota, and allow for continued research into earth science.

This objective does not preclude the use of these features; rather it seeks their protection from "inappropriate" use. In determining the appropriateness of any use, reference should be made, amongst any other considerations, to the values that make these features important.

Objective 2 refers to regionally outstanding landscapes. Landscapes are predominantly made up of land and activities on the land. As with natural features, under the Act these matters are the responsibility of territorial authorities. The Regional Policy Statement may only provide objectives and policies for them where any adverse effects on them would affect the regional community, that is, where the effects are of regional significance. It is therefore necessary to identify landscapes which are outstanding at a regional level to which objectives and policies may apply. This objective applies to those landscapes identified through the operation of Method 1 (the preparation of a regional plan).

The quality of regionally outstanding landscapes is a dynamic characteristic and is subject to change. It reflects the impacts of human activity and the normal interactions of natural and physical resources. **Objective 2** seeks to ensure that human activities are managed in ways which maintain those values that contribute to the quality of the landscape, whilst allowing for natural and human induced change.

Objective 3 gives effect to the requirement of s. 7(e) of the Act to have regard, in the preparation of policies and plans, to the recognition and protection of the heritage value of sites, buildings, places or areas.

The cultural heritage of the Region comprises buildings, structures, sites, areas, waahi tapu and waahi tapu areas associated with human activity, which are inherited from the past, or are of value to future generations, and which are considered to be of special value. As with landscapes, the planning and control of the use of any aspect of our cultural heritage is primarily the

responsibility of territorial authorities. This is because such places are usually comprised of land and vegetation or are built on land. The Regional Policy Statement may only provide objectives and policies for these structures or places where any adverse effects on them would affect the regional community, that is, where they are of regional significance. In this Objective, the meaning of "conserved" has the same meaning as "conservation" in the Historic Places Act 1993, namely the process of preserving, maintaining and restoring historic or special places and areas to safeguard their values.

The amenity aspects of landscape are also referred to in the Act (s. 7(c)); relevant authorities must have regard to these when making decisions or preparing policies and plans. **Objective 4** recognises that one of the most important aspects of landscapes (and the natural and physical resources which make them up) is their capacity to provide recreational opportunities. Increasingly, recreational activity is taking on a regional dimension, as more people than ever move about the Region to enjoy its recreational opportunities. Landscapes that combine elements of the coastal, urban, and natural environment are the most popular. These landscapes include the Kapiti Beaches, the Catchpool, Orongorongo, Kaitoke and Akatarawa Valleys, the Wairarapa coast and, perhaps supreme amongst these, the beaches and waters of Wellington Harbour (Eastbourne, Wellington City, and Petone) and the southern coastline.

These opportunities, and other amenity values of the landscape which people enjoy, need to be maintained for the regional community and for future generations.

The principal reasons for adopting these objectives are the following: to ensure the continued healthy functioning of ecosystems; to allow use and activity for the achievement of human social and economic needs; and to meet community aspirations for aesthetically pleasing regional landscapes of high quality, and the protection of regional heritage and amenity values.

10.4 Policies

Policy 1

To manage the use, development, and protection of natural and physical resources in ways which recognise and respect their contribution as elements of regionally outstanding landscapes.

Landscape
Methods 1-6,
18 and 19.

The purpose of **Policy 1** is to ensure that consideration is given to

the contribution that resources make to regionally outstanding landscapes when decisions are made about their use, development and protection.

The emphasis of the policy is on the management of landscapes, rather than their preservation, because of the need to recognise the dynamic nature of the processes which constitute the landscape. In some cases, however, preservation might be the appropriate response.

Other chapters in this Policy Statement contain policies for the management of resources (e.g., freshwater, soil, ecosystems and the coastal environment) but those policies do not provide for the management of those resources for their landscape value. This is the purpose of this policy.

Policy 2

To avoid, remedy, or mitigate the adverse effects of subdivision, use, and development on regionally outstanding landscapes, and nationally and regionally outstanding landforms, geological features, soil sites, and other natural features.

Landscape
Methods 1-6.

This policy requires those wishing to carry out activities with effects on regionally outstanding landscapes and natural features to avoid any adverse effects of their activities where possible, but otherwise to remedy or mitigate those effects.

See also
Ecosystems
Policy 4.

The appropriateness of avoiding, remedying or mitigating will depend on the vulnerability of the landscape to damage and the value attached to it by people. Landscapes which are highly vulnerable to change or of special significance to the regional community will require a management response towards the top of this hierarchy. More robust landscapes will not require the same degree of attention to the effects of activities.

Mitigation of effects will include a range of actions which will depend on the nature of the effect. However, they could include consideration of the impact on an area's natural character, limiting activities to a scale appropriate to the landscape, giving particular attention to any significant natural features, minimising the risk of natural hazards, maintaining the quality of the environment as far as possible, and ensuring iwi values are adequately provided for.

Nationally and regionally outstanding landforms and geological features are listed in Kenny, J A and B W Hayward, *Inventory of Important Geological Sites and Landforms in the Manawatu and Wellington Regions*, First Edition, 1993. Those to which the Policy applies are those in the Wellington Region which have an importance assessment of A to C and a vulnerability assessment of 1 and 2 (but excludes any buildings or other structures as these are not natural features).

Nationally and regionally outstanding soil sites are listed in Arand, J (*et al.*) *Inventory of New Zealand Soil Sites of International, National and Regional Importance*, Part Two, November 1993. Those to which the Policy applies are those in the Wellington Region which have an importance assessment of 1 to 3 and a vulnerability assessment of 1 to 3. Other regionally outstanding natural features may be identified by the Council through the operation of Method 1 (the preparation of a regional plan).

Policy 3

To manage the use, development and protection of outstanding landscapes of significance to the tangata whenua.

Landscape
Methods 1-6,
18
and 19.

Policy 3 recognises the particular requirements of the tangata whenua in relation to outstanding landscapes.

Policy 4

To promote the maintenance and enhancement of the amenity and intrinsic values of regionally outstanding landscapes, and of nationally and regionally outstanding landforms, geological features, soil sites, and other natural features.

Landscape
Methods 1-6
and 15-19.

Landscapes are valued in different ways by different people. Recognition of this is required by s. 7 of the Act which refers to amenity values. Amenity values are defined in s. 2 of the Act. The nationally and regionally outstanding landforms, geological features and soil sites are the same as those in Policy 2. The amenity aspects of these features include their scientific and educational values.

The Act requires the Policy Statement to have particular regard to the intrinsic values of ecosystems (s. 7(d)). In this policy intrinsic values means the intrinsic values of the ecosystems that make up the regionally outstanding landscapes of the Region.

Policy 5

To recognise, when planning for and making decisions on new subdivision, use, and development, the heritage values of regionally significant cultural heritage resources and to manage those heritage resources in an integrated manner with other natural and physical resources.

Landscape
Methods 7-13.

This policy seeks to ensure that the heritage values of the Region's cultural heritage are given appropriate recognition in resource planning and decision making. Heritage resources are natural and physical resources and their management should be integrated

with other such resources. The regionally significant cultural heritage resources referred to in this Policy are given further definition in the explanation to Policy 6.

Policy 6

To avoid, remedy or mitigate the adverse effects of subdivision, use and development on regionally significant cultural heritage resources.

Landscape
Methods 7-13.

This policy seeks to protect the heritage values of the cultural heritage resources of the Region which are of regional significance by requiring adverse effects on those resources to be avoided, remedied, or mitigated. These resources are those places, buildings, structures, sites and other resources listed as Category 1 items in the Register of Historic Places, Historic Areas, W_hi Tapu and W_hi Tapu Areas (prepared by the New Zealand Historic Places Trust under s. 22 of the Historic Places Act 1993).

Category 1 entries in this Register are of outstanding or special value and are therefore worthy of recognition at a regional level.

The Policy recognises that change in the use of heritage resources is inevitable. Absolute protection which prevents any new use being made of them would be inappropriate. It could mean, for example, that the restoration or refitting of a heritage building might not be possible, even though it might retain or preserve the building's heritage values or extend its life. The heritage values of these resources can best be protected, therefore, by allowing use and development, but by requiring the avoidance or reduction of adverse effects, as well as recognising the importance of these heritage resources under Policy 5.

The Policy gives effect to the requirement of the Act for the Regional Policy Statement to have regard to any "relevant entry in the Historic Places Register" (s. 61 (2) (a) (ia)).

Policy 7

To manage and protect existing recreational opportunities of regional significance.

Landscape
Methods 6 and
14-17.

Recreational opportunities which are used by members of the regional community are spread throughout the Region. This policy aims to encourage local authorities to manage changes in land use, or the use of water, in ways which maintain those opportunities.

Policy 8

To promote, on behalf of future generations, the protection of the potential for recreation of open space, indigenous and exotic vegetation, water bodies, the coast, and regionally outstanding landscapes, and any other regionally or nationally outstanding

Landscape
Methods 6 and
14-18.

natural features.

The purpose of this policy is to ensure that, as far as is practicable, future needs for recreational amenity are safeguarded in any decisions affecting regionally significant recreational opportunities. Regionally and nationally outstanding natural features include such features as landforms, geological features and soil sites (as described in Policy 2).

This policy is not designed to preclude the use of and development of sites in the name of future generations' recreational needs. Rather it is to ensure that the quality of the environment, in toto, which is handed on to succeeding generations offers the **potential** to meet their reasonably foreseeable needs. In particular, this means considering future generations in any decision relating to regional sites vulnerable to irreversible loss, for example, sites which are unique within the Region.

10.5 Methods

The Wellington Regional Council will:

Method 1	<ul style="list-style-type: none"> • <i>Prepare a regional plan for the outstanding natural features and landscapes of the Region, including those of significance to the tangata whenua.</i> 	Landscape Policies 1-4.
Method 2	<ul style="list-style-type: none"> • <i>Investigate landscape character assessment as a tool for identifying valued aspects of regionally outstanding landscapes.</i> 	Landscape Policies 1-4.
Method 3	<ul style="list-style-type: none"> • <i>Discourage development which is not in keeping with the character of any regionally outstanding landscape through comments on district plans and consent applications to territorial authorities.</i> 	Landscape Policies 1-4.
Method 4	<ul style="list-style-type: none"> • <i>Advocate for the sustainable management of regionally outstanding landscapes and regionally and nationally outstanding landforms, geological features, soil sites and other natural features.</i> 	Landscape Policies 1-4.
Method 5	<ul style="list-style-type: none"> • <i>Encourage the protection of privately owned land which is, or is a part of, a regionally outstanding landscape or a nationally or regionally outstanding landform, geological feature, soil site or other natural feature.</i> 	Landscape Policies 1-4.
Method 6	<ul style="list-style-type: none"> • <i>Where appropriate, prepare regional plans or</i> 	Landscape Policies 1-4

	<i>management plans for landscapes or areas of open space which require management or protection, including on its own land, and include in relevant regional plans (such as a Regional Coastal Plan) provisions for the management of landscape values.</i>	and 7 and 8.
Method 7	<ul style="list-style-type: none"> • <i>Investigate adopting the New Zealand Charter for the Conservation of Places of Cultural Heritage Value to guide any heritage conservation activities it carries out.</i> 	Landscape Policies 5 and 6.
Method 8	<ul style="list-style-type: none"> • <i>Provide for the management and conservation of any cultural heritage values relating to any land it owns and for the recognition and protection of these values in any plan it prepares (including a Regional Coastal Plan) and through the consent granting process.</i> 	Landscape Policies 5 and 6.
Method 9	<ul style="list-style-type: none"> • <i>Investigate the need for, and prepare if necessary, a regional plan for regionally significant cultural heritage matters.</i> 	Landscape Policies 5 and 6.
Method 10	<ul style="list-style-type: none"> • <i>Co-operate, where appropriate, with the Historic Places Trust and other relevant agencies to conserve the heritage values of places, sites and structures which are considered to be of regional significance, including sharing information and using its powers as a Heritage Protection Authority as appropriate.</i> 	Landscape Policies 5 and 6.
Method 11	<ul style="list-style-type: none"> • <i>Collect and maintain the information necessary to enable the Council to undertake its heritage policy and heritage protection authority functions.</i> 	Landscape Policies 5 and 6.
Method 12	<ul style="list-style-type: none"> • <i>Recognise the New Zealand Historic Places Trust as an affected person in relation to any non-notified resource consent which affects a Category 1 heritage resource on the Register of Historic Places, Historic Areas, W_{hi} Tapu and W_{hi} Tapu Areas.</i> 	Landscape Policies 5 and 6.
Method 13	<ul style="list-style-type: none"> • <i>Require, where relevant, that an assessment of effects, undertaken as part of an application for a resource consents affecting a cultural heritage resource of regional significance, has regard to its heritage values.</i> 	Landscape Policies 5 and 6.
Method 14	<ul style="list-style-type: none"> • <i>Continue to provide and manage a range of recreational facilities (including regional parks) for the purposes stated in the Local Government Act 1974 and the Wellington Regional Water Board Act 1972, including the management and protection of natural features,</i> 	Landscape Policies 7 and 8.

landscapes, and cultural values.

Method 15	<ul style="list-style-type: none"> • <i>Prepare, if necessary, a regional plan to promote regional recreational amenity and to manage the adverse effects of recreation on the environment.</i> 	Landscape Policies 7 and 8.
Method 16	<ul style="list-style-type: none"> • <i>Prepare, if necessary, inventories of regional recreational opportunities, resources, and facilities.</i> 	Landscape Policies 7 and 8.
Method 17	<ul style="list-style-type: none"> • <i>Advocate for the preservation of recreational opportunities of a regional nature for future generations, particularly where they are vulnerable to irreversible effects.</i> 	Landscape Policies 7 and 8.
Method 18	<i>District plans would be an appropriate means of providing for Landscape and Heritage Policies 1 to 8.</i>	Landscape Policies 1-8.
Method 19	<p><i>To achieve integrated management, other means which could be used to implement Landscape and Heritage Policies 1 to 6 and 8 include:</i></p> <ol style="list-style-type: none"> (1) <i>Protecting regionally outstanding landscapes and nationally or regionally outstanding landforms, geological features, soil sites and other natural features through covenants under the Reserves Act 1977 (s. 77) and with the Queen Elizabeth II National Trust;</i> (2) <i>The voluntary retirement of land, assisted, where necessary, through rate remission under the Rating Powers Act 1988; and</i> (3) <i>The use of other mechanisms by territorial authorities to protect regionally outstanding landscapes from inappropriate development.</i> 	Landscape Policies 1-6 and 8.

The most immediate need in relation to the management, protection, and use of regionally outstanding landscapes is to identify them and the values that make them special to the regional community. This requires the preparation of a definitive list of these landscapes. It also requires an assessment of the values of these landscapes to identify those aspects which are of high value and which should be taken into account when resource management decisions are made by consent authorities. This will occur through the preparation of a regional plan (**Method 1**).

Further advocacy or service provision by the Wellington Regional Council will depend on the knowledge acquired through the

development of this plan. The Council also recognises that until this information is provided to territorial authorities, they will be limited in their ability to have regard to these policies.

Method 2 proposes the investigation of the technique of landscape character assessment as a tool for identifying values in relation to regionally outstanding landscapes. The identification of the character of these landscapes would enable the Wellington Regional Council to discourage activities which are not in keeping with or out of scale with the particular landscape in which they occur and to undertake its own works in sympathy with the landscape. However, such assessments for all of the outstanding landscapes of the Region may not be possible for reasons of cost. **Method 2**, therefore, will consider the costs and benefits of landscape character assessment at the regional level.

The Council will act as an advocate for the sensitive management of the landscapes and features in the plan through such means as commenting on district plan provisions and notified consent applications to territorial authorities (**Method 3**) and the promotion of the protection of vulnerable parts of the landscape (**Methods 4 and 5**) through such methods as education, encouragement and consultation. Other means could include the production of guidelines to show resource users how to avoid or remedy the adverse effects of their activities on important landscape values.

The Council's performance of **Method 5** will depend upon the circumstances of any individual situation which arises.

Methods 7 to 13 outline the steps the Council will take to take account of cultural heritage values of regional significance both on its own land and elsewhere in the Region. **Method 12** seeks to ensure that, for any proposed use or development requiring a resource consent from the Council which relates to a Category 1 listing on the Register of Historic Places, the Council will consider the New Zealand Historic Places Trust an affected person under s. 94 of the Act.

Where an assessment of effects is required (under s. 88 of the Act) relating to a cultural heritage resource of regional significance (**Method 13**), it should have regard to the heritage values of that resource. This could include such matters as a description of the proposal, an explanation of the heritage values of the resource affected (i.e., whether the resource is a heritage building, place, site, or waahi tapu), a statement of the actual and potential effects of the proposal on the heritage values of the resource, an indication of how any adverse effects would be

avoided, remedied, or mitigated, and a description of the consultation that has occurred with any affected persons. Any assessment of effects that might be required would be in such detail as corresponded with the scale and significance of the actual or potential effects that the activity had on the environment (s. 88(7)).

Territorial authorities could also provide for regionally significant heritage values in their district plans. Other methods such as rate relief, voluntary retirement of land, and covenants are appropriate to protect particular features or heritage values of regional significance. This could be done by territorial authorities, the Wellington Regional Council, the Department of Conservation, and through the Queen Elizabeth II Trust.

Methods 6 and 14 to 17 are concerned with the management of the regional recreational amenity of natural and physical resources. Recreational values are an integral part of land and water management. Regional plans (**Methods 1, 6 and 15**) are an effective means of providing policy and methods for sites, features or areas which are outstanding or of regional significance, the values of which require protection or are likely to be in demand in the future (s. 65, 3(b) and 3(d)). If a regional plan is prepared under **Method 15**, its focus is likely to be on such matters as existing regional parks and recreational opportunities managed by the Council, facilitating access to resources managed by the Council (rivers and the coast), linear recreation facilities, such as trails and scenic drives, and other regional recreational opportunities not currently provided for by territorial authorities. Where the Council undertakes management plans for land it owns or regional plans for resources it controls, recreational values will be considered and included where relevant.

The Council will continue to provide recreational facilities of a regional nature (**Method 14**) in line with its statutory responsibilities. Regional parks will be considered by the Council as a means of protecting the environment or key features within it where human activity or use of an area is causing adverse effects. Parks could be established where they are clearly the best means of dealing with these effects, having considered other options (such as covenants or arrangements with private landowners) and the costs and benefits of establishing a park. The Council's long term planning has identified coastal management, river corridors, and a number of high impact areas (such as the Palliser and Rimutaka shorelines) as the foci for its future recreational activity. The extension of the regional park network is also dependent upon the development of existing parks and the provision of appropriate services and facilities for users (e.g.,

toilets, signage). The Council will also advocate for future generations' recreational amenity needs, particularly where recreational opportunities are vulnerable to irreversible loss.

The effective management and protection of regionally outstanding landscapes also lies with territorial authorities, given that most matters of this nature relate to site specific land use consents or effects which are their direct concern.

Method 18 refers to this responsibility. In reality there is an array of methods open to territorial authorities to give effect to these policies for which **Method 18** is only a convenient shorthand.

District plans are an appropriate means of providing for the management of adverse effects. However, avoiding, remedying or mitigating adverse effects could also be provided for by district and city councils through the consent process (e.g., subdivision), management plans, building controls, building design guidelines, and the promotion of an aesthetically pleasing and environmentally sympathetic urban form (**Method 19(3)**).

10.6 Anticipated Environmental Results

- (1) The adverse environmental effects of activities on regionally outstanding landscapes and nationally and regionally outstanding natural features are avoided, remedied or mitigated.
- (2) The heritage values attached to any regionally significant cultural heritage resource are recognised and adverse effects on them avoided, remedied or mitigated.
- (3) Regional recreational amenity values are maintained and enhanced.

11. Natural Hazards

11.1 Introduction

Hazards may be broadly categorised into two classes: natural hazards and technological hazards. Hazards in the latter category, including hazardous substance incidents and accidents arising from the production, storage, transportation, use and disposal of hazardous substances, are considered in the Waste Management and Hazardous Substances chapter (chapter 13). This chapter deals with natural hazards.

S. 2 of the Act defines the term "natural hazard" to mean "any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment".

With the exception of geothermal activity, the Wellington Region is susceptible to all of the hazards listed above. All of the Region is susceptible, from the densely populated urban areas to the sparsely populated rural areas. Hazards may affect localised areas or their effects may be widespread throughout the Region. Some hazards occur at low magnitudes but with high frequency and so the accumulation of effects can pose significant problems. Other hazards occur only occasionally, but have a high potential impact.

In the Wellington Region, the hazards with the potential to cause the greatest adverse effects are flooding and earthquakes. Many of the Region's major floodplains have been substantially developed, and there are now considerable assets at risk from the flood hazard. Of particular concern are the Hutt, Otaki, Waikanae, Porirua, Waingawa, Waiohine and Ruamahanga floodplains. The Hutt floodplain has an asset value of approximately \$10 billion, the second highest in New Zealand.

The Wellington Region sits astride the boundary of two great crustal plates and is cut by a number of major active fault lines. The Region is not infrequently shaken by large earthquakes and, with the continuing movement of the two plates, more major earthquakes can be expected in the future.

The objectives and policies on natural hazards in this chapter are

generic and apply to all natural hazards, except sedimentation and soil erosion. Because these hazards have strong links to water and land management they are dealt with in chapters 5 and 6.

The following facts need to be considered when dealing with natural hazards:

- Natural hazard events **will** occur in the Wellington Region.
- **Implementation** of risk mitigation strategies is the key to successful risk reduction — good ideas and intentions are not enough.

A coherent approach to anticipating and dealing with natural hazards is needed. Such an approach requires an understanding of the likelihood, characteristics and effects of the different types of natural hazards, measures to mitigate risk and enhance preparedness, and a response and recovery system. This approach would provide the Regional community with an acceptable level of security.

The term "risk" as used here is a combination of a natural hazard event and our vulnerability to it. Risk may be measured quantitatively or qualitatively, and will be associated with a given probability or specified time period. Risk could be specified in terms of expected number of lives lost, persons injured, damage to property, disruption of economic activity or loss of essential services and facilities due to a particular natural hazard.

Reducing the impacts of natural hazards is one of the major functions of the Wellington Regional Council. The function spans resource management, warning, protection, awareness raising, provision of advice, and emergency response. The Council's functions come from a number of statutes, including the Resource Management Act 1991, Soil Conservation and Rivers Control Act 1941, Wellington Regional Water Board Act 1972, Land Drainage Act 1908, Transit New Zealand Act 1989, Civil Defence Act 1983, Forest and Rural Fire Act 1977, Building Act 1991 and Local Government Act 1974.

11.2

Issues

Issue 1

The Wellington Region is susceptible to **a range of natural hazards** which have the potential to cause substantial adverse

effects on the environment. The scale of effects may range from ones that impact on an individual site (such as a landslip) to ones that impact on the whole Region (such as an earthquake).

Issue 2 For the major natural hazards in the Wellington Region, such as flooding and earthquakes, it is not practicable to eliminate risks entirely. The aim should be to ensure that the level of risk is understood and acceptable. However, **acceptable levels of risk** are generally unknown.

Issue 3 Current knowledge of the nature and potential effects of many natural hazards in the Wellington Region is limited. As a consequence, decisions on the use, development and protection of natural and physical resources are often made with **inadequate information on natural hazards**.

Issue 4 The frequency and magnitude of natural hazard events can be increased or decreased by **human actions**. For example, many activities in the Wellington Region involve modification of landform to provide building platforms for development. This may result in the oversteepening of hill slopes, or the flattening of sand dunes with consequential interruption to beach processes. Human actions can also reduce hazards, for example by the removal of steep slopes through recontouring of the land during the development of a new subdivision. In addition, some attempts to safeguard against natural hazards can themselves exacerbate the problems and may have other adverse effects on the environment. For example, sea walls can aggravate erosion, degrade the natural character of the coast and bring about a loss of intertidal marine habitat.

See also Soil Issue 7.

Issue 5 The frequency and magnitude of natural hazard events in the Wellington Region may also alter due to **climate change**. Warmer global temperatures may increase the Region's exposure to tropical cyclones such as the Wahine storm, which would increase the frequency of major flood and landslip events and may increase coastal erosion hazard from projected sea level rise.

See also Air Issue 2.

Issue 6 People and communities in the Wellington Region are generally **inadequately prepared** for natural hazard events which may occur with little or no warning. This is particularly the case for major events, such as damaging earthquakes, and flooding on the major floodplains such as Hutt and Otaki.

11.3 Objective

Objective 1 *Any adverse effects of natural hazards on the environment of the Wellington Region are reduced to an acceptable level.*

Objective 1 relates to all Natural

Natural hazards may have a range of adverse effects on the environment. Of particular concern are the adverse effects on people and communities, including loss of life, injury, damage to property and disruption of social and economic activities. The objective does not seek the total elimination or avoidance of adverse effects, because for some hazards, such as earthquakes, this is not possible. There are also benefits to be gained from using hazard prone land, while accepting some level of risk.

An acceptable level of risk will be one that balances the benefits and costs of risk reduction measures, taking into account non-monetary costs, community aspirations and the statutory responsibilities of relevant authorities. Public input is required to determine the level of acceptable risk.

The principal reasons for adopting the objective are an acceptance of the fact that natural hazard events with the potential to cause substantial adverse effects on the environment **will** occur in the Wellington Region and, in order to promote sustainable management, it is necessary to avoid or mitigate these effects wherever possible.

The Wellington Region has suffered substantial adverse effects from natural hazard events in the past. These events now have a greater potential to cause adverse effects because of the greater level of development within the Region. For example, an earthquake of the same magnitude as the West Wairarapa earthquake in 1855 would probably cause major damage, loss of life, injuries, etc., today, because of the greater population and development in the area compared with that which existed in 1855. The same argument can be applied to the 1898 flood in the Hutt Valley.

11.4 Policies

Policy 1

To ensure that there is sufficient information available on natural hazards to guide decision making.

This policy aims to ensure that resource managers have access to sufficient information on natural hazards to allow potential adverse effects to be considered in the decision making process. "Sufficient information" will include data on the probability of occurrence, magnitude and location of effects from potential natural hazard events. Where data on these factors are not available, various scenarios should be considered.

The principal reason for adopting this policy is that informed decisions can only be made with adequate information and the current level of information on natural hazards is inadequate in many areas; further investigations are required. The collection and provision of information needs to be an ongoing process which reflects advances in understanding and methods of assessment.

Policy 2

To consider all of the following matters when planning for, and making decisions on, new subdivision, use, and development in areas which are known to be susceptible to natural hazards:

Natural
Hazards
Methods 9-10
and 14-15.

- (1) *The probability of occurrence and magnitude of the natural hazards, and the location of the effects, including any possible changes which might arise from climate change;*
- (2) *The potential consequences of a natural hazard event occurring, both on-site and off-site. Potential loss of life, injury, social and economic disruption, civil defence implications, costs to the community, and any other adverse effects on the environment should be considered;*
- (3) *The measures proposed to mitigate the effects of natural hazard events, the degree of mitigation they will provide, and any effects on the environment from adopting such measures;*
- (4) *Alternative measures that might be incorporated into the subdivision, use and development to mitigate the effects of natural hazard events, the degree of mitigation they will provide, and any effects on the environment from adopting such measures. Both structural and non-structural measures should be considered;*
- (5) *The benefits and costs of alternative mitigation measures;*
- (6) *The availability of alternative sites for the activity or use; and*
- (7) *Any statutory obligations to protect people and communities from natural hazards.*

This policy provides guidance for district and regional plans, and for resource consent decisions, to ensure that appropriate weight is given to the potential consequences of natural hazard events. Opportunities to avoid and mitigate hazards should be evaluated, so that these may be incorporated in the planning documents or

consent decisions, where appropriate.

Policy 3

To recognise the risks to existing development from natural hazards and promote risk reduction measures to reduce this risk to an acceptable level, consistent with Part II of the Act.

Natural Hazards Methods and 11. 10

It is readily apparent that much development in the Wellington Region has taken place in hazardous locations. This policy is directed towards the reduction of risks to existing development from natural hazards. Risks may be reduced either by altering the nature of the hazards (e.g., by building stopbanks to prevent flooding) or by reducing the vulnerability of the development to the hazard (e.g., by raising the floor levels of buildings situated in a floodplain). The first step in achieving risk reduction is for the people and communities affected, as well as the local authorities involved, to actually recognise the risk. Risk reduction can be promoted through advocacy and through the provision of information.

See also Soil Policy 8.

An "acceptable level" of risk will be one that balances the benefits and costs of risk reduction measures, taking into account non-monetary costs, community aspirations and the statutory responsibilities of relevant authorities. Public input is required to determine this level. The most important step, however, is the implementation of risk mitigation measures.

Policy 4

To ensure that human activities which modify the environment only change the probability and magnitude of natural hazard events where these changes have been explicitly recognised and accepted.

Natural Hazards Method 9.

This policy recognises that human activities can affect both the frequency and magnitude of natural hazard events. The effects may be confined to the site where activities are occurring (e.g., excavation of a hill slope may cause instability) or may be off-site (e.g., building in a floodway may divert river flows and cause downstream problems). The policy aims to ensure that any possible adverse effects on the risks from natural hazards are explicitly recognised and accepted before the activity proceeds.

Policy 5

To encourage people and communities to prepare for the occurrence of natural hazard events by providing them with relevant information and advice.

Natural Hazards Methods 1-8.

This policy seeks to increase the level of preparedness of people and communities for the occurrence of natural hazard events. Being prepared for natural hazard events is an essential means by which adverse effects can be minimised. In many situations it will not be possible to eliminate risks or even reduce them to

levels where consequences will be minor. In these situations the best and most cost effective approach is to be prepared for the hazards.

In order to be adequately prepared, people and communities need information, both on the likely hazards and their effects, and on ways in which they can prepare to minimise the consequences. Being prepared involves knowing what actions to take and having the essential items available to take those actions. For example, people and communities should have emergency water supplies available for use following a major earthquake, when normal supplies may be cut for some time.

The information and advice referred to in the policy includes information about the hazard events themselves (e.g., the probability, location and magnitude of flooding), the potential consequences of that event on people and communities and ways in which the adverse impacts can be reduced.

11.5 Methods

Method 1

The Wellington Regional Council will complete flood hazard assessments on all major floodplains in the Region. The assessments will include an analysis of the potential effect of flooding events.

Natural Hazards Policies 1 and 5.

Detailed flood hazard assessments are underway for major floodplains in the Region. Flood hazard assessments have been completed for the Waikanae, Otaki, Porirua and Waingawa floodplains and are programmed to be completed for the Hutt, Waiohine and Ruamahanga Rivers. Future work will address a number of other known floodable areas.

See also Soil Methods 27-31.

This method has been adopted because of the significant assets at risk from flooding and the potential cost of damage that may occur and because avoiding or mitigating this hazard is one of the major functions of the Wellington Regional Council.

Method 2

The Wellington Regional Council will complete regional scale assessments of the various components of seismic hazard including surface fault rupture, ground shaking, tsunami, liquefaction and ground damage, landslides, and locally significant hazards.

Natural Hazards Policies 1 and 5.

The Wellington Regional Council commenced regional scale assessment of earthquake hazards in 1988. Studies are being progressively completed on the various components of earthquake

hazard for the urban areas of the Region. The principal reasons for adopting this method are to provide improved information on seismic hazards and their consequences.

Method 3

The Wellington Regional Council will continue to identify and investigate the risks from slope instability within areas of greatest development or development potential within the Region.

Natural Hazards Policies 1 and 5.

Initially this information will provide an overview and identify general areas of highest risk from slope instability within and around developed areas. More specific investigations may be carried out once the regional scale assessment has been completed. The principal reasons for adopting this method are to provide improved information on slope instability hazards and their consequences.

See also Soil Method 26.

Method 4

The Wellington Regional Council will identify those areas in the Region which are susceptible to coastal erosion and inundation. The work will concentrate on the areas of greatest development or development potential.

Natural Hazards Policies 1 and 5.

Areas in the Region susceptible to coastal erosion will be identified through a review of past shoreline positions. This will distinguish long-term trends from short-term fluctuations (which may require a different response or an alternative form of management). The investigation will also consider the potential effects of rising sea levels due to climate change.

Method 5

The Wellington Regional Council will undertake a scoping study on the hazards of wild fire, severe wind, tsunami and drought and set priorities for more detailed investigations of these hazards if the scoping study shows this to be warranted.

Natural Hazards Policies 1 and 5.

Information on the hazards of wild fire, severe wind, tsunami from distant sources and drought in the Wellington Region is limited. The proposed work will identify potential risks and determine whether more detailed studies are warranted. If so, future studies will be prioritised according to the perceived level of risk and the opportunities for mitigation which might arise out of the study. The study would also consider the potential impacts of climate change.

Method 6

The Wellington Regional Council will periodically review the current knowledge on climate change and possible effects on natural hazards.

Natural Hazards Policies 1 and 5.

Climate change effects resulting from the "Greenhouse Effect"

are not yet well understood, and are the subject of major studies worldwide. This method requires the Council to review regularly the available information and assess possible effects on the frequency and magnitude of natural hazards in the Region.

Method 7

The Wellington Regional Council will make information it has on natural hazards available to the people and communities of the Wellington Region.

Natural Hazards Policies 1 and 5.

The Wellington Regional Council has a recognised role in the provision of information on major natural hazards within the Region. There is a substantial amount of information held within the Council on natural hazards and, in particular, on hazards within the Region. This method will require the Wellington Regional Council to make sure that its natural hazard information is maintained in a way that makes it available to the people and communities of the Region.

The principal reasons for adopting this method are to ensure that existing information on natural hazards available within the Council is available to the public and to fulfil the Council's responsibilities under s. 35 of the Act.

Method 8

The Wellington Regional Council will encourage and assist, where possible, territorial authorities to investigate natural hazards within their districts. These investigations should include flood hazard assessments for land in floodways managed by territorial authorities (including watercourses managed by agreement with the Wellington Regional Council) and seismic hazard and landslip studies at a greater level of detail than provided for in the regional scale studies.

Natural Hazards Policies 1 and 5.

Many territorial authorities have undertaken studies of natural hazards within their districts. The Wellington Regional Council will encourage and assist with such studies, where possible, on request. As appropriate, information and expertise within the Council will be made available for such studies. The Council will produce guidelines for the assessment of flood hazard and the subsequent evaluation of flood mitigation options.

See also Soil Method 26.

Method 9

The Wellington Regional Council will, in situations where it is the consent granting authority, require applicants for resource consents to include, in their assessment of effects, the risks posed by natural hazards. The level of assessment should be appropriate to the potential consequences of the hazard and the location of the activity in relation to known natural hazards.

Natural Hazards Policy 4.

The Wellington Regional Council is the consent granting authority for the discharge of contaminants, the taking and use of

water, all activities in the coastal marine area (except for restricted coastal activities), activities in the beds of rivers and lakes, and potentially for control of the use of land in relation to soil conservation, natural hazards and hazardous materials. As consent granting authority, the Council can ensure that information supplied with an application is sufficient to enable proper assessment of the effects on the environment.

Method 10

The Wellington Regional Council will use its information on natural hazards to identify the risks to existing development and ways in which these can be reduced.

Natural
Hazards
Policy 3.

Once the Council has collected information on the characteristics of the major natural hazards, it will assess the potential impacts of hazard events on human life, property, economic and social activities, and other aspects of the environment. This will define current levels of risk which exist. The Council will then identify opportunities for risk reduction. These will include actions to reduce the hazard itself and actions to reduce the vulnerability of people and communities to the effects of the hazard.

Method 11

The Wellington Regional Council will implement measures directly within its power to ensure risk levels are acceptable. This will involve the Council exercising its functions, powers, and duties under the legislation which governs its operations. The cost effectiveness of any measures must be acceptable to the Council.

Natural
Hazards
Policy 3.

Council powers of particular relevance to the implementation of this method are those under the Civil Defence Act 1983 and the Soil Conservation and Rivers Control Act 1941. An example of the use of this method would be for the Council to identify the construction of a flood detention dam as the most effective way of mitigating the flood hazard in a particular catchment. The Council could then use its powers under the Soil Conservation and Rivers Control Act 1941 to construct the dam.

Method 12

The Wellington Regional Council will, in consultation with major regional civil defence responding organisations, territorial authorities and other interested parties, prepare a five year strategy to inform people and communities in the Region about the ways in which they can prepare for the occurrence of natural hazard events.

Natural
Hazards
Policy 5.

In developing the strategy consideration will be given to:

- (1) *The various means available to inform the public including advertising programmes, brochures, presentations to schools and interest groups, signs, and*

the provision of reports;

- (2) *The actions that people can and should take to prepare themselves for the occurrence of natural hazard events;*
- (3) *Funding implications; and*
- (4) *Identification of the appropriate agencies to implement the strategy.*

Current approaches to informing the community about natural hazards and preparedness are largely ad hoc and involve several agencies working independently. A co-ordinated approach is likely to be efficient and effective. This method will require the preparation of an integrated plan of action over a five year period to inform people and communities about natural hazards and actions they can and should take to reduce the potential adverse effects.

The Wellington Regional Council will act as the primary agency with responsibility for preparation of the strategy, but it will be necessary for all agencies and organisations with a potential role to be involved.

Method 13

The Wellington Regional Council will ensure that the risks from natural hazards to its own assets and operations are minimised. Where significant risks still exist, the Council will prepare contingency plans to ensure that essential operations can continue to function following a major natural hazard event. The Council will also ensure that, as far as practicable, it is covered by insurance against damage from natural hazard events.

Natural
Hazards
Policy 5.

The Wellington Regional Council owns and operates major assets in the Region, including bulk water supply facilities, flood schemes, etc. Under this method the Council will ensure that the vulnerability of these facilities to natural hazards is minimised and that the Council is, as far as possible, able to take responsibility for any adverse effects of natural hazards on the facilities.

Method 14

The Wellington Regional Council will implement natural hazards policies, as appropriate, through regional plans.

Natural
Hazards
Policies 1-4.

Regional plans are an appropriate means of implementing some of the policies in this chapter. However, the ways in which the plans could deal with the various hazards will require further investigation.

Method 15

District plans would be an appropriate means of implementing Natural Hazards Policies 1 and 2.

District plans would be appropriate documents to contain a description of the natural hazards that may occur within a district, and maps showing existing information on natural hazards. The information could be derived from a review of current knowledge of natural hazards within the district and be presented at a level of detail appropriate to the hazard.

11.6 Anticipated Environmental Results

- (1) The adverse environmental effects arising from natural hazards are minimised as far as possible.
- (2) Risks to existing subdivision, use and development are identified, and mitigation measures implemented where appropriate.
- (3) New development in hazard prone areas occurs only after explicit consideration of the natural hazard aspects of the proposals.
- (4) People and communities in the Region are better prepared to cope with the occurrence of natural hazard events.

11.7 Responsibilities

The responsibilities for **developing objectives, policies and rules for the control of the use of land** for the avoidance or mitigation of natural hazards are shown in table 11. In this table "land" has been divided into three types: the coastal marine area, the beds of lakes and rivers, and all other land.

Table 11 : Responsibilities for the Control of the Use of Land for the Avoidance or Mitigation of Natural Hazards

	Responsibility for Developing Objectives	Responsibility for Developing Policies	Responsibility for Developing Rules
Coastal Marine Area	WRC	WRC	WRC
Beds of Lakes and Rivers	WRC	WRC	WRC

Other Land	WRC* TA	WRC* TA	WRC TA*
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Key

WRC = Wellington Regional Council

TA = Territorial authorities

* = Primary responsibility

The table shows that **the Regional Council has the primary responsibility** for the control of the use of land for the avoidance or mitigation of natural hazards. For land other than land in the coastal marine area and the beds of lakes and rivers, the Regional Council will carry out this responsibility through this Regional Policy Statement and through the development of objectives and policies in regional plans. It will not write regional rules for this purpose, **unless** any relevant regional objective or policy is not able to be achieved through rules in district plans.

Territorial authorities therefore have primary responsibility for writing rules for the control of the use of land (other than in the coastal marine area and the beds of lakes and rivers) for the avoidance or mitigation of natural hazards, but these rules must not be inconsistent with either the Regional Policy Statement or the relevant objectives and policies in a regional plan.

The responsibilities shown in table 11 apply **only** to the development of objectives, policies and rules for the control of the use of land for the avoidance or mitigation of natural hazards, and do not affect any other responsibilities set out in s. 30 and 31 of the Act.

12. Energy

12.1 Introduction

Energy¹⁷ is an essential input to natural and economic systems but its use has both good and bad effects.

Energy enables humans to achieve a high degree of mobility through its use in transport systems. It provides heating for comfort and warmth, and motive power for the operation of equipment in the workplace and at home.

Imaginative exploitation of a variety of energy sources has provided the basis for economic development and for dramatic improvements in the quality of life for many people.

Unfortunately, the fossil fuel sources of energy that have underpinned many of the social and economic benefits referred to above will not last for ever. Fossil fuel energy sources are not only finite, but their use is also producing a number of undesirable environmental effects. Moreover, several decades of cheap and apparently plentiful energy supply has induced wasteful energy practices in industry, transport and in the home. In short, current patterns of energy production and use are unsustainable.

If the social and economic benefits are to be maintained and the bad environmental effects avoided or substantially reduced, then

¹⁷ Energy is identified as a natural and physical resource in the definitions contained in s. 2 of the Act. Energy is subject to all of the provisions of s. 5 of the Act. Minerals, including non-renewable fuel minerals such as coal and petroleum, are specifically excluded from s. 5(2)(a). The Regional Policy Statement acknowledges that minerals cannot be considered in terms of "sustaining their potential to meet the foreseeable needs of future generations", consistent with s. 5(2)(a).

In developing policy for energy management in the Regional Policy Statement there is a requirement to consider all of Part II of the Act. S. 7(b) identifies the "efficient use and development of natural and physical resources" and s. 7(g) "any finite characteristics of natural and physical resources" as matters for particular regard. Minerals are not excluded from these provisions in the Act.

The Regional Policy Statement therefore strikes a balance between meeting the provisions of s. 5(2)(a) and the broader requirements of Part II to provide integrated management of natural and physical resources. Given the importance of energy in underpinning economic and social well-being in the Region, the Regional Policy Statement considers how energy (from renewable and non-renewable sources) can continue to sustain desirable social and economic goals.

a different policy direction is needed. Broadly, the policy

direction should aim towards reducing energy demand, increasing efficiency in energy use, managing non-renewable sources to extend the period of their usefulness, and developing renewable sources.

Because of its central importance to economic and social well-being, and because of the environmental effects of its use, energy is a significant resource management matter for the Regional Policy Statement. Energy management is closely linked with policies for transportation, air quality and the shape, layout and locations of settlements in the Wellington Region.

See also chapters 8 (Air) and 14 (Built Environment and Transportation).

12.2 Issues

Issue 1

Data on energy sources and sectoral use is not generally available at the regional level. Even at the national level, many of the important categories of information (e.g., about trends in the use of energy by different activities) are patchy and focus on economic rather than environmental considerations. It is therefore very difficult to establish a clear and comprehensive picture of energy use and the effects of that use.

Energy Policy 10.

Issue 2

There are many **players** in the energy field. These include the energy industry and consumer organisations, central government, environmentalists, energy related professional associations and a variety of national and international organisations concerned with the development and delivery of several different forms of energy. Moreover, a number of environmental issues related to energy management have a global dimension, thus involving even more players.

Energy Policy 10.

Because of the wide range of bodies with overlapping and sometimes conflicting organisational responsibilities for energy related matters, it is very difficult to establish or co-ordinate local policy or project initiatives aimed at energy management. There is also a false perception that any such local initiatives are unlikely to make significant inroads into global problems and therefore, may not be worth the effort. However, even small efforts have some beneficial effect and New Zealand is required to take certain actions in order to meet international obligations and protocols.

Energy Objectives 1-3.

Issue 3

There is a high degree of **dependence** by the Wellington regional economy and by communities in the Region on non-renewable sources of energy. This dependency on non-renewable energy sources, particularly fossil fuels, raises concerns about the long-

Energy Objective 2.

term viability of regional economic and social well-being. For example, the transport sector is a crucial link in the Region's social and economic well-being, but relies on a heavy and increasing use of non-renewable fuels. Half of these fuels come from overseas and this proportion is likely to increase in the next few years.

Issue 4

The production, transmission and use of energy are not as efficient as they could be. Examples of **inefficient use of energy** can be found in all sectors of activity — industry, commerce, transport, primary production, urban form and in the individual home. Opportunities and incentives for greater efficiency have recently received more attention, reflecting a growing body of evidence that energy efficiency offers the potential to postpone or avoid the various costs (including environmental costs) associated with the provision of new energy capacity.

Energy
Objective 1.

Issue 5

A growing number of **adverse environmental effects** are being identified as a result of energy production, transportation, transmission, conversion and, particularly, end use. These effects include both localised and global scale damage to environmental systems.

Energy
Objective 3.

12.3 Objectives

Objective 1

Energy demand is moderated and energy that is needed is produced, distributed and used efficiently so as to reduce impacts on the environment and to make effective use of limited energy resources.

Energy Policies
1-3.

Objective 1 recognises that energy efficiency, by itself, is not sufficient to be able to sustain the beneficial services provided by energy resources or to successfully manage significant environmental effects that arise from energy production and use. The objective is thus based on an understanding that an additional and substantial increment of environmental benefit can also be achieved through a moderation in the demand for energy.

Objective 1 applies to the production, distribution and use of energy by all activities. It also applies to all sources of energy.

Energy efficiency increases benefits per unit of energy consumed. Efficiency can reduce both financial costs and the adverse environmental effects arising from the production, transportation, conversion and the end use of energy.

Moderating energy demand and making more efficient use of non-

renewable sources will also provide a longer period for the orderly transition to renewable energy sources. S. 7(b) of the Act requires that those exercising functions and powers under the Act have particular regard to the efficient use and development of natural and physical resources.

Improved energy efficiency can be achieved in a number of ways, including:

- Matching the type, location and quality of the energy provided by a particular source to the end use or specific service needed;
- Using energy saving technologies for production, transmission and end use; and
- Changing individual or collective patterns of behaviour.

Although improved efficiency is an objective in its own right, it is also an integral and complementary part of the other energy objectives set out below.

Objective 2

An increasing proportion of energy is provided by sources that are renewable.

Non-renewable fossil fuel energy sources currently comprise the major source of energy for transport and are a significant source of energy for direct and indirect inputs to agricultural, industrial and commercial activities. Because of their chemistry, the uses of fossil fuel based sources of energy also have actual or potential adverse effects on local and global environmental systems.

S. 7(g) of the Act requires particular regard to be given to the finite characteristics of resources.

The continuing use of non-renewable fuels is not a sustainable practice. Depletion of finite energy resources (e.g., petroleum, gas and coal) raises economic, social and environmental costs, and will limit the choices that future users will have about energy sources. Depletion of an energy source to the point of exhaustion will preclude use by future generations.

Objective 2 seeks to sustain social and economic well-being by helping to prepare for the time when fossil fuels are in short supply. The objective recognises the adverse effects that arise as a result of the use of fossil fuels. To avoid, remedy or mitigate these adverse effects, and to sustain well-being, the objective points to the development and use of environmentally benign and

Energy
Policies 4-6.

See also Built
Environment
Issues 6 and
10.

See also Air
Objectives 3-4.

renewable energy sources.

Objective 3

Adverse local and global environmental effects of energy production, transportation, transmission, conversion and end use are avoided, remedied or mitigated.

Energy
Policies 7-9.

Objective 3 seeks to avoid, remedy or mitigate local and global effects of energy production, transportation, transmission, conversion and use, particularly the effects of the use of fossil fuels.

See also Air
Issue 2.

Whilst energy production does not currently occur on a large scale in the Region, the effects of this activity elsewhere are indirectly felt (e.g., "acid" rain, climate change). To a limited extent, the Regional Policy Statement can anticipate some of these external effects and attempt to mitigate the impact of such effects.

The Regional Policy Statement is more able to deal with the direct impacts on environmental systems that arise from the transmission and transportation, storage, conversion, processing and end use of energy in the Region.

The effects can find expression in a number of ways:

- **By changing air composition and quality** (e.g., CO₂ and primary pollutants such as lead, CO and other gaseous and particulate emissions enter the air as a result of the combustion of fossil fuels; secondary pollutants such as photochemical oxidants also enter the atmosphere);
- **By reducing water and soil quality** (e.g., from oil spills and from stormwater run-off containing deposits from roads and airborne particulates from exhausts);
- **By damaging ecosystems** (e.g., specific habitats affected by construction of energy related infrastructure and pollution of soil, water and ambient air that reduces ecosystem quality);
- **By affecting visual values** (e.g., pylons in landscape); and
- **By placing potential pressures on human health** (e.g., electromagnetic fields from power lines).

12.4 Policies

Policies for Moderating Energy Demand and for

Energy Efficiency

- | | | |
|-----------------|---|--|
| Policy 1 | <i>To promote a more efficient match between the characteristics of different energy sources and the required end uses:</i> | Energy Method 3. |
| | <ul style="list-style-type: none"> · <i>In production processes and activities (including production and transmission of energy);</i> · <i>In the management of energy needs for commercial buildings and businesses; and</i> · <i>In domestic energy service requirements.</i> | See also Waste Policy 3. |
| Policy 2 | <i>To promote a moderation in energy demand and efficient energy use:</i> | Energy Method 3. |
| | <ul style="list-style-type: none"> · <i>In production processes and activities (including production and transmission of energy);</i> · <i>In the operation of equipment and appliances; and</i> · <i>Through the development of energy efficient products and services.</i> | |
| Policy 3 | <i>To promote the consideration and the application of energy efficiency and a moderation in energy demand:</i> | Energy Methods 1-3. See also Built Environment Policies 2-3. |
| | <ul style="list-style-type: none"> · <i>In building design and site layout;</i> · <i>In the use of construction materials;</i> · <i>In the design and operation of transport vehicles and transportation systems; and</i> · <i>In plans, policies and proposals that influence urban form and the distribution of land uses and activities.</i> | |

Policies 1-3 seek a moderation in energy demand and improvements in the efficient production, transmission and use of all sources of energy, in all sectors of the economy, and throughout the Region. They recognise that comprehensive improvements in efficiency are needed in the development of products and services, in building design and the use of appropriate materials, and in the integrated development of the Region's settlement pattern and transport systems. Many public and private sector organisations will be able to help implement these policies.

Energy efficiency can make an important contribution to relieving environmental pressures, as well as producing cost savings. At the level of individual organisations and households, investment in cost effective energy efficiency is likely to produce financial benefits with a short pay back period.

Policies for Making an Orderly Transition to Renewable and Environmentally Friendly Energy Sources

Policy 4

To promote efficient and effective use and management of all energy resources in the short-term, and the adoption and use of appropriate renewable energy resources for industry, commerce and domestic energy services in the longer-term.

Energy
Method 5.

Policy 5

To promote a movement away from the use of non-renewable fossil fuels as the primary source of motive power for transport in the Region.

Energy
Methods 4-5.
See also Air
Policy 7 and
Built
Environment
Method 3.

Policies 4 and 5 are concerned with how goods and services might continue to be provided in the longer-term, given the finite characteristics and the environmental effects of using the energy sources on which the provision is currently based.

The policies therefore seek to sustain the long-term provision of necessary services, whilst using less harmful and renewable energy sources. **Policy 4**, in using the word "appropriate" acknowledges that the development, transmission and use of renewable energy resources do not necessarily imply desirable environmental outcomes and that care needs to be taken to ensure that all the environmental effects of the development, transmission and use of such resources are considered.

Policy 6

To promote efficient energy production from the Region's renewable energy assets, where the effects of the development are environmentally acceptable.

Energy
Method 5.

Policy 6 specifically addresses the Wellington Region's natural advantages and potential for energy production. The locally based energy provision could draw on renewable and environmentally benign sources of energy. Wind power, in particular, has been seen to offer considerable potential in the Region. Energy production from waste materials in landfills is another possibility.

The policy wording provides support for taking opportunities, but emphasises that other criteria for environmental management have also to be considered.

Policies for Dealing with Adverse Effects of Energy Production, Transportation, Transmission, Conversion and End Use

Policy 7	<i>To avoid, remedy or mitigate effects on the atmosphere, including emissions of greenhouse gases, that result from energy production, transportation, transmission, conversion and end use, consistent with national standards and international protocols.</i>	Energy Method 6. See also Air Methods 11-12.
Policy 8	<i>To avoid, remedy or mitigate pollution of soil, water and ecosystems that arise from energy production, transportation, conversion and end use consistent with any standards or rules that may be set for managing such effects.</i>	Energy Method 6. See also Fresh Water Policies 4-7, Soil Policy 6 and Ecosystems Policy 4.
Policy 9	<i>To avoid, remedy or mitigate any adverse effects on human health that arise from the production, transmission, transportation, conversion and end use of energy.</i>	Energy Methods 6-7.

Policies 7-9 concern the avoidance of environmental pollution and impairment of human health, both of which may potentially arise from the production, transmission, transportation, conversion and end use of energy.

Policies to achieve **Objective 3** are, in fact, spread throughout the Regional Policy Statement. In particular, policies that deal with air and water quality, the health of ecosystems, landscape, the urban environment, energy from waste and with the coastal environment can all be seen as relevant policies for achieving Energy **Objective 3**. Collectively, they set standards of environmental quality within which activities associated with energy production, transportation, transmission, conversion and end use have to operate.

The policies listed here supplement this broader collection of standards by alluding to global climate protocols and internationally accepted needs for good human health.

Whilst the policies are intended to apply to issues for the Wellington Region, there is an additional expectation that global benefits, albeit small, are likely to ensue (e.g., reducing pollution levels in the local environment through a reduction in traffic volume can also help limit greenhouse gas emissions).

Policy for Meeting Information and Organisational Framework Needs for Energy Management

Policy 10

To improve knowledge of energy use and the effects of energy use, and to co-ordinate implementation of national, regional and local policies and actions aimed at achieving the sustainable management of energy.

Energy
Method 8.

Policy 10 is concerned with establishing an information base and an organisational framework for energy management.

The policy recognises the need to have a data base on the use of different energy sources by different activities as an important step in understanding how energy can be managed in a sustainable way.

Policy 10 also seeks to establish some co-ordination between the diverse range of authorities, organisations and companies that have a responsibility for, or interest in, energy management. The policy acknowledges the need for consistent application of energy policies at all levels and across different organisational responsibilities.

12.5 Methods

Methods for implementing the energy management policies are discussed under the four headings which correspond to the policy groupings adopted above.

Methods for Improving Energy Efficiency

The Wellington Regional Council will:

Energy
Policies 1-3.

Method 1

- *Serve as a role model for energy efficiency by conducting Energy Audits as part of a commitment to implement a long-term energy efficiency action programme dealing with its in-house energy-using assets.*

Method 2

- *Consider, where relevant, energy efficiency in regional plans, in transport policy development and in assessments of environmental effects required by the Council as part of the resource consent granting process.*

Energy Policy
3.

Method 3

To achieve integrated management, other means which could be used to implement Energy Policies 1-3 include:

Energy
Policies 1-3.

- (1) *Advocacy by concerned organisations and individuals for the preparation of a New Zealand Energy Policy Statement;*
- (2) *Introduction, by appropriate organisations, of a consistent*

and comprehensive range of measures to promote energy efficiency and a moderation in energy demand;

- (3) *Provision of information and promotional campaigns by appropriate organisations to increase public awareness about the means for achieving, and benefits of, moderating energy demand and improved efficiency in the use of transport fuels;*
- (4) *Continuation of the provision of information and advice by the Energy Efficiency and Conservation Authority (EECA) to all sectors of economic and domestic activity on the benefits of energy efficiency and the availability of energy efficient equipment and products;*
- (5) *Encouragement from and targeted campaigns by the EECA and the energy supply industry to industry, trade associations and the construction industry and related professions to identify and adopt energy efficient practices;*
- (6) *Provision of financial and other incentives by the energy supply industry to encourage improved energy efficiency in all sectors of the economy;*
- (7) *Introduction of energy audits by public and private sector organisations, and implementation of cost-effective findings from such audits;*
- (8) *Establishment of demonstration projects on energy efficiency by the EECA, the energy supply industry or other relevant organisations; and*
- (9) *Implementation through the provisions of district plans.*

To be effective and efficient, programmes and initiatives aimed at implementing energy efficiency need to be strategically co-ordinated and apply across all sectors of energy use. **Method 3** identifies a range of possibilities.

A New Zealand Energy Policy Statement could provide direction for energy management in general and for energy efficiency in particular.

Central government, in conjunction with the Energy Efficiency and Conservation Authority, could also introduce various other means of encouraging and enforcing improved energy efficiency. Financial incentives could include differential taxation (e.g., to encourage the use of more fuel-efficient vehicles), taxes on pollutants (e.g., a carbon tax) or the provision of capital for

appropriate initiatives (e.g., the installation of energy efficient technology). Some incentives could be provided through the energy supply industry, which is well placed to provide direct contact with consumers.

If it was felt that some more formal level of control or guidance was appropriate, this could be exercised by central or local government through the:

- Use of legally binding **regulations**;
- Development of formal or informal **agreements** reached by Government with, for example, industrial or trade associations, product manufacturers or business groupings; and
- Setting of **standards** which could:
 - * Specify design criteria for how a building, a product or an appliance performs (e.g., a performance standard for retaining heat);
 - * Establish energy efficient behaviour (e.g., companies or organisations to conduct Energy Audits and to implement the findings); or
 - * Identify appropriate information about energy efficiency (e.g., kitchen "whiteware" to have energy efficiency rating information).

A number of studies have shown that one of the reasons why greater efficiency is not practised is because of a lack of information. The EECA and the Centre for Advanced Engineering Energy Efficiency Project are addressing this issue. A wide range of possibilities exists to increase knowledge, including targeted campaigns and demonstration projects (**Method 3**).

In conjunction with national scale initiatives, local authorities such as the Regional Council could serve as role models for cost effective energy efficiency (**Method 1**). The role model could find expression in conducting Energy Audits as a key component of in-house Energy Management Plans and the greater use of energy efficient equipment in the delivery of operations and services. Other organisations might also wish to find out how they can benefit financially by becoming more energy efficient (**Method 3**).

By highlighting energy efficiency as an explicit matter to consider

in its consent granting and in policy development (e.g., in transport policy and urban form), the Regional Council will be acknowledging and signalling the important status given to energy efficiency in decision making (**Method 2**).

Similarly, district plans could be an appropriate means of implementing energy efficiency through the management of urban form and the distribution of and relationship between land uses (**Method 3**).

Methods for Making an Orderly Transition to Renewable and Environmentally Friendly Energy Sources

Method 4

The Wellington Regional Council, through its Regional Land Transport Strategy, will:

Energy Policy
5.

- (1) *Promote existing modes of sustainable transport and their associated infrastructure;*
- (2) *Promote, in the short-term, more efficient use of fossil fuels in transport; and*
- (3) *Promote, where appropriate, in the medium to longer-term, the progressive development and use of cost effective transport modes that are propelled by motive power derived from renewable energy sources.*

Method 5

To achieve integrated management, other means which could be used to implement Energy Policies 4-6 include:

Energy
Policies 4-6.

- (1) *Promotion of cost effective use of renewable energy sources in the industrial, commercial, domestic and transport sectors, by the EECA and other relevant authorities working in conjunction with research institutions and energy sector representatives.*
- (2) *Promotion and co-ordination of funding for a research and development programme for the establishment of cost effective and environmentally acceptable energy ventures in the Region; and*
- (3) *Distribution to interested parties of information about the Wellington Region's potential for renewable energy provision.*

As with several of the energy policies, policy direction and associated programmes for implementation are most sensibly initiated by central government. The Government has, in June

1993, produced an outline framework for renewable energy, and it is expected that more specific steps will follow. The methods discussed here therefore focus on actions that the Regional Council might take to complement wider policy, together with reinforcement of the initiatives that are already being taken by Government and the EECA.

Method 4 deals with Regional Council responsibilities and the steps that the Council can take to progressively enable a shift from non-renewable to renewable energy forms. Support could be given to renewable energy sources for transport (e.g., electricity), and modes of transport (e.g., walking, cycling) and their associated infrastructure that do not deplete finite fossil fuels.

See also Built Environment Method 3.

Whilst research and development continues on cost-effective and renewable alternatives for the medium to longer-term, the focus of Council effort in the meantime would be placed on improved efficiency in the use of existing (mainly fossil) fuels. The Council could complement this effort by continuing to promote public transport options as a means of reducing the use of fossil fuels in private transport.

Method 5 concerns the establishment of the broader policy and financial framework to facilitate a transition to greater use of renewable forms of energy, including co-generation of heat and power, and the development of the Region's potential for renewable energy.

The suggestion that a National Energy Policy Statement be prepared is mentioned in relation to energy efficiency in **Method 3**. It is repeated here to emphasise that the Statement also needs to consider the long term supply of energy sources and transition to use of renewable sources in order to sustain social and economic well-being.

The reference to the role of the EECA in **Method 5** acknowledges the work already being done by the organisation. The wording through the method emphasises the EECA concern that a move to renewable energy sources needs to be based on cost effectiveness and technical viability, as well as environmental acceptability.

Methods for Dealing with Adverse Effects Arising from Energy Production, Transmission, Transportation, Conversion and End Use

The Wellington Regional Council will:

Method 6

- *Establish discharge and other environmental standards,*

where appropriate, in order to achieve reductions in pollutants associated with energy production, transmission, transportation, conversion and end use.

Energy
Policies 7-9.

Method 7

District plans would be an appropriate means of implementing Energy Policies 7-9.

Energy
Policies 7-9.

Methods 6-7 are concerned with the statutory means for avoiding or reducing the adverse effects of energy production, transmission, transportation, conversion and use on local and global communities and environmental systems.

The methods are a supplement to national scale initiatives, to policies and methods elsewhere in the Regional Policy Statement, and to numerous responsibilities that other authorities have for managing the effects of energy provision on people and environmental systems.

In relation to global effects, the most effective and efficient methods are likely to be national and international agreements and initiatives. Although small in scale, local actions would complement initiatives with global objectives. However, there will also be local benefits in pursuing particular actions that incidentally help resolve a global concern. For example, improving energy efficiency in transport reduces local pollution, saves resources and assists (global) CO₂ reduction programmes. Methods for avoiding or otherwise managing adverse local effects are likely to be primarily achieved through controls or standards against which proposals for resource consents will be considered. Environmental quality standards (e.g., for air, water, ecosystems, etc.) will be shaped by policies provided elsewhere in the Regional Policy Statement and specific controls may be set in regional plans (**Method 6**) and in district plans (**Method 7**).

See also Air
Methods 11-
12.

Method for Meeting Information and Organisational Framework Needs for Energy Management

Method 8

To achieve integrated management, means which could be used to implement Energy Policy 10 include:

Energy
Policy 10.

- (1) *Establishment of a regional energy forum, for:*
 - (a) *Bringing together energy interests in the Region;*
 - (b) *Facilitating links between the EECA and local government; and*
 - (c) *Advocating on energy matters on behalf of the Region.*

- (2) *Assessment of the energy characteristics of the Region, and monitoring of:*
- (a) *Energy **sources** used by activities and communities in the Region (e.g., type and location of sources, quantities used and trends in proportions of non-renewable and renewable sources);*
 - (b) *Energy **use** (e.g., by sector);*
 - (c) *Energy **efficiency** (e.g., by sector, by product improvement rate); and*
 - (d) ***Effects** of energy production, transportation, transmission, conversion and end use (including effects on air, water, soil, ecosystems and human health).*

An energy forum could co-ordinate efforts for advocating and achieving sustainable energy management. It could bring together a range of interests, including the energy supply industry, energy companies, education and research organisations, venture capital and investment groups, and environmental and consumer groups.

A forum could be useful in achieving a number of other energy management policies. The forum could monitor the characteristics and effects of energy use in the Region and provide a mouthpiece for advocating on energy policy to central government. It could also be a means of linking EECA initiatives, co-ordinating energy management information and integrating policies for energy, air quality, transport, etc., across local authorities within the Region.

As an informal grouping of interests, the forum would not be primarily concerned with the funding of local energy initiatives. Whilst the method does not specify any particular body to direct research, initiate investment and develop promotional activities, the forum could have a role in these areas.

12.6 Anticipated Environmental Results

- (1) There is a reduced demand for all forms of energy and public needs for energy services are met.

- (2) There is increased efficiency in energy use in all sectors of the economy.
- (3) An increasing proportion of renewable energy sources is used.
- (4) There is a decreased use of fossil fuels and an increased use of the less environmentally damaging energy sources, including those available within the Wellington Region.
- (5) There is a reduction in the adverse effects attributable to the production, transportation, transmission, conversion and end use of energy.

13. Waste Management and Hazardous Substances

13.1 Introduction

"Waste" can be seen as resources which no longer have an economic value to the person or industry which used them.

The disposal of waste — solid, liquid and gaseous, hazardous and non-hazardous — can have an adverse effect on the environment in a number of ways, most notably by causing pollution. The deposition of all wastes, but particularly human waste in the form of sewage, is a major concern for the tangata whenua.

In the past, waste management has tended to focus on "refuse disposal". Current attitudes, internationally and at a national level, are changing this focus to one of "waste management" — managing waste as a resource rather than as a problem to be disposed of. One person's waste may be another person's raw materials. This type of approach can allow waste materials to make a significant contribution to a more sustainable and efficient use of finite resources. Good waste management therefore does not just avoid adverse environmental effects, it also has positive environmental effects.

The basis of good waste management is summarised in the **waste management hierarchy** which involves:

- Reducing the amount of waste generated;
- Reusing waste resources;
- Recycling;
- Recovering resources from waste (e.g., energy); and
- Disposing of residual waste safely.

Some of the steps in the waste management hierarchy, such as recycling, have a relatively high level of public understanding and acceptance. Others, such as waste minimisation and cleaner production (both part of reducing the amount of waste generated), are only just beginning to be discussed and implemented. However, it is clear that if we are to begin to deal with the effects

of waste management in our Region we have to start by reducing the amount of waste generated and managing the waste that is generated in accordance with the principles of the waste management hierarchy. It is on these principles that the Waste Management and Hazardous Substances Section of the Regional Policy Statement is structured.

13.2 Issues

Issue 1

There is a lack of clarity about **responsibilities for waste management and hazardous substances**, and about liability for damage caused by waste. The management of waste and hazardous substances is dealt with at central, regional and territorial levels of government and several statutes, including the Resource Management Act 1991, Local Government Act 1974 and Health Act 1956, apply. Areas where responsibilities are particularly unclear include:

Waste Policy 1.

- Liability for contaminated sites;
- Control of the use of land for preventing or mitigating adverse effects from the use of hazardous substances;
- Incentives for reusing materials from the waste stream; and
- Dealing with intractable hazardous wastes.

Issue 2

There is a **lack of reliable, comprehensive information** on the quantities and components of the waste stream in the Wellington Region. This makes it difficult to direct initiatives towards problem waste sources, to determine the most efficient and effective means of managing the waste stream, and to justify requirements or incentives for waste reduction.

Waste Policy 1 and Method 3.

Issue 3

The Wellington Region, like the rest of New Zealand, generates **large quantities of waste**.¹⁸ The amount of waste we generate is clearly unsustainable as it uses up large quantities of resources and causes ongoing problems with disposal. In general, the costs

Waste Objective 1. See also Built Environment Issue 10.

¹⁸ Ministry for the Environment, 1992, *Waste Analysis Protocol*, Ministry for the Environment, Wellington.

of waste disposal are not borne by the generators of the wastes, so there is no incentive for reducing the amount of waste generated.

Issue 4

There is a high level of public awareness and demand for

	<p>recycling facilities. Some parts of the Region have kerbside recycling, others are serviced by bins and some have no access to recycling facilities. However, there are currently no markets for many recyclable materials. People and organisations are prepared to sort some of their waste resources in preparation for recycling, but not always to "close the recycling loop" by purchasing recycled products.</p>	Waste Objective 2.
Issue 5	<p>Waste materials tend to be viewed as a problem rather than as a resource. For example, sewage contains valuable nutrients and can be used as an energy resource. Metals such as copper and lead can be lost in landfills. Re-use of waste resources and recovery of materials from waste is a response to both the current excessive levels of resource use and the loss of potentially valuable resources through waste disposal.</p>	Waste Objective 2.
Issue 6	<p>The discharge of treated and untreated sewage into water, including the discharge of sewage into the sea in Wellington and the Hutt Valley, and into rivers in the Wairarapa, is of general concern and of particular concern to Maori.</p>	Waste Objective 3. See also Fresh Water Issue 1 and Coastal Environment Issue 4.
Issue 7	<p>There is concern about the level and effects of illegal discharges to air, water and land, including illegal dumping. Monitoring and enforcement of illegal discharges is hampered by lack of resources for enforcement.</p>	Waste Objective 3.
Issue 8	<p>Inadequate waste management practices, both in the past and at present, are causing pollution and adverse environmental effects.</p> <p>For example, leachate from landfills discharges into waterways causing pollution. Poorly managed landfills can provide a food source for gulls, contributing to the incidence of bird strike at airports. Inadequate disposal of hazardous wastes results in contamination of soil, water and food chains. Of particular concern is the duration of pollution problems resulting from current waste management practices. Old landfill sites will continue to discharge leachate and methane gas up to 30 years after they are no longer used as landfills. Cottles Tip at Horokiwi is an example of an old site causing environmental problems.</p>	Waste Objective 3. See also Soil Issue 11 and Air Issue 7.
Issue 9	<p>Many existing landfills in the Region (e.g., Kapiti Coast) have limited life spans and very few of the Region's landfills are suitable for the disposal of hazardous wastes. Potential sites for new landfills are limited.</p>	Waste Objective 3.
Issue 10	<p>The fate of unused agrichemicals (including pesticides and herbicides) is a concern, particularly in the Wairarapa.</p>	Waste Objective 4.

Issue 11 **Hazardous substances management** is an issue in the Wellington Region because of the presence of a major port in Wellington Harbour, the concentrated industrial area in the Hutt Valley and the Region's earthquake risk. The management of hazardous substances is of concern because of the potential for accidents involving hazardous substances and their capacity to damage the environment during their transportation, use, handling and final disposal as hazardous wastes.

Waste
Objective 4.
See also
Coastal
Environment
Issue 6.

Issue 12 Waste management is closely linked with **energy management**. Good waste management can have positive effects on energy management, for example, through generating energy from landfill gas or conserving energy by reusing waste resources. There is therefore a need to give greater consideration to the energy implications of waste management.

Waste Policy
3.
See also
Energy
Issue 4.

13.3 Objectives

Objective 1 *The quantity of waste generated is reduced.*

Waste Policies
2,
4 and 5.

The Wellington Region has one of the highest levels of waste generation per person in the world. Our highest priority, therefore, should be to reduce the amount of waste generated. The reduction of waste at source is an effective way of addressing waste management problems because it reduces the amount of material entering the waste stream. Reducing the amount of waste generated also has immediate benefits in terms of economic efficiency. This objective applies to all types of wastes, including solid wastes, liquid wastes and hazardous wastes and is consistent with the priority given to waste reduction in national waste management policy.

Objective 2 *The quantity of residual wastes for disposal is minimised through reuse, recycling and resource recovery.*

Waste Policies
2,
4, 5 and 6.

Many materials which have reached the end of their useful life in one form may still have similar or other uses in a different form. Reusing materials for the same or similar purposes, recycling and recovering materials from the waste stream (e.g., compost or energy) are ways of making use of resources which would otherwise be disposed of as waste. This reduces the amount of residual waste material which needs to be disposed of (and therefore reduces the problems associated with waste disposal) and provides opportunities for sustainable production based on reused materials rather than on raw resources.

Objective 3

Adverse effects on the environment and human health from the inappropriate disposal of residual liquid and solid wastes are avoided or, where this is not possible, remedied or mitigated.

Waste
Policies 7-10.
See also Soil
Policy 6.

Even if all possible steps are taken to minimise the amount of waste left for disposal, there will still be some materials which cannot be reused, recycled or recovered from the waste stream. The objective for residual waste is to dispose of it in a manner which avoids the adverse effects on human health and the environment which have characterised past waste management practices. Not all adverse effects from waste disposal can be avoided immediately, particularly effects that result from poor waste management practices in the past. They can, however, be remedied or mitigated and planning to avoid adverse environmental effects **now** will save future generations from the problems of dealing with our wastes and contaminants.

Objective 4

The potential for any accidental or unanticipated effects to arise as a result of the use, storage, transportation and disposal of hazardous substances is minimised and any adverse effects that do occur are remedied or mitigated.

Waste
Policies 11-14.

There are two matters which distinguish waste hazardous substances from other kinds of wastes. First, hazardous substances, by their nature, have the potential to cause significant adverse environmental effects. Secondly, hazardous substances can cause adverse environmental effects throughout their life cycle, from when they are first manufactured or imported into the country until they are finally treated or disposed of as hazardous wastes. The management of hazardous wastes is therefore closely associated with the management of hazardous substances during their useful lives.

Objective 4 emphasises the need to avoid the adverse effects of hazardous substances throughout their life cycles, including the need to minimise the risk of the occurrence of accidental discharges of hazardous substances during their use, storage, transportation or disposal. Waste Objectives 1-3 also apply to the management of hazardous wastes.

13.4 Policies

The Waste Policies are listed in five closely linked groups:

- Policies for achieving an integrated approach to waste management;

- Policies for minimising the amount of waste which needs to be disposed of;
- Policies for avoiding the adverse environmental effects of waste disposal;
- Policies which deal with the management of hazardous substances; and
- Policies to address the adverse environmental effects of past waste management problems.

Policies for Integrated Waste Management

Policy 1	<i>To develop an integrated waste management framework in the Region, including integration across environmental media and jurisdictional boundaries, and between levels of government.</i>	Waste Methods 1-4.
Policy 2	<p><i>To adopt and implement the waste management hierarchy of:</i></p> <p>(1) <i>Reducing the amount of waste generated;</i></p> <p>(2) <i>Reusing waste resources;</i></p> <p>(3) <i>Recycling waste resources;</i></p> <p>(4) <i>Recovering resources (including energy) from waste; and</i></p> <p>(5) <i>Disposing of residual waste in an environmentally safe way.</i></p>	Waste Methods 1, 3 and 5-8.
Policy 3	<p><i>To give consideration to energy management in the development of waste management policies and plans and the delivery of waste management services.</i></p> <p>Policies 1-3 set the "big picture" for waste management in the Region. A strategic and integrated approach to waste management (Policy 1) is necessary because the environmental effects of waste occur throughout the environment on land, in water, in air, on ecosystems and on people's health. Many of these effects are long-term and cumulative.</p> <p>A further reason for adopting a strategic and integrated approach is that waste is managed by many different agencies at district, regional and national levels, and efficiency and effectiveness can be improved by clarifying and co-ordinating responsibilities.</p> <p>The waste management hierarchy (Policy 2) is the basis of an integrated approach to waste management. The waste management hierarchy places a priority on minimising waste, but</p>	Waste Method 1. See also Energy Method 2.

also acknowledges that the most practical and effective means of dealing with waste in a specific case could be at any of the five levels of the hierarchy, depending on the environmental and economic characteristics prevalent at the time. Adoption of the waste management hierarchy is consistent with central government waste management policy.

Waste management is closely linked with all production sectors and, in particular, with energy management (**Policy 3**). Energy implications, such as the energy required to transport or recycle wastes, therefore need to be considered when making waste management decisions.

See also
Energy
Policies 1-3
and
6.

Policies for Minimising the Amount of Residual Waste for Disposal

- | | | |
|-----------------|---|-----------------------|
| Policy 4 | <i>To ensure that, as far as is practicable, the Region's waste generators meet the costs of the waste they produce.</i> | Waste
Methods 5-7. |
| Policy 5 | <i>As a matter of priority, to promote the concepts of clean production and waste minimisation and to support all sectors of the community in the implementation of these concepts.</i> | Waste
Methods 5-8. |
| Policy 6 | <i>To provide opportunities for the reuse of waste materials, recycling, and the recovery of resources from waste (including composting and the recovery of landfill gas).</i> | Waste
Methods 5-8. |

Policies 4-6 reflect the first four levels of the waste management hierarchy which aim to reduce the amount of material which ultimately needs to be disposed of as waste. **Policy 5** places priority on reduction of waste at source through cleaner production and waste minimisation because this is often the most efficient overall means of reducing waste. It also has immediate efficiency gains for those reducing their waste output. Cleaner production includes the principle of reducing the quantity and toxicity of hazardous substances used in production processes. Central government waste policy places a priority on promoting cleaner production and transferring the costs of waste disposal to waste generators.

See also Air
Policy 6 and
Energy Policy
2.

Policy 4 acts as an incentive to minimise waste by ensuring that waste generators meet the true costs of managing the wastes they generate, rather than passing these costs on to third parties, such as the environment, local communities and future generations. The words "as far as practicable" in this policy reflect the need to balance the "user pays" philosophy against the potential for this to create an incentive for increased illegal waste disposal.

Reuse of materials is the next step in the waste management

hierarchy after reduction of waste generated (**Policy 6**). It has some advantages over recycling in that the energy costs of reuse are usually less than recycling because the resource remains essentially unchanged. Recycling has a higher public profile and is to be supported where it is the most practical option for reducing waste. However, consideration needs to be given to the markets available for recycled goods. Recovery of resources from waste (such as the recovery of compost from organic wastes) can help meet many objectives. For example, the recovery of landfill gas is an efficient use of a waste resource, it collects methane (a greenhouse gas), and improves landfill safety by preventing the migration of gas.

See also Air Policy 9.

Reuse, recycling and resource recovery will not always be appropriate waste management options for all resources, in all parts of the Region, and at all times. A decision on which, if any, is most appropriate in a particular waste management situation will depend on the economic and environmental factors at the time.

Policies for Avoiding Adverse Environmental Effects from Waste Disposal

Policy 7

To ensure that all residual wastes are safely disposed of in an appropriate facility

Waste Methods 9, 11 and 13.

Even if all practical steps are taken to reduce the amount of waste entering the waste stream, there will still be waste which needs to be disposed of. **Policy 7** covers all forms of waste (solid, liquid, gaseous and hazardous wastes). It ensures that waste reaches appropriate disposal sites, thereby avoiding the environmental effects of litter and illegal dumping. In this policy, "safely disposed of in an appropriate facility" means in a manner and at a facility (e.g., a landfill or outfall) which has the appropriate resource consents, is run by appropriately qualified operators and meets any other requirements of the Act and any relevant regional plans. For hazardous wastes, it includes disposal at a site which is recognised as being suitable for the particular type of waste.

See also Soil Policy 6.

Policy 8

To avoid, remedy or mitigate all adverse effects of waste disposal sites, including those sites that are no longer used for waste disposal, and as a matter of priority to avoid the adverse effects of landfill leachate.

Waste Methods 9-12.

Policy 9

To rationalise the siting of landfills within the Wellington Region.

Waste Method 9.

In the Wellington Region, solid wastes are normally disposed of in landfills. **Policies 8 and 9** deal with the adverse effects of

landfills and other waste disposal sites and encompass mitigating the adverse effects of old waste disposal sites, managing existing sites well and planning for the future (including rehabilitating existing landfill sites once they are no longer used for waste disposal and siting new landfills if necessary). These policies have been adopted because although waste minimisation is the long-term priority in the Region, the environmental effects of landfills require urgent attention. Leachates are identified as a priority because at present leachates from most Wellington landfills are not effectively managed and often cause pollution through contamination of waterways.

See also
Fresh Water
Policy 6.

Landfill siting decisions can influence the effects of the disposal of wastes. Rational landfill siting occurs when Region-wide community benefit considerations are reflected in decisions on landfill siting and when siting takes full account of the constraints imposed by the environment. Community benefit considerations include matters such as the waste disposal needs of the entire community of interest (which may extend beyond jurisdictional boundaries) and making the best use of the limited number of cost effective landfill sites in the Region.

Policies on high temperature incineration have not been included in the Regional Policy Statement, as incineration does not appear to be a practical option for disposal of solid wastes in the near future in the Region. It requires a large waste stream in order to remain economic and there are also environmental problems associated with the disposal of incinerator ash. However, the possibility of incineration becoming a waste disposal option in the future is not excluded.

Policy 10

To ensure, in all decisions on the treatment and disposal of sewage, that:

(1) *Sewage is treated to a level which is appropriate to the means of disposal so that adverse effects on human health and the quality of ecosystems are avoided, remedied or mitigated, and in particular:*

(a) *For discharge into or onto land, adverse effects on the quality of groundwater and surface water are avoided, remedied or mitigated;*

(b) *For discharge into coastal water, the discharge, after reasonable mixing, does not render the receiving waters unsuitable for contact recreation or for any other purpose specified for that water in the Regional Coastal Plan;*

Waste
Methods 9 and
11.

- (c) *For discharge into freshwater, the discharge, after reasonable mixing, does not render the receiving waters unsuitable for any purpose specified for that water in any relevant plan;*
- (2) *The values and views of the relevant iwi are given due recognition; and*
- (3) *The values and views of the appropriate communities of interest are taken into account.*

Policy 10 deals with the treatment and disposal of human wastes in the form of sewage. The policy distinguishes between sewage treatment (chemical, biological and physical processes which occur under controlled conditions) and sewage disposal (the release of treated sewage into the wider environment, for example, discharge to water through an outfall, discharge onto land by spraying or discharge into waterways from a wetland treatment system). The focus of this approach is on the quality of sewage effluent and sewage solids after treatment and the effects of the treated effluent and solids on the receiving environment. The criteria listed in Part (1) of the Policy are consistent with the criteria adopted elsewhere in the Regional Policy Statement. The reference to contact recreation in clause (b) has been adopted to broadly reflect the existing coastal water quality in the Region and to ensure that there is no further degradation from that quality as a result of discharges of human effluent.

See also
Fresh Water
Policy 6 and
Coastal
Environment
Policy 5.

This approach has been adopted in preference to advocating a particular receiving environment (i.e., disposal on land), because discharge of sewage effluent onto land, while not impossible in the Wellington Region, is subject to considerable geographic (and therefore cost) limitations. Sewage treatment and disposal is the responsibility of territorial authorities and decisions on appropriate systems will be based on a number of factors, including the ability of particular options to meet the purposes of the Act. In these circumstances, and given the "effects based" approach of the Act, it is more appropriate to specify criteria for the receiving environment, than to specify a particular location for disposal.

However, the disposal of human wastes in water is culturally and spiritually offensive to tangata whenua, and many find this practice to be unacceptable regardless of the level of treatment. The disposal of human wastes on some areas of land may also be unacceptable to tangata whenua. Part (2) of the Policy ensures that these values are given due recognition in decision making processes, as required in s. 6(e) of the Act. Part (3) of the Policy recognises that sewage treatment and disposal is also an issue of

major significance throughout the regional community and that community values, including willingness and ability to pay, need to be taken into account in decisions on sewage. Parts (2) and (3) of the policy indicate that there are many different values and considerations which must be worked through when making decisions on sewage treatment and disposal and that trade-offs are a necessary part of this process.

Policies for the Management of Hazardous Substances

Policy 11

To ensure that the storage, transportation and use of hazardous substances is safely carried out and, in particular, to encourage, where practicable, a reduction in the amount and toxicity of hazardous substances used in the Region.

Waste
Methods 15-
19.

Policy 12

To have a response capability for pollution incidents, including spills of hazardous substances on land and in the coastal marine area.

Waste
Methods 15-17
and 19.

Policies 11 and 12 acknowledge two special characteristics of hazardous substances — their ability to cause adverse effects throughout their life cycle and the significance of their potential adverse effects. The policies focus on avoiding the adverse effects of hazardous substances at all stages of their life cycles. This encompasses forward planning to ensure that all contingencies, including hazardous spills, can be dealt with at minimal risk to the environment, human health and safety.

See also
Coastal
Environment
Policy 6.

In **Policy 11**, "safely carried out" means in accordance with existing and new legislation, regulations, guidelines and codes of practice for particular hazardous substances, and in accordance with any relevant conditions on resource consents and provisions in any relevant regional plans. Reducing the amount and toxicity of hazardous substances used in the Region is consistent with implementing cleaner production practices. However, it is recognised that less hazardous substitutes may not always be immediately or economically available.

Policies to Address the Adverse Environmental Effects of Past Waste Management Problems

Policy 13

To minimise the risk of damage to the environment and human health from contaminated sites in the Region.

Waste
Methods 20
and
21.

Policy 14

To minimise the risk of damage to the environment and human health from unused and unwanted agricultural chemicals in the Region.

Waste
Methods 22
and
23.

Inadequate waste management practices of the past have left a legacy of environmental contamination. **Policies 13 and 14** deal with two of the problems which have arisen — contaminated sites (e.g., timber treatment sites, old gas works, underground storage tanks) and unwanted agrichemicals. A third problem, the depletion of the ozone layer through the release of CFCs and halons from waste products, such as refrigerators, is covered in the Air chapter.

See also Air Policy 9 and Methods 11 and 13.

These issues are receiving attention because of their potential to cause significant adverse effects on human health and the environment, and because of their high profile regionally and nationally. For example, a recent publication estimated that there could be a total of 642 contaminated sites in the Wellington Region (excluding timber treatment sites), of which 141 could be high risk sites.¹⁹

¹⁹ Ministry for the Environment, 1992. *Potentially Contaminated Sites in New Zealand : A Broad Scale Assessment*, prepared by Worley Consultants for the Ministry for the Environment, Wellington.

The "risk minimisation" approach of **Policies 13 and 14** has been adopted in preference to specifying a particular strategy for remediation, because it defines the desired environmental outcome rather than a particular process.

This approach allows flexibility in achieving the desired result. For example, it may not be economically or environmentally practical to clean up all contaminated sites — in some cases the site may only be cleaned up to an extent which is compatible with a particular end use.

13.5 Methods

Methods for implementing the waste management policies are discussed in five groups which match the policy groups adopted above.

Methods for Integrated Waste Management

The Wellington Regional Council will:

Method 1

- *Prepare a Regional Framework for Waste Management.*

Waste Policies 1-3.

Method 2

- *Establish and service a regional waste liaison group made up of representatives of territorial authorities and other agencies with waste management responsibilities in the Region.*

Waste Policy
1.**Method 3**

- *Promote and co-ordinate the adoption of the Waste Analysis Protocol to monitor and gather information on the waste stream.*

Waste Policies
1
and 2.

The major method for achieving integrated waste management in the Region is the development of a Regional Framework for Waste Management (**Method 1**). The Regional Framework for Waste Management will consist of regional plans controlling the discharge of contaminants (including wastes and hazardous substances) and a set of objectives, policies and methods for waste minimisation. The regional plans or parts of regional plans to be included in the Waste Management Framework include a Regional Air Quality Management Plan (for discharges to air), regional fresh water plans (for discharges to water), the Regional Coastal Plan (for discharges in the coastal marine area) and a regional plan dealing with the discharge of contaminants to land. The waste minimisation objectives, policies and methods will either be included in a regional plan or will be a non-statutory element of the Regional Framework for Waste Management.

Together, these elements of the Regional Framework for Waste Management cover those issues which were previously being addressed by the Wellington Regional Council, in consultation with other groups, through the preparation of a Regional Waste Management Plan. The Framework approach has been adopted in preference to a Regional Waste Management Plan because it provides for a clear division between the various regional plans being prepared by the Regional Council, while maintaining an integrated approach to waste management in the Region.

The regional waste liaison group (**Method 2**) will ensure waste management issues, particularly those which cross district boundaries, are integrated across the Region. A liaison group is an efficient and effective way of maintaining communication throughout the Region.

Good information on the nature of the waste stream is essential for the integrated management of wastes (**Method 3**). The Waste Analysis Protocol has been developed by central government as a tool for gathering information on the waste stream. The Wellington Regional Council will promote and co-ordinate the regional adoption of the Waste Analysis Protocol by territorial authorities. The advantage of using the Waste Analysis Protocol is that it is a nationally integrated system that has already been

developed.

Method 4

To achieve integrated management, other means which could be used to implement Waste Management and Hazardous Substances Policies 1-3 include:

- (1) *Liaison with central government over waste management issues which need to be dealt with at a national level; and*
- (2) *Iwi Waste Management Plans.*

Any group with an interest in waste management could adopt **Method 4(1)** to deal with issues such as national facilities for the storage or disposal of some hazardous wastes or national schemes for encouraging the reuse of waste materials.

Iwi in the Region may wish to use **Method 4 (2)** to ensure that their views on waste management are incorporated into the policies, plans and decisions of local authorities. The advantages for iwi are that the plan would be recognised under the Act and local authorities would be required to consider it in the development of any other plans. Such a plan would also enable iwi to be proactive rather than responsive in relation to the effects of waste management. Where iwi wish to produce such plans, local authorities may wish to provide support.

Methods for Minimising the Amount of Waste for Disposal

The Wellington Regional Council will:

Method 5

- *Prepare a statement of the objectives, policies and methods to contribute to the implementation of Waste Management and Hazardous Substances Policies 4-6 and consider including this statement in a regional plan for waste minimisation.*

Waste Policies
4-6.

Method 6

- *Investigate the use of appropriate incentives for waste reduction.*

Waste Policies
4-6.

Waste minimisation is an ongoing issue. A strategic policy and planning approach has therefore been adopted in **Method 5**. The advantages of including waste minimisation policies in a regional plan are that waste minimisation will be a factor to be included in the assessment of resource consents. However, there are also advantages in promulgating such policies in the form of regional guidelines for cleaner production and waste minimisation. The Regional Council, in consultation with other interested parties, will carry out further analysis to determine the most effective

approach.

Potential incentives for waste minimisation (**Method 6**) include:

- Positive incentives e.g., rewards, loans, rating relief and grants;
- Disincentives e.g., increased charges for use of landfills and other mechanisms to transfer the costs of waste disposal to waste generators; and
- Waste reduction targets (voluntary or mandatory).

At present there is very little information on which to base the level of the incentive. There is therefore a danger of creating unanticipated adverse environmental or economic effects. For example, an increase in tip charges, instead of leading to a reduction in waste generated, could lead to increased illegal tipping and increased monitoring and enforcement costs. The use of economic incentives is therefore only likely to be effective in conjunction with other methods. Similarly, the development of waste reduction targets requires good information on the waste system and effective consultation with any parties involved in achieving the targets.

Method 7

District Plans would be an appropriate means of implementing Waste Management and Hazardous Substances Policies 4-6.

Waste Policies
4-6.

Method 8

To achieve integrated management, other means which could be used to implement Waste Management and Hazardous Substances Policies 4-6 include:

Waste Policies
4-6.

- (1) *Education and information dissemination on waste minimisation;*
- (2) *Setting a good example by implementing measures which minimise the generation of waste; and*
- (3) *Providing appropriate waste management services.*

Territorial authorities can address waste minimisation issues through the inclusion of appropriate policies and incentives in district plans (**Method 7**), or other policy, planning and operational documents, as appropriate.

Methods 8(1) and (2) are important means of supplementing a regulatory approach, because they address society's attitudes to waste, which is at the root of the large quantities of waste generated. These methods could be implemented or supported by

a number of groups, including joint waste minimisation initiatives by local authorities, central government and industry. Examples of educational initiatives which could be adopted to implement **Method 8(1)** include:

- A research, information and advisory service on waste minimisation opportunities;
- Appropriate teaching modules in schools;
- Waste education positions in local authorities;
- Use of landfills and transfer stations as waste education centres; and
- A regional education strategy for the minimisation of waste.

Organisations wishing to set a good example in minimising waste (**Method 8(2)**) could consider implementing:

- Waste audits to assess their waste management practices and identify opportunities for waste reduction;
- Cleaner production demonstration projects;
- Waste reduction targets and objectives in corporate plans; or
- "Think tanks" of industry representatives to develop innovative methods of waste reduction.

The advantages of minimising waste accrue to the organisation which is setting a good example, as well as to the Region as a whole.

Examples of services which could be provided to implement **Method 8(3)** include:

- Domestic, industrial and commercial waste registers and exchanges to encourage reuse;
- Recycling facilities;
- Composting facilities; and
- Recovery of gas from landfills.

Waste management services are the responsibility of territorial authorities under the Local Government Act 1974 and decisions on appropriate services will be taken on a case by case basis, depending on environmental and economic considerations. The Regional Council could become involved in cases where a regional initiative, for reasons of economies of scale or to meet other regional objectives, is more likely to be efficient or effective.

Methods for Avoiding Adverse Effects of Waste Disposal

The Wellington Regional Council will:

- | | | |
|------------------|---|-----------------------------|
| Method 9 | <ul style="list-style-type: none"> • <i>Include objectives, policies and, where appropriate, rules and other methods in the regional plans dealing with the discharge of contaminants to land, water and air.</i> | Waste Policies 7-10. |
| Method 10 | <ul style="list-style-type: none"> • <i>Review, improve and extend landfill leachate monitoring for the Wellington Region.</i> | Waste Policy 8. |
| Method 11 | <ul style="list-style-type: none"> • <i>Liaise with the relevant iwi and give particular consideration to any relevant iwi management plans or statements of iwi views when developing policies and plans on waste disposal, and disposal of sewage in particular.</i> | Waste Policies 7, 8 and 10. |

The treatment and disposal of liquid and solid wastes is the responsibility of territorial authorities under the Local Government Act 1974 and Health Act 1956. The Regional Council's roles are limited to managing the effects of discharges of waste to the environment (e.g., issuing discharge permits for landfills or sewage outfalls) and integrating waste disposal issues across jurisdictional boundaries. The Wellington Regional Council will address these responsibilities through the regional plans (**Method 9**) and the landfill leachate monitoring programme (**Method 10**).

See also Soil Methods 20-23.

In particular, the regional plan for discharges to land will help to avoid the adverse effects of landfills by:

- (1) Requiring all existing and new landfills to obtain the appropriate discharge consents;
- (2) Requiring site management plans for the operation and subsequent rehabilitation of all existing and new waste disposal sites;
- (3) Assisting in the co-ordination of the application process for the various resource consents required for landfills;

- (4) Incorporating the National Landfill Guidelines; and
- (5) Including criteria to identify and rationalise landfill sites in the Region.

Adverse effects from the treatment and disposal of sewage and other liquid wastes (e.g., septic tank discharges, trade wastes and hazardous wastes) will be managed in the regional plan for discharges to land, the regional fresh water plans and the Regional Coastal Plan.

Method 11 applies to the development of the Regional Framework for Waste Management and can also be implemented by territorial authorities in the preparation of policies and plans. This method acknowledges the particular concern of iwi regarding sewage in water and emphasises the need for tangata whenua views to be explicitly considered in decision making on sewage disposal. This is consistent with the purposes and principles of the Act.

Method 12

District plans would be an appropriate means of implementing Waste Management and Hazardous Substances Policy 8.

Waste Policy
8.

Method 13

To achieve integrated management, other means which could be used to implement Waste Management and Hazardous Substances Policy 7 include:

Waste Policy
7.

- (1) *Provision of information and education programmes on appropriate waste disposal to all waste generators, including the industrial, commercial, agricultural and domestic sectors;*
- (2) *Provision of facilities for the collection and disposal of wastes, including hazardous wastes; and*
- (3) *Use of the provisions and powers of other legislation, regulations and guidelines for the disposal of hazardous wastes.*

Method 14

To achieve integrated management, other means which could be used to implement Waste Management and Hazardous Substances Policy 10 include research into alternative means of sewage treatment and disposal.

Waste Policy
10.

Territorial authorities can assist in avoiding the adverse environmental effects of waste disposal by including appropriate provisions in district plans (**Method 12**), bylaws or other plans, as appropriate. The advantages of adopting a planning approach

are that it provides an opportunity for environmental protection requirements to be built in at an early stage of a waste disposal programme and it enables the long-term management of the effects of waste disposal.

Method 13 contains three important supplementary means for avoiding the adverse effects of waste disposal. In particular, education can be carried out by any number of interested groups, including local authorities.

Method 14 could also be carried out by a number of organisations in the Region and complements the operational responsibilities of territorial authorities and the more regulatory approach taken in regional plans to the discharge of sewage effluent.

Methods for the Management of Hazardous Substances

The Wellington Regional Council will:

Method 15	<ul style="list-style-type: none"> • <i>Establish and service a liaison group of local authorities and other agencies with responsibilities for hazardous substances in the Region.</i> 	Waste Policies and 12.	11
Method 16	<ul style="list-style-type: none"> • <i>In consultation with territorial authorities, develop a regional inventory of hazardous substances, including facilities and activities which use hazardous substances.</i> 	Waste Policies and 12.	11
Method 17	<ul style="list-style-type: none"> • <i>Include in the Regional Framework for Waste Management objectives, policies and, where appropriate, rules and other methods in regional plans dealing with the discharge of contaminants to land, water and air, to contribute to the implementation of Waste Management and Hazardous Substances Policies 11 and 12.</i> 	Waste Policies and 12.	11

The legislation governing the management of hazardous substances is currently under review and responsibilities are changing. The liaison group (**Method 15**) will facilitate co-operation among the agencies responsible for managing hazardous substances and will enable responsibilities to be clarified during the transitional period. Lack of information on hazardous substances is currently hindering better management. Information systems (**Method 16**) could be developed at a regional level but they will need to be closely co-ordinated with national initiatives.

The advantage of adopting a planning approach to hazardous substances management (**Method 17**) is that it plans in advance to manage the risks posed by hazardous substances throughout

their life cycles (including emergency responses), rather than adopting an ad hoc response as problems arise. At a regional level the Regional Framework for Waste Management is the major mechanism for implementing the Regional Council's responsibilities in this area. The various elements of the Framework will cover:

- (1) Site management plans, contingency plans and cleaner production programmes for facilities handling hazardous substances;
- (2) The co-ordination of a regional response strategy for hazardous spills; and
- (3) The development of a tracking system for highly hazardous substances in the Region.

Method 18

District plans would be an appropriate means of implementing Waste Management and Hazardous Substances Policy 11.

Waste Policy
11.

Method 19

To achieve integrated management, other means which could be used to implement Waste Management and Hazardous Substances Policies 11 and 12 include:

Waste Policies 11
and
12. See also
Soil Methods
21 and 22.

- (1) *Promoting and providing information on cleaner production practices; and*
- (2) *Using provisions and powers of other legislation, regulations and guidelines for the transportation, use and storage of hazardous substances.*

Territorial authorities can use planning mechanisms to control the use of land in relation to hazardous substances, as specified in **Method 18** (see also section 13.7).

Rules relating to hazardous substances can only be included in regional or district plans where they are consistent with the local authority's responsibilities under the Act, and where they can be justified in terms of environmental effects and costs and benefits in relation to alternatives.

Method 19 contains two supplementary mechanisms for the management of hazardous substances. Responsibility for these methods is shared between the local authorities and health authorities. Cleaner production is an effective way of reducing the adverse effects of activities which use hazardous substances. Other legislation dealing with hazardous substances, including the Transport, Dangerous Goods, Explosives, Pesticides and Toxic

Substances Acts, sets out responsibilities for other agencies. These Acts are currently under review and will be replaced by the proposed hazardous substances and new organisms legislation. In the interim, there is a need to make co-ordinated use of the provisions of existing legislation and to promote adherence to existing guidelines, such as those prepared by the Department of Health for the safe management of various hazardous substances.

Methods to Address the Adverse Environmental Effects of Past Waste Management Problems

The Wellington Regional Council will:

- | | | |
|------------------|--|--|
| Method 20 | <ul style="list-style-type: none"> • <i>In conjunction with territorial authorities, compile a register of all confirmed contaminated sites in the Region, including underground storage tanks.</i> | Waste Policy 13.
See also Soil Method 23. |
| Method 21 | <ul style="list-style-type: none"> • <i>Adopt the ANZECC guidelines on contaminated sites to assist in the assessment of risk, prioritisation of sites, and development and implementation of a strategy for action for contaminated sites in the Region.</i> | Waste Policy 13. |
| Method 22 | <ul style="list-style-type: none"> • <i>Co-ordinate the development of a data base of the unwanted agrichemicals in the Region.</i> | Waste Policy 14. |
| Method 23 | <ul style="list-style-type: none"> • <i>Develop and implement a strategy for the redistribution, reuse, collection, treatment and disposal of unwanted agrichemicals in the Region.</i> | Waste Policy 14. |

The methods for contaminated sites and unwanted agrichemicals focus first, on the collection of information, and secondly, on the development of a strategy for action based on assessment of risk and priorities. Once the level of risk and priority has been identified, economic and environmental criteria can be applied to decide the most appropriate course of action for a particular contaminated site or store of chemicals. These methods have been adopted because they are flexible and practical and build on the work which has already been done in Australia and New Zealand. Their successful implementation will require co-operation between the Wellington Regional Council, territorial authorities and industry.

13.6 Anticipated Environmental Results

- (1) Less waste is produced and there is a more sustainable rate

of the use of natural resources including energy.

- (2) Pollution from the disposal of waste is avoided.
- (3) The quality of water, air and soil in the Region is improved.
- (4) Environmental damage from hazardous substances is avoided.

13.7 Responsibilities

The responsibilities for **developing objectives, policies and rules for the control of the use of land** for the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances are shown in table 12. In this table "land" has been divided into three types — the coastal marine area, the beds of lakes and rivers, and all other land.

The table shows that **the Regional Council has the primary responsibility** for the control of the use of land for the prevention or mitigation of any adverse effects from hazardous substances.

Table 12 : Responsibilities for the Control of the Use of Land for the Prevention or Mitigation of Adverse Effects of Hazardous Substances

	Responsibility for Developing Objectives	Responsibility for Developing Policies	Responsibility for Developing Rules
Coastal Marine Area	WRC	WRC	WRC
Beds of Lakes and Rivers	WRC	WRC	WRC
Other Land	WRC* TA	WRC* TA	WRC TA*

Key

WRC = Wellington Regional Council
 TA = Territorial authorities
 * = Primary responsibility

For land other than land in the coastal marine area and the beds of lakes and rivers, the Regional Council will carry out this responsibility through this Regional Policy Statement and through the development of objectives and policies in regional plans. It will not write regional rules for this purpose, **unless** any relevant regional objective or policy is not able to be achieved through rules in district plans.

Territorial authorities therefore have primary responsibility for writing rules for the control of the use of land (other than in the

coastal marine area or the beds of lakes and rivers) for the prevention of any adverse effects from hazardous substances, but these rules must not be inconsistent with either the Regional Policy Statement, or the relevant objectives and policies in a regional plan.

The responsibilities shown in table 12 apply **only** to the development of objectives, policies and rules for the control of the use of land for the prevention or mitigation of any adverse effects of the storage, use, disposal or transportation of hazardous substances, and do not affect any other responsibilities set out in s. 30 and 31 of the Act.

14. The Built Environment and Transportation

14.1 Introduction

The Wellington Region has primarily an urban population. Of the 400,000 people living in the Region, 94 percent live in urban areas containing more than 1,500 people. These settlements range from small towns like Martinborough to cities such as Wellington with a population of 150,000.

Although many of these urban areas may be regarded as physically separate communities, many settlements in the Wellington Region are functionally linked by a complex web of physical, social, cultural and economic interrelationships. Activities or changes in one part of the built environment can often have significant and sometimes unexpected consequences for other areas.

The term "built environment" is used to describe all those structures, facilities and other physical resources built by people. It therefore includes urban and rural settlements, telecommunication and utility networks, transportation systems, sewerage and water systems, dams and flood control structures, and recreational facilities.

However, as use of the word "environment" indicates, the built environment means more than just physical resources. It additionally involves the relationships between people and communities, and physical resources. Five aspects of these relationships are considered in this and in other chapters of the Regional Policy Statement:

- The human values placed on **buildings, structures and facilities**;
- The need for physical resources such as transportation systems and public utilities (**infrastructure**) that connect and service human settlements;
- The **natural systems** (air, water, land and ecosystems) that are essential for life, but that also contribute to the quality of the built environment;

- The **resources** used (including energy) and the **wastes** produced by activities undertaken by people for their social and economic well-being; and
- The **process of development** by which the built environment changes, and the **urban form** which results from the process.

Buildings provide many of the services and products which enable people and communities to provide for their well-being, safety and health. Buildings provide shelter and warmth, but also meet other human needs. They can help create a sense of history and heritage, meet requirements for recreation and entertainment, provide the physical structures in which to shop or work, and cater for the provision of health and other community services. Collectively, buildings can make important contributions to local identity and to wider landscapes.

The Region's **infrastructure** comprises those structures and facilities that link urban areas, and support the functioning of society. Infrastructure includes the electricity, gas, sewage disposal, water supply, roading and rail networks that service the Region. The Region's infrastructure therefore represents a considerable physical resource.

This chapter provides a particular focus on one part of the Region's infrastructure, its **transportation network**. Debates about transport often begin, and end, with disagreement about the relative advantages and disadvantages of different types (modes) of transport. The current pattern and scale of movement is heavily dependent on motor vehicles that are powered by finite fossil fuels. This dependency has a number of adverse consequences for the long-term viability of transportation and for the environment.

Transport is not an end in itself but a means of undertaking social, economic, cultural, recreational and other activities. The key question relates to the optimum way of meeting regional (and national) needs for the movement of people and goods. The optimum solution is one that provides, now and in the future, good accessibility to many different places for as many people as possible, whilst minimising the risk of damage to the environment and using finite fuel sources wisely.

The healthy functioning of **natural systems** as an integral part of the built environment is an important consideration for the

Regional Policy Statement. Access to clean water, unpolluted air, the coast and to a diverse range of natural areas contributes enormously to the quality of urban living. These matters are dealt with in other chapters of the Regional Policy Statement.

(Coastal Environment), 8 (Air) and 9 (Ecosystems).

However, the day-to-day use of the Region's urban areas and infrastructure **consumes significant volumes** of resources, and can **generate large quantities of waste**. The density and diversity of activities within large urban areas can lead to high concentrations of pollutants and cumulative effects on the natural environment.

See chapter 13 (Waste).

Moreover, the repair and upgrading of road and rail infrastructure and the extension of pipes and networks to service new urban development can also consume large quantities of construction materials. Construction, if not properly managed, can also cause adverse effects on the environment.

The **process of urban development**, the shape of settlements (**urban form**) and the distribution of activities and their interrelationships (**density**), are potentially major influences on sustainable resource use. The development of the Region's urban areas and the provision of infrastructure systems represent a major investment of capital and, when built, are significant regional resources. Though renewable, these resources are costly to provide, maintain and replenish. Decisions about the location of activities and the form and density of urban development can have a major long-term impact, for better or worse, on the achievement of sustainable resource management.

Nonetheless, it is essential to recognise the beneficial value of urban areas in terms of providing for the Region's social, cultural and economic well-being. Indeed, in possessing a capital city, an international seaport and airport, and the centre for significant national and international economic activities, the Region plays a vital national role. This role is acknowledged in the Regional Policy Statement.

The sustainable management of the Region's built environment must take all these matters into account. The Regional Policy Statement has a part to play, but the objectives and policies contained in this and in other chapters of the Statement will be complemented by the policies adopted by territorial authorities in their district plans. The district plans are expected to be the documents that spell out the more specific means for promoting sustainable management of the built environment.

14.2 Issues

- | | | |
|----------------|---|---------------------------------------|
| Issue 1 | There is considerable uncertainty about what sustainable management of the built environment involves . There are no commonly accepted approaches to addressing the subject, nor agreement about what data might be needed to assess whether sustainability is being achieved. | Built Environment Policy 1. |
| Issue 2 | Despite the severe constraints presented by hilly topography, the Wellington Region's urban areas are generally characterised by a low density and extended form of development . While lower density housing may be appropriate in certain areas (for example, because of the physical character of the terrain, limitations of infrastructure or for reasons of amenity) other areas that could accommodate higher densities are not able to do so because of subdivision controls. Low density development is not very efficient for resource use, requires a large and valuable land area and, over the long-term, carries extra costs through the need to maintain an extensive infrastructure. | Built Environment Objective 1. |
| Issue 3 | Unco-ordinated and sporadic development around the Region may place pressures on those parts of the environment that are less able to cope. There is presently a risk that policies on urban development within each district may be prepared with little consideration of the wider impacts of such policies on other urban areas or wider resource management issues (e.g., energy use). The implications, for example, of rapid urban growth in the Kapiti Coast area for the remainder of the Region are little understood. | Built Environment Objectives 1 and 2. |
| Issue 4 | The location of major facilities for public use , such as major shopping developments or new recreation centres, can also have significant effects beyond the immediate surroundings of the facility. For example, sports stadia can have long-term impacts on the transport system and the use and development of infrastructure, and a large shopping centre can influence the location and density of development and the demand and supply of other public facilities. | Built Environment Objective 2. |
| Issue 5 | Low density development and growth in areas not serviced by public transport tends to reinforce the inefficient use of public transport systems . It is proving difficult and expensive to operate and maintain an efficient urban public transport system in Wellington, yet such a system is important in meeting social and environmental objectives. Despite the extensive network and the significant investment in resources that has been made, the urban passenger rail network, for example, needs large subsidies to be able to operate. There is a need to: | Built Environment Objective 1. |

- Ensure that land uses and developments are managed so that, as far as possible, they can be efficiently serviced by public transport;
- Maintain and develop public transport networks which can provide good accessibility, while minimising adverse effects on the environment; and
- Provide a more integrated land use/transportation planning process.

Issue 6

Road, rail, sea and air **transport systems create a range of adverse local and global environmental effects**. In the Region these include the following:

- Air pollution (from "greenhouse" and other gases such as CO₂, CO, NO_x, SO_x, unburnt hydrocarbons, CFCs and benzene; primary pollutants such as lead and other particulate emissions);
- Noise (from aircraft and from vehicles in congested built-up areas and in the vicinity of major roads);
- Severance of neighbourhoods (from roads that cut through or divide residential areas);
- Water and soil pollution (from pollutants in run-off from road surfaces, running into freshwater and coastal water; potentially, from used or waste liquids such as ethylene glycol, crankcase and gear oil, transmission fluids and grease; and, potentially, from solids such as aluminium, chromium, iron, lead, nickel, zinc, asbestos, paint, rubber dust and soot); and
- Ecological damage (arising from habitat disruption or destruction caused, for example, by oil spills, dredging of sea beds or new route construction).

The various types of transport systems create these effects to a greater or lesser extent. The concerns raised in this Issue relate to identifying the range of effects, preventing them and encouraging transport users to make informed choices which would minimise adverse effects on the environment.

Issue 7

The cost of **maintaining, developing and expanding the Region's infrastructure** is often large, entailing a major investment of resources, and frequently commits future

Built
Environment
Objective 2.
See also
Energy
Objective 3.

Built
Environment
Objective 2.

development to a fixed pattern or direction. Decisions concerning infrastructure need to take into account a full consideration of long-term environmental costs and resource efficiency.

- | | | |
|-----------------|---|---|
| Issue 8 | The need to protect major investment in infrastructure is also an issue. The protection and maintenance of transport networks and of network utility operations, together with the land corridors through which they pass, is essential for their long-term and efficient use. | Built Environment Objectives 1 and 2. |
| Issue 9 | Developments and extensions to infrastructure can have adverse environmental effects . Extensions to the transport network, for example, may have impacts on areas of special value, including the coastal environment, valued landscapes, rare habitats or sites of significance to tangata whenua. | Built Environment Objectives 2 and 3. See also Soil Issue 14. |
| Issue 10 | Urban areas are large consumers of energy and producers of wastes . They are also typically the biggest generators of environmental problems connected with energy use, such as the emission of contaminants. However, historically energy has been one of the least considered aspects of urban development. | Built Environment Objectives 1-3. |
| Issue 11 | The concentration of activities in urban areas and the cumulative impact of their effects have the potential to place unsustainable demands or effects on local natural resource systems. Avoiding or minimising such effects on an integrated basis must be a key element in managing development. Different authorities and agencies have different but complementary roles to play, and there needs to be consistent application of environmental policies across the Region's urban systems. | Built Environment Objective 2. |
| Issue 12 | Levels of amenity vary widely within the Region at present. A high quality urban environment enhances social and economic well-being for its residents and also central to visitors' feelings about the Region.

"Quality" largely depends on having those amenities which the community deem as important elements of the overall urban environment, including visual quality, heritage character, access to parks and recreational facilities, low pollution levels and traffic volumes, and the presence of natural features. | Built Environment Objective 3. |
| Issue 13 | The importance of special features and the particular character of different urban areas is often overlooked and needs a better level of protection. Each area has unique qualities that collectively contribute to the regional character — the things that make the Wellington Region distinctive from other parts of New Zealand. The historic character of the suburbs flanking Mount Victoria, for example, and the urban landscape around Porirua | Built Environment Objective 3. |

Harbour are important elements of the regional character, particularly as they are located on "gateways" into the Region (the airport and major road and rail routes).

14.3 Objectives

Objective 1

Urban areas, the built environment and transportation systems are developed so that they, and their associated activities, use resources efficiently and demand for the use of finite resources is moderated.

Built
Environment
Policies 2, 3, 5
and 6.

Sustainable management requires the efficient use of our natural and physical resources. **Objective 1** recognises that scarce resources, such as land for urban development, freshwater, clean air and non-renewable energy, are used in ways that maximise benefits whilst minimising costs, including environmental costs.

The objective refers to urban areas, individual structures and the activities that take place in urban areas and buildings. It therefore involves consideration of efficient use of resources in relation to urban form, to the density of development in urban areas, and to the geographical distribution of activities in the Region and the need to provide transport links between them.

Objective 1 also seeks to apply efficiency considerations to the use, development and management of transportation networks and to the operation and long-term management of the Region's physical infrastructure generally. The Regional Land Transport Strategy will help spell out the policy direction and implications of Objective 1 for the Region's transportation systems. The Objective also points to the need to avoid, as far as possible, duplication of facilities because of the need to manage resource use in an efficient and sustainable manner.

Objective 2

The adverse environmental effects that result from the use of urban areas, transportation systems and infrastructure are avoided, remedied or mitigated and, in particular, any effects that result from the concentration and scale of activities in urban areas are recognised and provided for.

Built
Environment
Policies 3-7.

Many of the effects of activities in urban areas are essentially the same as the effects of similar activities in non-urban areas. However, **Objective 2** recognises that there are two characteristics of urban areas which give rise to **cumulative** effects that are particular to urban areas. The characteristics are:

- (1) The **concentration** of activities and effects in urban areas

(e.g., the number of households and associated volumes of waste, vehicle ownership and concentrations of pollutants);

- (2) The **scale** or geographical extent of activities and effects.

Specific consideration needs to be given to these characteristics when managing the adverse effects of activities in urban areas. Management of the effects may require quite different approaches to those used for managing more localised effects. For instance, managing the effects of transport or sewage discharges from urban areas are usually very different from non-urban situations. Similarly, the scale and concentration of effects of major development projects require a management approach that could involve a range of local authorities.

The principal reason for adopting **Objective 2** is that it recognises that urban areas, transportation systems, and infrastructure are major source of adverse environmental effects. Because of their concentration and scale, the effects may best be addressed on an aggregated basis (city-wide or Region-wide), rather than on a site by site or locality basis.

Objective 3

The environmental quality of urban areas is maintained and enhanced.

Built
Environment
Policy 8.

Objective 3 identifies environmental quality as an important value to recognise and provide for in the management of urban areas and the built environment. Quality is a function of high levels of public amenity, good urban design and the presence and health of natural elements within the urban environment.

The Wellington Region is given a special character by the distribution and mix of sizes of its settlements, its city precincts and its individual buildings. This character ranges from the "downtown" setting of Wellington's central city to the semi-rural quality of rural-residential areas in Ohariu Valley and around Masterton. In other parts of the Region, such as the coastal suburbs of Oriental Bay, Eastbourne and Raumati, it is the interaction with the natural environment that creates a distinctive environment.

Objective 3 recognises that maintaining acceptable levels of urban environmental quality is essential, not only for the majority of the Region's residents, but also for the image and attractiveness of the Region.

14.4

Policies

Policy 1

To improve understanding of sustainable management in relation to urban areas and the built environment, and to develop means by which it can be implemented.

Built
Environment
Method 1.

Policy 1 seeks to provide more informed understanding of how urban areas can be managed in a sustainable way, given the importance of such areas in terms of their use of resources and their role in generating social and economic wealth.

The policy recognises that, because of the complexity of the systems involved and their dynamic nature, such understanding is unlikely to be completed — current understanding can only be improved upon.

The wording of the policy also acts as a reminder that knowledge of what constitutes sustainable management of urban areas is insufficient in itself. Understanding needs to find expression in practical application.

The principal reason for adopting **Policy 1** is that, without such knowledge, the management of the Region's urban areas and its built environment may overlook those issues and processes which would direct urban development onto a more sustainable path.

Policy 2

To use natural and physical resources efficiently in the development of urban areas and in use of the built environment by:

Built
Environment
Method 2.

- (1) *Encouraging forms of urban development that reflect efficient use of resources; and*
- (2) *Avoiding, where practicable, the use of new resources, particularly non-renewable resources.*

Policy 2 seeks greater efficiency in the use of resources in urban development, within urban areas and in the construction and operation of individual buildings. The policy is also concerned with the relationship between land uses, and the potential for particular distributions of land uses to generate inefficient or additional demands on transportation networks and transport services.

Policy 2 does not seek to direct particular urban forms, but it does require consideration of different forms of development in achieving efficient resource use.

Policy 2 also acknowledges that one of the fundamental precepts of sustainable management is that new resources, particularly non-renewable resources, should be used wisely.

Policy 3	<i>To promote the development of transportation systems in the Region that:</i>	Built Environment Method 3.
	<ul style="list-style-type: none"> (1) <i>Meet community needs for accessibility;</i> (2) <i>Use modes of transport that are powered by renewable energy fuels;</i> (3) <i>Help moderate demand for energy and use energy efficiently;</i> (4) <i>Discourage dispersed development; and</i> (5) <i>Avoid or reduce adverse effects on human health, public amenity and water, soil, air and ecosystems.</i> 	See also Energy Policy 3.
	<p>Policy 3 seeks to address the resource consumption and environmental problems generated by current patterns of transport. The policy seeks to provide guidance on the efficient use of resources whilst meeting community needs for accessibility and avoiding the local and global environmental problems associated with current transport modes. Recognition is given by the Policy, for example, to the contribution that transport can make to meeting targets which have been set through international agreements and protocols to reduce net CO₂ emissions.</p>	
Policy 4	<i>To provide for the accessibility needs of the Region by protecting existing transport corridors.</i>	Built Environment Method 3.
	<p>The topography of much of the Region severely limits the corridors available for transportation networks to meet community needs for accessibility. Decisions or actions that would lead to the removal or blockage of such corridors would inevitably lead to lower levels of accessibility and economic inefficiencies.</p> <p>Policy 4 seeks to safeguard transport corridors, on land and water, for the efficient provision of accessibility for the regional community.</p>	
Policy 5	<i>To recognise that the services provided by network utility operations and infrastructure make an important contribution to the social and economic well-being of the Region.</i>	Built Environment Method 4.
Policy 6	<i>To promote the provision and efficient use of infrastructure in the Region, and the reduction of adverse environmental effects from its use.</i>	Built Environment Method 4.

Policies 5 and 6 recognise the importance of, and the large costs associated with, providing and using infrastructure. Network utility operations and infrastructure generally represent a considerable physical resource in the Wellington Region. The financial costs of provision and the environmental costs that can arise from use together mean that the investment in network utility operations and infrastructure should be efficiently used.

Policy 6 also acknowledges that a balance needs to be struck between using infrastructure to achieve a good return on the initial investment and avoiding adverse environmental effects from use of pipes or reticulation systems that are old, damaged or overused. In certain circumstances the replacement of old systems and the development of new infrastructure may be an "efficient" use because of environmental benefits to be gained.

Policy 7

To take account of regionally significant effects on the environment of any new use or development, the size, function or location of which is likely to give rise to those effects.

Built
Environment
Method 5.

Policy 7 acknowledges that, because of the scale and concentration of effects that can arise in urban areas and as a result of urban development, a wider view may need to be taken. The policy also recognises that the effects arising from major development proposals (e.g., for new shopping centres or for sports stadia) may also require a regional view. The policy aims to encourage the co-ordinated formulation and implementation of policies by all relevant authorities.

Policy 7 has been adopted because the scale and concentration of effects arising from urban development can have significant cumulative and cross boundary effects on the environment. Criteria for assessing "regionally significant effects" of the use of land are set out in section 3.2.11 of the Regional Policy Statement.

Policy 8

To promote a high level of environmental quality in urban areas by:

Built
Environment
Method 6.

- (1) *Encouraging good urban design;*
- (2) *Enhancing and protecting amenity values; and*
- (3) *Maintaining and enhancing natural areas and protecting those places, features or buildings with significant heritage, ecological, cultural or landscape values.*

See also
Landscape
and
Heritage
Policy 4.

Policy 8 identifies good urban design and the protection of amenity values as key elements in achieving environmental quality in urban areas. Good urban design involves an approach to managing development that incorporates physical design elements with the needs and aspirations of people for health and a feeling of well-being, and with the needs of natural systems.

The policy also acknowledges, that for Maori residents of the Region, achieving high standards of amenity, urban design and environmental quality includes making provision for the development of marae, papakainga housing, kohanga reo and other cultural institutions within urban settings.

14.5 Methods

Method for Improving Understanding of Sustainable Management of the Built Environment

Method 1

The Wellington Regional Council will review relevant information sources on sustainability and urban and rural systems, and will consider undertaking research or policy analysis to further understanding.

Built Environment Policy 1.

At present there is confusion about the application of sustainable management to urban areas and the built environment. Further investigation may help establish better understanding.

Method for Efficient Use of Resources and Minimising the Use of New Resources

Method 2

District plans would be an appropriate means of implementing Built Environment and Transportation Policy 2.

Built Environment Policies 2 and 3.

District plans are a major way in which the efficient use of resources for urban development could be achieved.

For example, in relation to resource efficiency, transportation systems and urban development, district plans can begin to have an effect. Whilst plans may not achieve substantial improvements in the short-term, provisions in the plan could place a priority on the consolidation of existing or partly developed areas before opening up new areas to urban development. District plans can be an important means by which, for example, higher density development can be encouraged and facilitated in areas with convenient access to public transport or urban expansion directed to areas that are serviced or programmed to be serviced by public

transport.

Such provisions would not mean that existing urban areas need to be fully developed before any new green fields development is permitted. Rather, the relative costs and benefits (in their widest sense) should be considered.

At a small scale, district plans can be effective means of addressing resource efficiency considerations for new urban uses and development. Site layout, building design and consideration of energy efficiency in the development of policies for settlements and transport needs are all matters where district plans could help implement Built Environment and Transportation Policy 2.

See also
Energy
Policy 3.

Methods for Promoting a Sustainable Transport System and the Efficient Use of Infrastructure

Method 3

The Wellington Regional Council will prepare and review the Regional Land Transport Strategy and through the Strategy and its other transport responsibilities:

Built
Environment
Policy 3. See
also Energy
Method 4 and
Air Method 10.

- (1) *Promote public awareness about the full social, economic and environmental costs of using different modes of transport;*
- (2) *Promote the use of urban transport modes which use renewable energy resources and that are efficient in the use of energy generally;*
- (3) *Promote policies that encourage the provision and use of alternatives to individual vehicles as a means of meeting needs for accessibility;*
- (4) *Promote fuel efficient driving practices; and*
- (5) *Provide, where appropriate, funding for the investigation, planning and provision of public transport services.*

Method 4

To achieve integrated management, other means which could be used to implement Built Environment and Transportation Policies 3-6 include:

Built
Environment
Policy 3-6.

- (1) *Encouraging the introduction, monitoring and enforcement of emissions standards for all land transport vehicles;*
- (2) *Encouraging relevant authorities, in their plans and decisions, to make adequate and appropriate provision for the development, maintenance and upgrading of network*

utility operations and infrastructure, and for the protection of existing transportation corridors;

- (3) *Encouraging the owners and operators of existing infrastructure to ensure that such infrastructure, where practicable and reasonable, is used to capacity before additional infrastructure is programmed and provided; and*
- (4) *Ensuring that all infrastructure is developed and used in ways that reduce, as far as practicable, any adverse environmental effects.*

Method 3 identifies a number of means by which the Regional Council can help put Built Environment and Transportation Policy 3 into effect.

The Regional Land Transport Strategy is prepared by the Regional Council. It has a time horizon of five years and must be reviewed biennially. It identifies future transport needs of the Region and proposes ways in which accessibility can be met in safe and cost effective ways, while having regard to environmental effects.

The Regional Council also has responsibilities for public transport funding, planning, co-ordination and service provision. These responsibilities, together with the Regional Land Transport Strategy, are therefore likely to be important means of implementing Policy 3.

Method 4 identifies some other means by which Built Environment and Transportation Policy 3 and, in particular, Policies 4-6 may be implemented. Clause (1) deals with vehicle emission and the introduction of standards. Clause (2) seeks that relevant authorities address requirements for the provision of network utility operations and infrastructure, and for protecting corridors that enable accessibility to and through the Region (including land and coastal water "corridors"). "Relevant authorities" are principally territorial authorities, but also include the Regional Council and other public sector bodies and agencies.

A principle of efficient resource use is that existing investments are used at an optimal level. Clauses (3) and (4) reflect this principle by seeking a balance between maximising the capacity of existing infrastructure (Clause (3)), while recognising that avoiding adverse effects is also an important element of efficient resource use (Clause (4)).

Method for Providing an Integrated Management

Framework for Considering Regional Effects of Urban Development and Major Development Proposals

Method 5

The Wellington Regional Council will:

Built
Environment
Policy 7.

- (1) *Carry out a review to determine how the integrated management of the Region's urban areas can be best achieved;*
- (2) *Promote the assessment, where appropriate, of regionally significant effects, including transportation effects, of proposals for significant public and commercial developments and facilities;*
- (3) *Liaise with territorial authorities, Government departments and agencies, and other relevant organisations on issues of infrastructure and urban development that are of regional significance; and*
- (4) *Consider the preparation of a Regional Urban Development Strategy as a means of providing guidance and direction for matters relating to infrastructure, urban areas and urban development that are of regional significance.*

Method 5 identifies actions that the Regional Council will take in relation to the regional effects that may arise from urban development and major proposals for new facilities in the Region.

Clause (2) seeks that consent authorities, in determining resource consents for major developments, make an assessment of the regionally significant effects that may arise from the proposals. The clause is not intended to imply that the Regional Council will make a judgement on regionally significant effects; only that the Council will "promote" such an assessment by relevant authorities.

Clause (4) identifies an Urban Development Strategy as one means of providing a co-ordinated approach to regional considerations that may arise from urban development. Whilst such strategies have been used elsewhere in the country and can be an effective means of ensuring an integrated management framework, they should only be developed if there is a common acceptance of their purpose and benefits.

It is not yet clear whether such a strategy is needed. Therefore, the Regional Council will consider the suitability of a development strategy at an appropriate opportunity.

Method for Promoting Environmental Quality

Method 6

District plans would be an appropriate means of implementing Built Environment and Transportation Policy 8.

Built
Environment
Policy 8.

Method 6 recognises that territorial authorities can include objectives, policies or criteria in district plans which promote:

- The maintenance and restoration of environmental quality in urban areas;
- The protection of significant features; and
- The protection of sites within or around urban areas which will buffer, link and preserve ecosystems.

Examples of means that could be included in a district plan are:

- (1) Criteria for the identification and prioritisation of significant areas of poor visual amenity.
- (2) Provisions for the protection of the heritage values of significant buildings.
- (3) Provisions for the protection of places of special significance to the tangata whenua, including features that are likely to be affected by development pressures.

Methods identified elsewhere in the Regional Policy Statement are also of relevance to the implementation of Policy 8.

See
Ecosystems
Methods 12
and
14-17, and
Landscape
and
Heritage
Methods 6-9

14.6

Anticipated Environmental Results

- (1) The use of finite resources in urban areas is moderated and those finite resources and renewable resources which need to be used are used more efficiently.
- (2) Urban infrastructure and transportation systems are used efficiently and, as far as practicable, adverse effects of their use are avoided.
- (3) Urban systems are more energy efficient, and have a high level of renewable energy use per capita.

- (4) The urban environment is healthy and provides a high standard of urban amenity for its residents and visitors.
- (5) Buildings, urban areas and features with significant heritage, ecological, landscape or cultural values are protected.

Part III

Implementing the Regional Policy Statement

15. Implementation Processes

15.1 Introduction

The value of the Regional Policy Statement will be determined by its capacity to bring about change and provide direction for environmental management. Whereas chapters 4-14 outlined specific methods for implementing policies and achieving objectives, this chapter looks at how the Wellington Regional Council will implement this Statement as a whole. It deals with the Council's approach on the following matters:

- Consultation;
- Cross boundary issues;
- Resource consents;
- Regional Plans;
- Working co-operatively; and
- Monitoring and review of the Regional Policy Statement.

15.2 Consultation

During the preparation of a proposed policy statement or plan the local authority concerned is required to consult with the following: the Minister for the Environment, any other Minister of the Crown who may be affected by the policy statement or plan, local authorities who may be affected, and the tangata whenua of the area who may be affected, through iwi authorities and tribal runanga (First Schedule, Part I).

A High Court decision has helped define consultation.⁵ The Ministry for the Environment noted the following from Mr Justice McGechan's decision:

The Court held that the duty to consult -

- (a) *meant "meaningful discussion", lying between telling or presenting and agreement or negotiation towards agreement. Consultation must allow "sufficient time" and involve "genuine effort". It is to be a "reality, not a charade";*

⁵

Air NZ & Others v Wellington International Airport & Others, McGechan J, HC - Wellington; 6/1/92

- (b) *implied adequate information as to enable the person being consulted to make intelligent and useful responses, and the person doing the consultation being "ready to change and start afresh"; and*
- (c) *was breached in this case when consultation was closed off with the consultee's case substantially unrepresented.*⁶

The Council will be mindful of the above, not only when consulting with those parties with whom it has a statutory responsibility to consult, but when consulting with any party.

15.3 Cross Boundary Issues

The Wellington Regional Council will seek to promote consistent and integrated application of objectives and policies contained in this Regional Policy Statement. To this end, the Regional Council will:

- Encourage other resource management agencies in the Region to make provision, where appropriate, for the management of regionally significant resource issues in a manner consistent with objectives and policies stated in this document and in any regional plans;
- Review district plans for their consistency with the Regional Policy Statement and prepare submissions on documents from other authorities and agencies which relate to the Regional Council's resource management responsibilities;
- Consult, where appropriate, with neighbouring regional councils over the preparation of regional plans;
- Promote a collaborative approach to managing resource consent applications where the request for a consent involves decisions to be taken by both a territorial authority and the Regional Council, **except** in those situations where there is a potential conflict of interest between both authorities; and
- Promote a collaborative approach to managing resource consent applications where the application site or effects arising from the proposed activity cross regional boundaries and have implications for adjoining authorities.

15.4 Resource Consents

⁶

Ministry for the Environment, Manager, Central Region, pers. comm., 16 April 1992.

The Regional Council recognises the importance of social and economic development in the Wellington Region and will therefore make the process for obtaining resource consents as straightforward and efficient as possible.

In carrying out its resource consent granting responsibility, the Regional Council will:

- Provide a resource consent service that enables effective communication between all participants, including applicants or their agents, Council staff, those directly affected by a proposal and other interested parties within the public at large;
- Require the applicant to provide sufficient and appropriate information about a proposal, and a suitable assessment of the effects of the proposed activity on the environment;
- Encourage the use of pre-hearing meetings and seek to use other informal means of resolving disputes in advance of or in place of formal procedures; and
- Promote the use of joint hearings with territorial authorities (and where appropriate, neighbouring regional councils) where resource decisions need to be considered and decided upon in an integrated way.

In carrying out the resource consent service and in making decisions about the use, development and protection of natural and physical resources, the Regional Council will meet its obligations under s. 104 of the Act ("Matters to be considered") in coming to a decision.

The Regional Policy Statement contains a large number of policies that collectively strive for a consistent, coherent, and integrated approach to resource management in the Region. However, because of the scope of the document and the diversity of circumstances in which policies may be used, the Regional Council recognises that there will be situations when resource consent applications have to be determined and policies are not wholly consistent with one another. In these situations, the Council reserves the right to make a decision based on s. 104 and its interpretation of the relevant policies within the Policy Statement.

15.5 Regional Plans

Under the Act, regional plans may be used to implement the sustainable management of resources. Regional plans serve two purposes: first, they are a vehicle for **policy** (at a level below the Regional Policy Statement or for a more location specific purpose); and secondly, they are a **method for implementing policy** through the rules they contain.

The circumstances under which the Council is **able** to prepare a regional plan are outlined in s. 65 of the Act (e.g., where there is a need for the protection of a resource). The Council, however, has devised the following guidelines for determining the circumstances when a regional plan will be **the most appropriate way** to deal with a problem.

The Council will only prepare regional plans when it is necessary:

- To permit, regulate, or prohibit activities (through rules);
- To provide policies, objectives, and rules for consent granting purposes (s. 104(4)) which cannot be provided by other means such as a change to the Regional Policy Statement or by appending regional rules to a district plan;
- To ensure consistent outcomes between the plan and district plans (s. 75) or other regional plans;
- To enable the formulation of objectives, policies and rules that have been through a statutory process which involves consultation and which provides an opportunity for appeal;
- To give effect to one or more of the Act's mechanisms for managing resources (e.g., to allow for the transferability of water permits (s. 136), to set out in advance any financial contributions that may be a condition of a consent (s. 108(9)), and to acquire land (s. 86)).

The Council will only prepare a regional plan when it considers that it is the best way of achieving the result it seeks.

15.6 Working Co-operatively

The Regional Council will at all times endeavour to work co-operatively with other organisations and authorities which have resource management responsibilities or interests. When appropriate, it will:

- Facilitate forums, working parties and other means of communication which allow for the sharing of information and expertise between resource management agencies and resource users, including private enterprises, Government departments, territorial authorities and community representatives; and
- Encourage and facilitate joint resource management projects with territorial authorities where jurisdictional responsibilities can be most effectively and beneficially met through a joint arrangement.
- Consider the use of the transfer of power provisions in the Act where the purposes of the Act can more effectively and efficiently be met through an alternative administrative arrangement.

15.7 Monitoring and Review of the Regional Policy Statement

The Act establishes a general duty for the Regional Council to monitor the suitability and effectiveness of the Regional Policy Statement (s. 35(2)(b)).

In addition, the Council is required to state in the Regional Policy Statement the procedures to be used to review the matters set out in s. 62(1)(a)-(ha) of the Act and to monitor the effectiveness of the Statement as a means of achieving its objectives and policies (s.62(1)(i)).

The Regional Council is also required to commence a full review of its Regional Policy Statement, no later than 10 years after the Statement becomes operative (s. 79). However, the Regional Policy Statement may also be changed at the instigation of a Minister of the Crown, the Regional Council or any territorial authority within or partly within the Region (s. 60).

In meeting these requirements the Council will report, five years after the Statement has become operative, and thereafter at five yearly intervals, on:

- (1) The appropriateness of the significant issues and objectives in the Statement; and
- (2) The effectiveness of the policies and methods in meeting the objectives.

The report will contain:

- (1) Recommendations for any necessary changes to the Statement;
- (2) An assessment of the appropriateness of the significant issues and objectives in the light of feedback from territorial authorities, resource users, the public or other interested or affected parties. This feedback may come from the media, correspondence, meetings or other means, such as Council research;
- (3) An assessment of the degree to which the policies are reflected in regional and district plans;
- (4) An assessment of the degree to which the methods have been implemented; and
- (5) An assessment of the degree to which the anticipated environmental outcomes have been achieved.

For the purpose of, and as part of this five yearly review report, and to fulfil its monitoring responsibilities under the Act, the Council will implement a **Regional Monitoring Strategy** which will include:

- (1) A comprehensive "State of the Environment Report", to be prepared five years after the Statement has become operative and thereafter at five yearly intervals. This will provide information on the current state of the environment, describe changes and trends in environmental systems, and relate, where possible, such environmental changes to causes;

- (2) An annual publication containing summary results of the Council's monitoring activities;
- (3) Regular publications on social and economic trends in the Region;
- (4) Surveys of people's attitudes about the environment, particularly the attitudes of major resource users;
- (5) The monitoring of consents to ensure compliance with conditions; and
- (6) Special surveys, or investigations which focus on specific issues, as and when required.

In carrying out these tasks, the Council will consult, where necessary, with other relevant resource management and research agencies and, where possible, co-operate with them to reduce monitoring costs, to share information and to avoid duplicating data collection.

The Regional Council will review the Regional Policy Statement no later than ten years after the Statement becomes operative (s. 79). Having completed such a review, the Wellington Regional Council will change or replace the Statement in accordance with the requirements set out in the First Schedule of the Act.

The Regional Council may also make changes to the Statement whilst it is operative. These changes may be made after the five yearly report or if instigated by a Minister of the Crown, the Regional Council or a territorial authority within (or partly within) the Region.

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Appendix

Definitions

* As defined in the Resource Management Act 1991 or the Resource Management Amendment Act 1993. Other sources, where used, are indicated accordingly.

Access strip *	A strip of land created by the registration of an easement in accordance with s. 237B for the purpose of allowing public access to or along any river, or lake, or the coast, or to any esplanade reserve, esplanade strip, other reserve, or land owned by the local authority, or land owned by the Crown (but excluding all land held for a public work except land held, administered, or managed under the Conservation Act 1987 and the Acts named in the First Schedule to that Act).
Acid rain	Deposition (in rain) of acids and acid forming compounds on the surface of the earth. These compounds arise from emissions of sulphur dioxide and nitric oxide, mainly from industry and vehicles.
Aggregate	Crushed rock or gravel for use in road surfaces, concrete or bituminous mixes.
Agrichemical	Any substance, whether inorganic or organic, manufactured or naturally occurring, modified or in its original state, that is used in any agriculture, horticulture, forestry or related activity, to eradicate, modify or control flora or fauna.
Air	All zones and components of the atmosphere and stratosphere which contribute to the functioning of the global environment.
Alluvial	Pertaining to material that is transported and deposited by running water.
Ambient air quality	Surrounding, or general air quality.
Amenity values *	Those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.
ANZECC	Australia and New Zealand Environment and Conservation Council.
Appropriate	As determined to be appropriate by the Wellington Regional Council or relevant territorial authority, or their officers

acting under delegated authority.

Aquifer

A geologic formation or layer of rock or soil that is able to hold or transmit water.

Assessment of Environmental Effects

An assessment of any actual or potential effects an activity may have on the environment, and the ways in which any adverse effects may be avoided, remedied or mitigated. The level of detail should correspond to the scale and significance of the actual or potential effects, and the assessment should be prepared in accordance with the requirements of the Fourth Schedule of the Resource Management Act 1991.

Atua

Deity; god; child of Ranginui and Papatuanuku.

Bed *

- (1) In relation to any river:
 - (a) For the purposes of esplanade reserves, esplanade strips and subdivision, the space of land which the waters of the river cover at its annual fullest flow without overtopping its banks:
 - (b) In all other cases the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and
- (2) In relation to any lake, except a lake controlled by artificial means-
 - (a) For the purposes of esplanade reserves, esplanade strips and subdivision, the space of land which the waters of the lake cover at its annual highest level without exceeding its margin:
 - (b) In all other cases the space of land which the waters of the lake cover at its highest level without exceeding its margin; and
- (3) In relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and
- (4) In relation to the sea, the submarine areas covered by the internal waters and the territorial sea.

Benefits and costs *

Includes benefits and costs of any kind, whether monetary or non-monetary.

Best practicable option *	<p>In relation to a discharge of a contaminant or an emission of noise, best practicable option means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to:</p> <ol style="list-style-type: none"> (1) The nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and (2) The financial implications, and the effects on the environment, of that option when compared with other options; and (3) The current state of technical knowledge and the likelihood that the option can be successfully applied.
Biodiversity	<p>The variability among living organisms from all sources including, <i>inter alia</i>, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.</p>
Biomass production	<p>The total quantity or weight of organisms (plant and animal) produced in a given area.</p>
Built environment	<p>The structures, facilities and other physical resources which have been built by people, and the relationship that people and communities have with these physical resources.</p>
Carbon sinks	<p>Components of the environment that lock, store or contain carbon in a non-atmospheric form (e.g., trees or other plants, ocean sediments and fossil fuels).</p>
CFCs	<p>Chlorofluorocarbons, chemical compounds used in refrigeration, in foaming agents and in solvents.</p>
Clean production	<p>The provision of goods and services in such a way as to minimise resource use, environmental effects and waste generation throughout the entire production system.</p>
CNG	<p>Compressed natural gas.</p>
Coastal marine area *	<p>The foreshore, sea bed and coastal water, and the air space above the water:</p> <ol style="list-style-type: none"> (1) Of which the seaward boundary is the outer limits of the territorial sea; (2) Of which the landward boundary is the line of mean

high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of:

- (a) One kilometre upstream from the mouth of the river; or
- (b) The point upstream that is calculated by multiplying the width of the river mouth by five.

Coastal water *

Sea water within the outer limits of the territorial sea and includes:

- (1) Sea water with a substantial freshwater component; and
- (2) Sea water in estuaries, fiords, inlets, harbours, or embayments.

Co-generation

The production of two useful forms of energy, such as high temperature heat or steam, and electricity, from the same fuel source.

Conditions *

In relation to plans and resource consents, includes terms, standards, restrictions and prohibitions.

Contaminant *

Includes any substance (including gases, liquids, solids, and microorganisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat:

- (1) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or
- (2) When discharged onto or into land or into air, changes or is likely to change the physical, chemical or biological condition of the land or air onto or into which it is discharged.

Covenant

Legal agreement.

Cross blading

A river management technique, involving the pushing of material (usually by bulldozer) from the beach on one side of a river to the eroding bank on the other side.

Cultural heritage

Buildings, structures, sites, areas, waahi tapu and waahi tapu

areas associated with human activity which are inherited from the past or are of value to future generations, and which are considered to be of special value.

Discharge *	Includes emit, deposit, and allow to escape.
Easement	Right-of-way or a similar right over another person's ground or property.
Economic instruments	Charges, levies, other fiscal measures and financial incentives or disincentives.
Ecosystem	A dynamic complex of plant, animal and microorganism communities and their non-living environment, interacting as a functional unit.
Eco-tourism	Tourism that is based upon visiting places that are special for their natural qualities or on activities which rely on a healthy, natural environment.
Effect *	<p>Unless the context otherwise requires, the term "effect" includes:</p> <ol style="list-style-type: none"> (1) Any positive or adverse effect; and (2) Any temporary or permanent effect; and (3) Any past, present, or future effect; and (4) Any cumulative effect which arises over time or in combination with other effects <p>regardless of the scale, intensity, duration, or frequency of the effect, and also includes:</p> <ol style="list-style-type: none"> (5) Any potential effects of high probability; and (6) Any potential effect of low probability which has a high potential impact.
Efficiency	Efficiency in relation to resource use requires that output is maximised for a given level of inputs or that inputs are minimised for a given level of output.
Environment *	<p>Includes:</p> <ol style="list-style-type: none"> (1) Ecosystems and their constituent parts, including people and communities; and (2) All natural and physical resources; and

- (3) Amenity values; and
- (4) The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (1) to (3) of this definition or which are affected by those matters.

Esplanade reserve *

Means a reserve within the meaning of the Reserves Act 1977:

- (1) Which is either:
 - (a) A local purpose reserve within the meaning of section 23 of that Act, if vested in the territorial authority under section 239; or
 - (b) A reserve vested in the Crown or a regional council under section 237D; and
- (2) Which is vested in the territorial authority, regional council or the Crown for a purpose or purposes set out in section 229.

An esplanade reserve or an esplanade strip has one or more of the following purposes:

- (1) To contribute to the protection of conservation values by, in particular:
 - (a) Maintaining or enhancing the natural functioning of the adjacent sea, river or lake; or
 - (b) Maintaining or enhancing water quality; or
 - (c) Maintaining or enhancing aquatic habitats; or
 - (d) Protecting the natural values associated with the esplanade reserve or esplanade strip; or
 - (e) Mitigating natural hazards; or
- (2) To enable public access to or along any sea, river or lake; or
- (3) To enable public recreational use of the esplanade reserve or esplanade strip and adjacent sea, river or lake, where the use is compatible with conservation values.

Esplanade strip *	A strip of land created by the registration of an instrument in accordance in accordance with s. 232 for a purpose or purposes set out in s. 229 (see purposes in "Esplanade Reserve" above).
Eutrophication	Process by which water (usually freshwater) becomes rich in nutrients, causing excessive plant growth which kills animal life by deprivation of oxygen.
Financial contribution *	<p>A contribution of:</p> <ol style="list-style-type: none"> (1) Money; or (2) Land, including an esplanade reserve or esplanade strip (other than in relation to a subdivision consent) but excluding Maori land within the meaning of the Maori Land Act 1993 unless that Act provides otherwise; or (3) Works, including (but without limitation) the protection, planting or replanting of any tree, or other vegetation, or the protection, restoration or enhancement of any natural or physical resource; or (4) Services: <p>or any combination thereof, made for purposes specified in a plan (including the purpose of ensuring positive effects on the environment to offset any adverse effect) and which does not exceed in value the maximum amount specified in, or determined in accordance with, the plan.</p>
Fresh water *	All water, except coastal water and geothermal water.
General authorisations	Rules (granted under s. 22 of the Water and Soil Conservation Act 1967) that allow water to be taken, and discharges into water to be made, provided certain conditions are met and that the effects of the activity are minor.
Greenfield development	New development (often subdivision) that occurs on land that has not been previously used for urban related activities.
Greenhouse gases	Gases in the earth's lower atmosphere (e.g., CO ₂ , methane, nitrous oxide) that cause the global "greenhouse" effect. This is a natural effect that traps heat in the atmosphere near the earth's surface.

Habitat	The place or type of site where an organism or population normally occurs.
Halons	Greenhouse gases that force or speed up chemical processes of which they are part.
Hapu	Subtribe.
Hazardous substances *	Any substances which may impair human, plant or animal health or may adversely affect the health or safety of any person or the environment, and whether or not contained in or forming part of any other substance or thing.
Health	In relation to human health, a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.
Historic Place	<p>(1) Means:</p> <ul style="list-style-type: none"> (a) Any land (including an archaeological site); or (b) Any building or structure (including part of a building or structure); or (c) Any combination of land and a building or structure; <p>that forms part of the historical and cultural heritage of New Zealand and lies within the territorial authority limits of New Zealand; and</p> <p>(2) Includes anything that is in or fixed to such land.</p>
Indigenous	Produced by or naturally belonging to a particular region or area.
Infrastructure	Networks, links and parts of facility systems, as in transport infrastructure (roads, rail, parking, sea transport facilities, etc.) or water system infrastructure (the pipes, pumps and treatment works, etc.).
Intrinsic values *	<p>In relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including:</p> <ul style="list-style-type: none"> (1) Their biological and genetic diversity; and (2) The essential characteristics that determine an ecosystem's integrity, form, functioning, and resilience.

Iwi	Tribe, people.
Iwi authority *	The authority which represents an iwi and which is recognised by that iwi as having authority to do so.
Kaimoana	Food from the sea.
Kaitiaki	A person or agent who cares for taonga; may be spiritual or physical. A guardian or steward. The meaning of kaitiaki in practical application may vary between different hapu and iwi.
Kaitiakitanga *	The exercise of guardianship; and, in relation to a resource, includes the ethic of stewardship based on the nature of the resource itself.
Kawanatanga	Governorship, government.
Kohanga reo	Maori language preschool.
Lake *	A body of freshwater which is entirely or nearly surrounded by land.
Land *	Includes land covered by water and the air space above land.
Landfill	A waste disposal site used for the controlled deposit of solid wastes onto or into the land.
Leachate	Liquid effluent from landfills.
Liquefaction	Process by which water saturated sediment temporarily loses strength, usually because of strong shaking.
Local authority *	A regional council or territorial authority.
Loess	Material transported and deposited by wind, consisting predominantly of silt sized particles.
LPG	Liquid petroleum gas.
Maataitai *	Food resources from the sea. "Mahinga maataitai" means the areas from which these resources are gathered.
Manaakitanga	The practice of caring for others.
Mana	Prestige, power, authority.
Mana atua	Authority derived from the gods.
Mana whenua *	Customary authority exercised by an iwi or hapu in an

	identified land area.
Mauri	Life principle present in all things.
Mineral *	A naturally occurring inorganic substance beneath or at the surface of the earth, whether or not under water; and includes all metallic minerals, non-metallic minerals, fuel minerals, precious stones, industrial rocks and building stones, and a prescribed substance within the meaning of the Atomic Energy Act 1945.
Mining	The taking, winning or extracting of, by whatever means, a mineral in its natural state in land, or a chemical substance from that mineral, for the purpose of obtaining the mineral or chemical substance, but does not include prospecting or exploration.
Mitigate	Reduce or moderate the severity of something.
Mouth *	For the purpose of defining the landward boundary of the coastal marine area, means the mouth of the river either: <ol style="list-style-type: none"> (1) As agreed and set between the Minister of Conservation, the regional council, and the appropriate territorial authority in the period between consultation on, and notification of, the proposed regional coastal plan; or (2) As declared by the Planning Tribunal under s. 310 of the Act upon application by the Minister of Conservation, the regional council or the territorial authority prior to the plan becoming operative.
National policy statement *	A statement issued under s. 52 of the Act.
Natural and physical resources *	Includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced) and all structures.
Natural hazard *	Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.
Network utility operator	Means a person who: <ol style="list-style-type: none"> (1) Undertakes or proposes to undertake the distribution or transmission by pipeline of natural or manufactured

gas, petroleum or geothermal energy; or

- (2) Operates or proposes to operate a network for the purpose of telecommunication or radiocommunication as defined in section 2(1) of the Telecommunication Act 1987; or
- (3) Is an electricity operator or electricity distributor as defined in section 2 of the Electricity Act 1992 for the purpose of line function services as defined in that section; or
- (4) Undertakes or proposes to undertake the distribution of water for supply (including irrigation); or
- (5) Undertakes or proposes to undertake a drainage or sewerage system; or
- (6) Constructs, operates, or proposes to construct or operate, a road or railway line; or
- (7) Is an airport authority as defined by the Airport Authorities Act 1966 for the purposes of operating an airport as defined by that Act; or
- (8) Is a provider of any approach control service within the meaning of the Civil Aviation Act 1990; or
- (9) Undertakes or proposes to undertake a project or work prescribed as a network utility operation for the purposes of this definition by regulations made under the Resource Management Act 1991;

and the words "network utility operation" have a corresponding meaning.

**New Zealand Coastal
Policy
Statement**

A statement issued under s. 57 of the Act.

Noise *

Includes vibration.

Non-point discharges

Widely scattered discharges of contamination to air, water and land from a range of sources and which may not be attributable to an individual site or activity.

OECD

Organisation for Economic Co-operation and Development.

Ozone layer	Layer of gaseous ozone in the stratosphere that protects life on earth by filtering out harmful, ultraviolet radiation from the sun.
Papakāinga housing	Communal housing, often based around a marae and consisting of members of an extended family.
Permitted activity *	An activity that is allowed by a plan without a resource consent if it complies in all respects with any conditions specified in the plan.
Point source discharges	Discharges of contaminants from a single or identifiable source.
Practicable, where practicable	Where it is feasible as determined by the Wellington Regional Council or relevant territorial authority, or their officers acting under delegated authority.
Quango	Quasi autonomous non-Government organisation.
Raft *	Any moored floating platform which is not self-propelled; and includes platforms that provide buoyancy support for the surfaces on which fish or marine vegetation are cultivated or for any cage or other device used to contain or restrain fish or marine vegetation, but does not include booms situated on lakes subject to artificial control which have been installed to ensure the safe operation of electricity generating facilities.
Rahui	Temporary prohibition; a set of restrictions or controls; a conservation measure.
Region *	In relation to a regional council, the region of the regional council as determined in accordance with the Local Government Act 1974.
Regional Coastal Plan *	An operative plan approved by the Minister of Conservation under the First Schedule of the Act and includes all operative changes to such a plan (whether arising from a review or otherwise).
Regional plan *	An operative plan (including a regional coastal plan) approved by a regional council or the Minister of Conservation under the First Schedule to the Act and includes all operative changes to such a plan (whether arising from a review or otherwise).
Regional policy statement *	An operative regional policy statement approved by a regional council under the First Schedule of the Act and includes all operative changes to such a policy statement (whether arising

	from a review or otherwise).
Regional rule *	A rule made as part of a regional plan in accordance with s. 68 of the Act.
Regulations *	Regulations made under the Act.
Riparian land	Land situated along the bank of a stream or other body of water.
River *	A continually or intermittently flowing body of freshwater, and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation and farm drainage canal).
Rock rip-rap	Rock material placed on earth surfaces such as the bank of a river for protection against the action of water.
Rohe	A territory or boundary which defines the area within which a tangata whenua group claims traditional association and mana whenua.
Rule *	A district rule or a regional rule.
Runanga	Tribal representative and administrative body.
Seismic hazard	Ground shaking, liquefaction and fault rupture caused by the release of energy during an earthquake.
Soil conservation	<p>The management of land to maintain New Zealand's soil and water resources to provide the widest range of sustainable benefits for the needs and aspirations of present and future generations, and includes:</p> <ol style="list-style-type: none"> (1) The maintenance of the productive potential of the nation's soil resources to retain sustainable land use options for present and future generations; (2) The maintenance of catchments to provide high quality water resources for downstream users; (3) Land management practices that further enhance the protection of waterways from suspended sediments, nutrients, harmful microorganisms and other pollutants; (4) The mitigation of the impacts of land related hazards

including flooding, subsidence and erosion; and

- (5) The maintenance of aesthetic, scientific and cultural values related to land and water.

(National Water and Soil Conservation Authority)

Structure *	Any building, equipment, device, or other facility made by people and which is fixed to land and includes any raft.
Support	Not necessarily financial support; may include encouragement or the sharing of expertise.
Sustainable management *	<p>Managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while:</p> <ol style="list-style-type: none"> (1) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and (2) Safeguarding the life supporting capacity of air, water, soil and ecosystems; and (3) Avoiding, remedying or mitigating any adverse effects of activities on the environment.
Syncline	Rock bed folded into a trough structure or a depression.
Tangata whenua *	In relation to a particular area, means the iwi or hapu, that holds mana whenua over that area.
Taonga	<p>Treasure, property. Taonga are prized and protected as sacred possessions of the tribe. The term carries a deep spiritual meaning and taonga may be things that cannot be seen or touched.</p> <p>Included, for example, are language, waahi tapu, waterways, fishing grounds and mountains.</p>
Taonga raranga *	Plants which produce material highly prized for use in weaving (such as pingao or flax).
Tapu	Sacred, restricted.
Tauranga waka *	Canoe landing sites.

Tectonic processes	Major structural processes causing deformation (faulting, folding, uplift, warping, crushing) of the earth's crust.
Territorial authority	A city council or a district council.
Te Upoko o te Ika	Literally, the head of the fish; the area around Wellington.
Te Whanganui a Tara	Wellington Harbour.
Tikanga Maori *	Maori customary values and practices.
Tino rangatiratanga	Chieftainship, chiefly authority, full authority.
Trade wastes	Any liquid, with or without matter in suspension or solution therein, that is or may be discharged from trade premises in the course of any trade or industrial process or operation or in the course of any activity or operation of a like nature; but does not include condensing water, surface water or domestic sewage. (Local Government Act 1974)
Transfer station	Waste management facility for receiving, sorting and distributing wastes to disposal sites.
Treaty of Waitangi Te Tiriti o Waitangi	Has the same meaning as the word "Treaty" as defined in s. 2 of the Treaty of Waitangi Act 1975.
Tsunami	A sea wave of local or distant origin that results from sea floor fault movement, large scale sea floor slides or volcanic eruption on the sea floor.
Urupa	Burial ground.
Waahi tapu	Means a place sacred to Maori in the traditional, spiritual, religious, ritual or mythological sense.
Water *	<ol style="list-style-type: none"> (1) Means water in all its physical forms whether flowing or not and whether over or under ground; (2) Includes fresh water, coastal water and geothermal water; (3) Does not include water in any form while in any pipe, tank, or cistern.
Water body *	Fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area.

Wetland *	Includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.
Whakapapa	Genealogy.
Whenua	Land; placenta.