

Public Perceptions of Outstanding Natural Landscapes in the Auckland Region

**John R Fairweather
and
Simon R Swaffield**

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Preface

In 2003, a client report on public perceptions of landscapes in the Auckland Region was provided to Boffa Miskell Limited and Stephen Brown, Landscape Architects, as part of work being done for the Auckland Regional Council. Since that time there has been sustained interest in the report and we have decided to publish it to make it available to a wider audience. Readers will find this report to provide a detailed account of preferences for outstanding landscapes in the Auckland region, and these results will be of interest to those seeking to include public perceptions in planning issues. The report does not translate the findings of the survey to specific landscape areas or locations. This is subject of a separate report by Boffa Miskell Ltd.

Prof. Caroline Saunders
Director
AERU

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We acknowledge the assistance of Auckland Regional Council staff, in particular Louise Gobby, and a number of field workers employed by Boffa Miskell over the course of the project. Rachel de Lambert and John Goodwin of Boffa Miskell and Steven Brown, landscape architect, collaborated in developing the survey design, provided the photographs, and contributed to the interpretation of the results. Crystal Maslin provided expertise for the illustrations. We also acknowledge the contributions of the respondents to the survey.

Summary

There are many planning and policy decisions relating to land management that require some level of input from the public. One such area is public perception of the natural character of the landscape. This research reports on how members of the public and some key informants defined outstanding natural landscapes in the Auckland region. A total of 219 respondents completed 229 responses to photographs presented in sets of 30 for coastal, estuary and harbour, lowland, and hills landscapes, plus a combined set with examples from all four types of landscape.

Results show that there are, in general, two distinctive ways in which the public evaluates the qualities of natural landscapes in the Auckland Region. The first and predominant way in which respondents characterised outstanding natural landscapes was in terms of ‘wild nature’. This values natural landscape most highly when there is no evidence of human presence, modification or management. The landscapes that are selected as ‘truly outstanding’ are those which are closest to the pristine environments in the land types under consideration. The second way also values many pristine environments, but in addition evaluates some types of modified environment as being outstanding natural landscapes. This represents a ‘cultured nature’ position in which the presence of humans undertaking recreational activity, or some forms of low intensity production within a landscape, is considered to be consistent with it being an outstanding natural landscape. The main indicator is that landscapes which include a picturesque mix of bush and extensive pastoral agriculture on hills and lowlands are highly valued, whilst relatively unmodified salt marsh and wetland are less highly valued (as being unattractive and somewhat inaccessible). Hence for the ‘cultured nature’ evaluation, not all pristine environments are recognised as having potential to be an outstanding natural landscape, whilst some partially modified landscapes are regarded as outstanding.

These two ways of perceiving landscapes are described in the report as ‘factors’ due to the method by which they were derived. The two factors are broadly consistent across the different landscapes in the region and account for a very large proportion of the responses. In the case of hill country landscapes, the evaluation is slightly more complex.

Respondents also identified the photographs that portrayed landscapes considered to be ‘truly outstanding’ in each type of landscape studied (coastal, estuary and harbour, lowland, and hills landscapes). When these photographs are examined, an overall pattern of public response can be identified, with a reasonably high degree of consensus about the characteristics of landscapes that warrant the designation of being ‘outstanding natural landscapes’. They include pristine and relatively unmodified coastal environments, estuaries and harbours; unmodified wetlands with standing water; lowland bush; and picturesque or open hill country that includes a significant proportion of bush or bush remnants, with minimal presence of human artefacts or buildings.

Chapter 1

Introduction: Research Objective and Approach

The Auckland Regional Council has responsibility under the Resource Management Act 1991 for the integrated and sustainable management of natural and physical resources, at a regional scale. The protection of outstanding natural features and landscapes from inappropriate development, subdivision and use is recognised in Section 6(b) as a matter of national importance. In order to help meet the requirements of Section 6(b), Auckland Regional Council has commissioned a landscape assessment to identify the natural landscapes within the Region which should be recognised as outstanding, and to describe the qualities and attributes that make them outstanding and that may be vulnerable to inappropriate development.

Consideration of Section 6(b) matters in the Environment Court in recent years suggests that ‘outstanding’ natural landscapes should be reasonably self evident within the context in which they are being considered. Such outstanding natural landscapes are not always identified, however. In this report, we present the results of a public survey intended to identify how the Auckland regional community perceives outstanding natural landscapes. The objectives of the report are (1) to document, using a photographic method, how members of the public and some key informants perceive and define outstanding natural landscapes in the Auckland Region, and (2) to record the characteristics that they attribute to outstanding natural landscapes. The report is part a wider study, and will provide input into the expert delineation of outstanding natural landscapes at a regional level in Stage 3 of the overall project.

Drawing on recent research experience in investigating perception of the natural character of landscapes in New Zealand (Fairweather and Swaffield, 1999, 2000, 2002, 2003; Fairweather, 2002; Newton et al., 2002), we apply some well-developed techniques in qualitative research to assess public perception of outstanding natural landscapes. We have found that using photographs is particularly useful in landscape perception work. Photographs allow for the presentation of a variety of landscape settings and qualities in an efficient way, and respondents enjoy commenting on and working with them.

The approach we have adopted in assessing outstanding natural landscapes is to use the Q method (Brown, 1980). This method provides stimuli such as photographs to respondents in such a way that they are free to express their own view on the topic of research. Typically, about 20 to 30 photographs are sorted in order following a condition of instruction set by the researchers. Typically, we ask to sort from what the respondent likes, approves or judges to have some quality, such as outstanding natural landscape, to those which they judge to least represent the nominated quality. The photographs are sorted into piles, each pile having a pre-assigned score. The scores are recorded, and quantitative analysis then identifies characteristic and distinctive ways of sorting the photographs, which are common to a number of respondents. These are called factors.

While respondents are ordering the photographs, they are also interviewed, and asked to explain why they sort the items in the way that they do. These comments complement the scoring and are a vital way in which the thoughts and feelings of the respondent are recorded.

They are used to interpret in detail the factors that are identified in the quantitative analysis. In effect, the Q sort method is a way of using quantitative methods to assess qualitative judgements.

Previous research (Fairweather 2002) has demonstrated that when a dozen or more people 'load' on a factor, then the factor stabilises, that is, however many more people may be interviewed, it is highly unlikely that the main characteristics of the factor will change. When the analysis has identified one or more stable factors, therefore, we can be confident that these ways of evaluating landscape are present in the wider community. Furthermore, if a consensus emerges across a number of stable factors about the relative value of particular landscapes or attributes, then we can be confident that this evaluation is well grounded in the community. What we cannot do is to predict precisely what proportion of the community will hold any particular view. This does not appear relevant to the requirements of Section 6(b), and has not been pursued in the research.

Chapter 2

Use of Q Method with Photographs

2.1 Q Method

The Q sort distribution into which the respondent is asked to place the photographs is usually in the shape of the standard ‘bell shaped’ normal distribution (see Appendix 2). As there are only a few available spaces at the extremes of the distribution (i.e., the most or least outstanding), and more in the middle, this process requires the respondent to clearly discriminate between different landscapes, and to focus upon what they regard as an ‘outstanding natural landscape’. In order to undertake the quantitative analysis, the pre-assigned scores are arranged in such a way that the photographs at the two ends of the distribution receive high positive or negative scores, while the photographs towards the middle receive a low score. The middle column of photographs is given a zero score, representing a neutral judgement.

The Q sorts are completed by a non-random sample of respondents within the regional population. Samples in Q sort are typically smaller than in public opinion surveys which use random samples, and often include between 20 and 60 people. In this study, for reasons that will become obvious, we have interviewed over 200 respondents. The methodology of Q sort aims to describe the range of distinctive ways (factors) of assessing a landscape within the regional community, as well as identifying where there is overlap or consensus between the factors. As a consequence, sampling is designed to tap into varied viewpoints, so that from a technical perspective, the sample needs to be diverse rather than strictly random or totally representative. Nonetheless, in this study, the sample of respondents does match the overall demographic and ethnic profile of the Auckland region reasonably well, as shown in Table 1.

The Q sorts of all respondents are factor analysed, a process by which similar Q sorts are identified statistically. There are usually a small number of factors, about two to six, and each factor represents the sorting pattern of those people who are associated with it. The analysis provides the order of items for the factor. This represents the choices of the respondents that contributed to that factor. The purpose of the factor analysis is to identify the main ways that the items are Q sorted within the sample of respondents.

The power of the Q method is that it provides a means to understand the underlying way that people think and feel about outstanding natural landscapes, and identifies distinctive groupings of landscapes that are regarded as outstanding. It is important not to confuse Q method with other studies that aim to make inferences about the views held by the population as a whole about particular landscape attributes (e.g., to determine how important statistically is the presence of water, or bush). For that type of research, the focus is on the quantitative characteristics of a random sample of responses. In Q method, quantitative and interpretive analysis is used to identify the qualitative characteristics of people’s responses. It does not address the question of how these may be distributed among the population.

2.2 Photograph Selection

The environment in the Auckland region is particularly varied. In order to give respondents a practical sorting task it was necessary to present photographs separately for the different main types of landscape found in the region. The region was therefore divided, based upon underlying topography and land type, into four broad categories of landscape: coastal, estuary and harbour, lowlands, and hills. This approach has the advantage that it allows respondents to judge the qualities that may make a landscape outstanding against other similar types of landscape, without being unduly influenced by the relative scarcity of the underlying land type at a regional level.

It is also important to find out how respondents evaluate contrasting types of landscape relative to each other. A fifth set of photographs was therefore prepared to represent the region as a whole, using some taken from each of the four separate sets. 30 photographs were selected from the separate land types to create a combined set that shows the diversity of landscape characteristics in the region as a whole. Hence, a total of 120 photographs were used to represent the range of landscapes in the Auckland region.

The identification and selection of the range of photographs was undertaken by two expert landscape architects based upon the landscape character areas identified in the previous Auckland Regional Landscape Study (Brown, 1984), and upon their knowledge of changes to the landscape since 1984. The approach was to identify different landscape character units within the overall landscape types, and to select the 30 photographs which best represent the range of landscape characteristics of that land type across the region as a whole (The detailed method was described in the Stage 1 report). The survey was limited to non urban landscapes, reflecting the focus upon outstanding *natural* landscapes.

2.3 Conduct of the Interviews

Intercept interviews were undertaken at ten locations in the main population centres around the Auckland Region during December 2002 and January 2003. These locations were Manukau, Otahuhu, Panmure, New Lynn, Pukekohe, Newmarket, Orewa, Henderson, Remuera, and the offices of the Department of Conservation, the Auckland Regional Council and the Auckland City Council.

With the help of the Auckland Regional Council, sites were established in public streets, malls etc, where field interviewers could ask people passing by to co-operate and indicate their views on outstanding natural landscapes. At some sites a caravan was used for shelter and to promote the research. Tables and chairs were provided to make the sorting as comfortable as possible. In most cases, interviewers worked in pairs and worked from mid morning until mid or late afternoon.

People were generally happy to co-operate when asked, provided they had some time to commit to the sorting process. Q sorts took from 15 to 45 minutes depending on the personality of the respondent and their interest in the subject. Most were completed in 15 to 20 minutes. Each respondent completed a Q sort for either one of the land types, or for the combined Q sort. The allocation of each set of photographs to respondents was random.

In addition to the intercept Q sorts, a small number of people representing special interests such as elected councillors, council staff (planners), government agencies (DoC, MfE), an iwi

representative, conservation advocate, and developer were invited to act as key informants. Most of the key informants who were available completed two Q sorts and the associated interviews, including one of the land type Q sorts and the combined Q sort. There was a total of ten key informants in the overall sample and they completed a total of 18 Q sorts.

For each interview, the 30 photographs from one of the land types were spread out on a table, and the respondent was asked to arrange the photographs into piles, in accordance with the format shown in Appendix 2. The instruction used was: “Please order these photographs from those which represent the most outstanding natural landscapes to those that least fit this description”.

The distribution below shows how the Q sort was structured, and the scores assigned to each pile:

No. in pile:	1	2	3	3	4	4	4	3	3	2	1
Score:	-5	-4	-3	-2	-1	0	1	2	3	4	5

Hence, photographs placed at the extreme ends (the most and least outstanding) were more heavily weighted when determining the factors that summarise the responses.

Having ordered the photographs to distinguish between the most and least outstanding, respondents were asked to identify the threshold of what they regarded as “truly outstanding”. They were also asked to comment upon the reasons behind their choices by stating the characteristics or qualities that made those landscapes truly outstanding, and were asked about what changes or modifications would either degrade those outstanding landscapes or improve them. These comments were noted on the record sheet.

2.4 Sample Size and Characteristics

Interviews were undertaken before and after Christmas 2002, and in the latter stages intercepts were targeted to ensure that the final sample provided a close match to the ethnicity of the overall population distribution for Auckland, as indicated by Statistics New Zealand census data for 2001. A total of 229 Q sorts was obtained from 218 respondents.

Table 1 shows the demographic characteristics of the final sample of 229 Q sorts. The table shows that, overall, the final sample is a reasonable match to the regional population. For ethnicity, European New Zealanders and ‘others’ are slightly over represented and Asian, Maori, and Polynesians are slightly under represented. The age groups correspond reasonably well taking into account that the study included only people above school age. The sample has a lower number in the youngest age category and slightly more in all the intermediate categories. Consequently, the sample under-represents those under 20 and slightly over-represents the young adult categories. The number for the average years lived in the Auckland region was 26 and this indicates good familiarity with the Auckland region. The average years lived was similar across all Q sorts. Gender is well matched overall, but the combined Q sort had more women than men.

Table 1: Demographic Characteristics of the Sample

	Coast	Estuary	Lowlands	Hills	Combined	Avg.	%	Census 01 %
Ethnicity								
European	34	24	24	27	44	31	67	63
Maori	4	4	4	5	6	5	10	11
Polynesian	4	4	4	3	4	4	8	13
Asian	5	4	4	4	5	4	10	13
Other		3	3	0	6	3	7	1
Subtotal	47	39	39	39	65	46	100	101
Age								
<20	3	6	6	6	7	6	13	30
20-30	9	10	6	12	15	10	22	15
30-40	11	8	8	5	14	9	20	17
40-50	8	4	5	6	12	7	15	14
50-60	11	6	8	5	9	8	17	11
>60	5	5	6	5	8	6	13	13
Subtotal	47	39	39	39	65	46	100	100
Average Years Lived In Auckland Region	30	25	25	24	24	26		-
Gender								
Male	21	22	19	17	22	20	44	48
Female	26	17	20	22	43	26	56	52
Subtotal	47	39	39	39	65	46	100	100

2.5 Factor Analysis

On completion of the fieldwork, all Q sorts were coded and then factor analysed. The analysis used the PQ Method and applied Varimax rotation to identify factors with two or more significant loadings on the unrotated factor matrix (i.e., two or more respondents selected this way of ordering the photographs). (See Brown 1980, Fairweather 2002, Fairweather and Swaffield 2000, for details of factor analysis methods).

Chapter 3 Results

3.1 Factor Analysis Results

Table 2 shows the core results for all the 229 Q sorts. For each Q sort there were either two or three factors identified (in the case of the Coastal Q sort, factor 3 had some respondents who loading negatively on it and these are considered as an additional factor). In Q sort analysis it is common for some respondents not to load on any factors because their Q sorts are idiosyncratic, and these are known as ‘no loaders’ (NL). For all but three factors there were ten or more significant loaders, that is, respondents whose loading, or degree of association with the factor, was statistically significant. Analysis of previous studies (Fairweather, 2002) has shown that the characteristics of factors stabilise with ten or more significant loaders. Hence, all the factors may be regarded as both distinctive and stable factors, except for Coastal Factor 3 & 4 and Lowlands Factor 3. There were only two respondents loading on each of Coastal Factors 3 & 4, and only three respondents loading onto Lowlands Factor 3. These are therefore much less robust and little significance can be attributed to their detailed configuration. These data were not used.

Table 2: Core Results for each Landform

Land type	No. of Q Sorts	Factor					Total Loading		Usable Loading		Correlation between factors		
		1	2	3	4	NL		%		%	1 & 2	1 & 3	2 & 3
Coastal	47	22	17	(2)	(2)	4	43	91	39	83	0.72	0.13	0.1
Estuary	39	21	17			1	38	97	38	97	0.55		
Lowlands	39	25	10	(3)		1	38	97	35	90	0.2	0.1	0.6
Hills	39	14	11	10		4	35	90	35	90	0.5	0.6	0.24
Combined	65	42	21			2	63	97	63	97	0.55		
Total	229						217	95	210	92			

It is notable that, overall, 95 per cent of respondents loaded significantly on a factor. This compares with the more typical statistic of about 70-75 per cent. Hence, these results show that the factors identified account for nearly all the responses. Table 2 shows the total number of respondents loading on the factors for each Q sort and then shows the total usable number loading on each Q sort. Coastal Factors 1 and 2 account for 83 per cent of all responses to that Q sort, Estuary and Harbour Factors 1 and 2 account for 97 per cent, Lowlands Factors 1 and 2 account for 90 per cent, Hills Factors 1, 2 and 3 account for 90 per cent and Combined Factors 1 and 2 account for 97 per cent. These are unusually high loadings for a Q sort survey, and this gives us confidence that the survey has identified key factors which express the prevailing views of the population.

Table 3 also shows the correlation coefficients between each factor and this is a measure of the degree of similarity of the factors being compared. Some are quite similar, for example, Coastal Factors 1 and 2, and some are distinct, for example, Lowland Factors 1 and 3.

Because of the very high percentage of respondents loading on the main factors, and the very small numbers on the minor factors, the minor factors are not analysed in detail in the following pages. Coastal factor 3 & 4 and Lowland factor 3 are therefore noted but not examined further.

3.2 The Number of “Truly Outstanding Natural Landscapes”

When they had completed the Q sort, respondents were asked to indicate to the interviewer the place in the distribution that formed a cut off point between those photographs that were truly outstanding natural landscapes and those that were not. The average number of photographs showing a ‘truly outstanding landscape’ was not the same for each land type category or factor. Table 3 shows the data and for the Coastal land type the average was 11 in both factors. For Estuary and Harbour, nine in Factor 1 and seven in Factor 2. In the Lowlands it was ten and nine, Hills ten, eight, and nine respectively, and Combined 12 and 12.

Table 3: Thresholds for ‘Truly Outstanding Natural Landscapes’ (Average for all respondents in each Factor)

Landform	Factor 1	Factor 2	Factor 3	Basis for analysis
Coastal	11	11		9
Estuary	9	7		6
Lowland	10	9		9
Hills	10	8	9	9
Combined	12	12		13

The overall average of these data is ten but this clearly disguises some significant variation. Furthermore, the average of all respondents on each factor does not always coincide with a clear threshold between columns in the Q sort array, which is practically necessary in order to identify the key photographs for each land type in the factor distributions (the columns in the distribution correspond to 1, 2, 3, 9, and 13, which are the only practical thresholds for analysis). We have therefore taken the cut off point for truly outstanding to include the top nine photographs (4 columns) in coastal, lowlands and hills, top six photographs (3 columns) in estuary and harbour, and top 13 photographs (5 columns) in the combined Q sort. This averaged cut off slightly under-represents the number of landscapes identified as truly outstanding in the coastal and estuary land types, and slightly over-represents the number in the combined Q sort. Nevertheless, it appears to correspond well with identifiable thresholds in landscape characteristics in the land types in question, and is also consistent with the comments and overall characterisation of the factors.

In the detailed factor descriptions that follow, we present figures which illustrate both the full distributions of photographs for each factor (from most to least outstanding), and a figure that shows only the ‘truly outstanding’ landscapes in each land type. In the summary of ‘truly

outstanding' landscapes for that landform we have combined the factors on a single page, so that it is possible to identify the consensus landscapes across factors that are 'truly outstanding'. It is this final set of photographs which provides the main basis for deriving attributes of outstanding landscapes, These can be subsequently applied in field analysis and delineation of landscapes 'on the ground'.

3.3 Factor Description for each Land Type Q Sort

The results are presented in the following order. First, we provide a verbal description of the photographs identified as representing the truly outstanding natural landscapes for each land type, as well as the bottom six photographs, which are clearly the inverse, i.e., not outstanding or natural. This provides an introductory objective account of the results.

Second, the photographs for each factor are presented as a figure that shows the Q sort distribution of the factor, with a colour coding system to indicate some additional information about the factor. Note that the single photograph rated by the factor as most outstanding natural landscape is offset to fit the page.

Third, the verbatim comments by respondents on the photographs, which are reported in Appendix 1, are collated into a summary of key themes. The comments are grouped into three categories: elements, characteristics and feelings. In some cases these distinctions overlap. Attention was given to comments about the most outstanding natural landscapes and the least outstanding natural landscapes rather than the comments about what would degrade or improve the landscape in the photograph. These latter comments often repeated what had already been recorded.

Finally, the photographs identified as truly outstanding in each of the land types are presented, with a summary account of their qualities. For each land type we present a single figure which includes all the photographs identified as truly outstanding natural landscapes by all the factors in that land type. The top of the figure shows the landscapes regarded as truly outstanding by all the factors on that land type, and the bottom of the figure shows the landscapes identified as truly outstanding by each factor where they are distinctive.

The presence of factors does not mean that each factor has a distinctive rating for every photograph. In some cases there are photographs that receive an identical rating and some that receive a different rating but one that is not significantly different to the score received in another factor. In the figures for the individual factors the following colour coding conventions apply. A photograph whose location in a factor distribution is statistically significantly different to its location in other factor distributions in that land type is identified with a red background. This indicates that the evaluation of these photographs by respondents is particularly distinctive to the factor in question. It will be rated much higher or lower than in other factors, and this alerts us to the probability that there is something about the landscape being portrayed in the photograph which is critical to the overall factor evaluation.

For the Q sorts with three factors it is also possible to identify those photographs that have a different score across the three factors (that is they are located in a different column in each factor), but which are not statistically significant in the overall factor analysis. These photographs are identified with a yellow background. This indicates that the photograph shifts location in different factors by several columns. Its attributes are not likely to be critical to the

characterisation of the overall factor, but may certainly be indicative of the distinctive values of that factor, and may be sufficient to include or exclude a photograph from the ‘truly outstanding’ part of the distribution.

There are also consensus photographs upon which all the respondents undertaking Q sorts in a particular land type agree. They are identified by a black hatched background. This indicates the photograph is placed in the same place in all the factor distributions for that land type. If this is within the ‘truly outstanding’ part of the distribution, then the landscape attributes and qualities expressed in the photograph are clearly regarded as outstanding by all factors.

The unmarked (i.e., white edged) photographs are those whose evaluation is not critical or distinctive to a particular factor, nor entirely consensus. They may for example shift between two adjacent columns in the different factors in a particular Q sort.

Finally, a heavy black line indicates the threshold for landscapes identified as “truly outstanding” in the Q sort, as discussed above. Landscapes above that line are identified in that factor as truly outstanding natural landscapes. These are the types of landscapes that appear to warrant consideration for protection under section 6 (b) of the RMA and are combined in the ‘Truly Outstanding Landscape’ figures for each factor. However it is also important to note that in some land types, public perceptions of what constitutes an outstanding natural landscape are not entirely consistent with Environment Court determinations of what constitutes ‘natural’. This issue is discussed in the concluding section, and will need to be addressed in Stage 3.

Coastal Factor One (See figure 1)

Top 9 “Truly Outstanding”: Clean, open, wide, sandy beaches backed by cliffs and/or rocky shoreline, generally accessible; adjoining land is covered by bush, grass/scrub (not pasture) with minimal evidence of human habitation or artefacts.

Bottom 6 “Least Outstanding”: Beaches or rocky shoreline with buildings to edge of land and/or coastal structures and defences.

Key Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Natural beauty. Native vegetation. Natural processes, forms. Steep and rugged. Variety.	Residential development, roads, housing. Exotic vegetation. Power lines. Unnatural structures, hard surfaces. Development too close to shore. Human intervention. Removal of vegetation.
Character	Untouched, uncorrupted by man, no man made development. Clean, unpolluted, clean water. Remoteness, openness. Grandeur, spectacular.	Intensive recreation. Commerce. Modified by coastal defences.
Feelings	Excitement, drama Refreshing. Pleasant place.	

Figure 1: Coastal Factor 1



Coastal Factor Two (see Figure 2)

Top 9 “Truly Outstanding”: Clean, open beaches backed by dune systems, or backed by cliffs or rocky shorelines. Adjoining land covered by pasture with some native trees and bush, and minimal evidence of human artefacts.

Bottom 6 “Least Outstanding”: Largely the same as Factor 1. Buildings adjoining either sandy beaches or rocky shores.

Key Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Natural. No buildings, people, houses. White sand. Dune grass (for protection). Good vegetation growth. Clear water, dynamic water. Natural vegetation.	Development. Houses too close. Power lines. Urbanisation. Too many elements. Lack vegetation.
Character	Rugged (slightly) steep. Untouched, quiet. Colours, textures. Distinctive. Uninhabited. Diversity. Integration of houses. Easy access.	Artificial. Not distinctive. Untidy, scrappy. Not permanent. Contrived. Populated.
Feelings	Free to roam. Nice to visit. Peaceful, serene. Dramatic atmosphere. Summer holidays.	Difficult to walk, poor access.

Figure 2: Coastal Factor 2



Summary for the Coast Q Sort Factors

Factors 1 and 2 are similar with a correlation of 0.72. They are similar in that they both identify undeveloped coastline with beaches and or cliffs and rocks as representing outstanding natural landscapes. They identify developed coastline as representing least outstanding natural landscapes. The photographs indicate that factor 1 prefers darker sand beaches as found on the West Coast, while factor 2 prefers white sand beaches with marram grass as found on the East Coast. (Photographs 3, 6 and 21 showing these sandy beaches are nearer to neutral for factor 1). Factor 1 dislikes photographs 11, 16 and 22 all showing rocky beaches with some houses, and these are rated lower than in Factor 2. Factor 2 accepts a greater degree of human intervention into the outstanding natural landscape, for example as pasture and marram grass, but not prominent or visible houses.

The comments in both factors emphasise pure nature but there is slightly more emphasis on this by factor 1, who made reference to attributes such as ‘untouched’, ‘uncorrupted by man’ etc. and made more frequent reference to native vegetation. Generally, both factors see man made intervention as an indication that the qualities that make an outstanding natural landscapes have been compromised.

The Coastal ‘truly outstanding natural landscapes’ are shown in Figure 3.

The key qualities may be summarised as:

Undeveloped coastline framed by medium to high relief, with bush cover or rough pasture and only very low levels of human modification that are visually subservient to the overall setting.

Figure 3: Outstanding Natural Landscapes in Coastal Land Type



Factor 1

Factor 2

Estuary and Harbour Factor 1 (see Figure 4)

Top 6 “Truly Outstanding”: A range of undeveloped shorelines, including beaches and dunes, salt marsh, and rocky shoreline backed by low hills. The presence of remnant or regenerating bush and mangrove, tall trees and shrubs with some pasture. An undeveloped land edge.

Bottom 6 “Least Outstanding”: Hard edges, built structures. Mudflats. Houses to water edge or buildings over water.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Regenerating bush, re-growth, Indigenous vegetation. No development, houses etc, not artificial things, few people. Clear water. Abundant vegetation. Good habitat. Combination of vegetation, Complexity of environment.	Too much activity. Pollution. Houses, power cables. Inappropriate development, development. Altered, artificial, man made. Any construction.
Character	Beautiful. Quiet. Clean and green, healthy, clean and tidy. Natural Distinctive.	Destroyed habitat. Not peaceful. Dirty.
Feelings	Appealing to be in., Peaceful, good vibes. Identity as Kiwi. Remote.	

Figure 4: Estuary and Harbour Factor 1



Estuary and Harbour Factor 2 (see Figure 5)

Top 6 “Truly Outstanding”: Undeveloped shorelines, including beaches and dunes backed by low hills. The presence of remnant or regenerating bush, tall trees and shrubs with some pasture. An undeveloped land edge, with only minimal evidence of human presence.

Bottom 6 “Least Outstanding: Mangrove, mudflats. Rocky shore. Poor access.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Sandy shores. (Lack of buildings, structures). More natural, not interfered with, natural look. Combinations of vegetation and water. Shades of green, colour contrasts.	Houses too close to shore. Unnatural, man made structures. Development (rock, buildings, factories, houses). Sludgy, muddy. Factories leading to pollution. Dirty. Mangroves.
Character	Typical of New Zealand. Serene and peaceful. Variety of elements. Brighter photographs. Clean and tidy.	Dull looking. Rocks unpleasant to walk on.
Feelings	Isolation. Enjoyable to visit.	

Figure 5: Estuary and Harbour Factor 2



Summary for the Estuary and Harbour Q Sort

The Estuary and Harbour Q sort has two distinct factors with a correlation of only 0.55. However, they have some similarities in what they identify as outstanding natural landscapes. Both factors agree that photograph 22 (showing low hills, bush and pasture) best represents outstanding natural landscapes, and both give similar scores to 26 and 8 which are consensus photographs (showing beach backed by dunes and tall vegetation). In all, they share five of the top six photographs. These photographs show variety of settings, native and exotic vegetation, sand and some pasture. There is a distant view of boats in one highlighted photograph.

The main difference between the factors at the upper end is that Factor 1 includes salt marsh backed by taller vegetation as truly outstanding, whereas Factor 2 omits salt marsh. Factor 2 also includes more developed shoreline higher up its Q sort distribution than does Factor 1. Greater contrast occurs at the other end of the array of photographs. Factor 1 rates hard edged shoreline and built structures as very low in terms of outstanding natural landscapes while Factor 2 downgrades mangroves and mudflats but is more neutral about developed shoreline.

The comments show both factors emphasise lack of man made structures and the clean, green, tidy characteristics. Their comments on the least outstanding natural landscapes show that factor 1 emphasises development but factor 2 emphasises apparently dirty mangroves and tidal march flats.

The commonalties among the two factors are photographs 22, 26 and 8. These show well-vegetated land in an apparently undisturbed state.

The Harbour and Estuary ‘truly outstanding natural landscapes’ are shown in Figure 6. They may be summarised as:

Open water, intertidal margins and shoreline which is highly natural backed by low to medium relief with significant areas of tall vegetation, bush and pasture, and only very low levels of human modification that are visually subservient to the overall setting.

Figure 6: Outstanding Natural Landscapes in Estuary and Harbour Land Type



Factor 1

Factor 2

Lowlands Factor 1 (see figure 7)

Top 9 “Truly Outstanding”: Shows wetland, with open water and no evidence of human artefacts but includes some pasture-covered hills and some bush remnants.

Bottom 6 “Least Outstanding”: Improved pasture, buildings. Cultivation, drains, fences.

Key themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Good habitats. Textures and colours. Native vegetation, forest. (No exotics). (No built elements). Water. Rolling hillsides. Close to original. Natural cycles.	Modification. Human activity. Man made structures, residential development. Human patterns. Cultivation, ploughing, farming. Exotics.
Character	Natural, unmodified, no structures, original, untouched. Variation, combinations. Unspoilt. Original look.	Lack of variety. No colour. Denuded vegetation. Spartan. Artificial. Indistinct.
Feelings	Need to protect coastal margins.	Boring.

Figure 7: Lowlands Factor 1



Lowland Factor 2 (see figure 8)

Top 9 “Truly Outstanding”: Open rolling country, clean pasture, well vegetated wetlands, lakes, some bush remnants or isolated trees.

Bottom 6 “Least Outstanding”: Wet land or marshy ground; cropping land, drains, rough pasture.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Water, clear water. Water and land. Variety of elements, versatile. Colour contrast, nice colours. Hills. Trees. Pasture animals. Vista, outlook, scenic shots, water view. Native vegetation.	Dry looking plants. Drained. Factories. Water not clear; dirty water. Mud. Scrub (too much), Brown.
Character	Clean and green image, clean and unspoilt. Natural, untouched nature, natural looking. Green. Uncluttered, tidy, openness. Different shades of colour. Patterns.	Brown. Human intervention, development. Brown, looks like pollution. Dead looking, dying, dry looking. Messy vegetation, untidy, no order. Unattractive mud, muddy and dirty. Not well maintained, poorly managed, abandoned. Damaged, rotten. Not natural. Mucky.
Feelings		

Figure 8: Lowlands Factor 2



Summary for the Lowlands Q Sort

Factor 1 and 2 are dissimilar with a correlation of 0.2. Factor 1 identifies wetland and open water as the main indicator of outstanding natural landscapes. Photographs showing commercial activity, houses on farm land or intensively managed farm land are the least outstanding natural landscapes. Factor 2 favours hills, pasture and water with only some bush or trees. Lowest ranked are mangrove or well-covered land, cropping, drains or rough pasture.

The comments show that factor 1 emphasises the natural and unmodified landscapes along with native vegetation which in the lowland largely comprises wetland. Factor 2 also emphasises nature but mentions colours and the views, thus illustrating a pastoral preference which includes human use of the landscape for farming. It does not regard wetland as outstanding.

The consensus photographs are few and located in the middle of the arrays. The pure nature viewpoint of factor 1 is distinctive, sharing little with the acceptance of views showing production as demonstrated by factor 2. Only photograph 2, showing water, pasture and bush, is rated among the top six by both factors.

The Lowland ‘truly outstanding natural landscapes’ are shown in Figure 9. They may be characterised as:

Unmodified wetlands with areas of open water and well vegetated margins, and, open rolling pastoral landscape with lakes or watercourses, remnant bush and very low density of settlement.

Figure 9: Outstanding Natural Landscapes in Lowlands Land Type



Factor 1

Factor 2

Hills Factor 1 (see Figure 10)

Top 9 “Truly Outstanding”: Higher relief hill country with either bush cover or bush with some pasture. Water views.

Bottom 6 “Least Outstanding”: Cropping or intensive pasture, houses.

Themes from the interviews

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Trees down to water. Water and land. Native bush, trees (no clearing). No human elements. Green. Water, sea.	Farm land. (No water). Housing. Concrete. Development.
Character	Natural, pure. Untouched, undisturbed, unspoiled, pristine. Not man made. Serene, magical. Vistas, sea views. Diversity, combinations. Rugged hills.	Not authentic. Dead, dull. Not accessible. Barriers (fences).
Feelings	Smell the sea.	

Figure 10: Hills Factor 1



Hills Factor 2 (see Figure 11)

Top 9 “Truly Outstanding”: Higher relief, pasture and some bush, views of water, intensive pasture and cropping. No fences.

Bottom 6 “Least Outstanding”: Rough pasture and scrub, houses, fences.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	(No houses). Sea, water. Farms and livestock, countryside. Trees, vegetation. Pasture. Forestry. Native bush (1 mention only).	Man made structure, human intervention.
Character	Vistas. Combination (of hill, forest, water), contrasts (water, land). Distinctive. Undisturbed. Balance. Natural. Smooth contour, rolling.	Cluttered, mixed, scrappy, untidy, scraggy, weedy, not well managed. Brown, dull, grass dying.
Feelings		

Figure 11: Hills Factor 2



Hills Factor 3 (see Figure 12)

Top 9 “Truly Outstanding”: Bush and tall trees, mixed pasture and bush. Some fencing, hedges and houses, water views.

Bottom 6 “Least Outstanding”: Cropping, open pasture, forestry.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Water views, vistas, open view. Land and water. Trees to water. (No erosion). Wooded backdrop. Preserved trees, ridgeline. Hills. Pastoral landscape. Trees, not necessary native. (No man made structures). Native bush. Bush clad hills.	
Character	Diversity, combination (of bush, water, hills), mixture. Original, pure, most natural, natural. (Not barren), forested. Humans in harmony, sympathetic housing. Nice vista. Well managed. Interesting patterns. Ruggedness.	
Feelings	Relaxing	

Figure 12: Hills Factor 3



Summary for the Hills Q Sort

Factors 1 and 2 have some similarity with a correlation of 0.5, as do factors 1 and 3 with a correlation of 0.6. Factors 2 and 3 are only slightly similar with a correlation of 0.24. All three factors associate outstanding natural landscapes with higher relief. Factor 1 rates bush, and bush with pasture as outstanding natural landscapes while intensive agriculture, houses on farm land and pasture as least outstanding natural landscapes. Factor 2 rates as outstanding natural landscapes, mixed pasture and some bush. It accepts pastoral land use as being compatible with outstanding landscape, even relatively intensive use, but does not accept the presence of houses. Factor 3 is similar to factor 1 but has photographs with houses and sheep in a higher position and, at the other end of the array, selects out the one photograph of the *Pinus radiata* plantation as among the least outstanding natural landscapes.

Comments show that factor 1 and factor 3 emphasise absence of man made structures, and the presence of trees and water views. The former adds the unspoilt and pristine characteristics, while the latter adds living in harmony, consistent with having some photographs in the top of the array showing signs of human activity. Factor 2 comments are broadly similar to factors 1 and 3 but include more intense farming and the countryside.

The consensus photographs are well spread through the arrays. Photograph 15 is uniformly assessed as an outstanding natural landscape. It shows a mixture of pasture and bush on hills with high relief, and a distant view of water. Photograph 28 is highly rated as outstanding natural landscape for factors 1 and 3 but its complete coverage in bush reduces its value to factor 2.

The differences between these factors are subtle. They all favour high relief with some proximity to water. Factors 1 and 3 prefer tall trees with some pasture. Factor 1 favours native bush, while factor 2 accepts deciduous trees. Factor 2 also prefers a more production mix of pasture and bush remnants.

The Hill Country 'truly outstanding natural landscapes' are shown in Figure 13. They may be characterised as:

Relatively high relief with significant areas of maturing native vegetation interspersed with rough pasture and extensive open views. Landscape structure and vegetation patterns are visually diverse, and clearly express the underlying geology, landform and natural drainage. A very low density of settlement that is visually highly integrated into the overall setting.

Figure 13: Outstanding Natural Landscapes in Hills Land Type



Factor 1

Factor 2

Factor 3

Combined Factor 1 (see Figure 14)

Top 13 “Truly Outstanding: Coastal, estuary and wetland, native vegetation, no pasture land, total absence of human artefacts.

Bottom 6 “Least Outstanding”: Cropping and intensive pasture, human artefacts, fences, cultivation.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Trees to water. Combinations of bush, water, beaches, vegetation, rocks. Contrast colour, vegetation Water.	Lack of trees. Polluted. Too much development, human impact, commerce, obtrusive development. Modified, fences, houses, agriculture, drained wetland, monoculture.
Character	No man made influences, houses, Wilderness, untouched, natural, unmodified, undisturbed, pristine, isolated. Clean. No people. Recreation. Attractive. Drama, interesting, dynamic. Represents New Zealand, pre human New Zealand, distinctive, typical of New Zealand, rarity. Peaceful.	Ecosystem crumbling. Artificial, not natural. Dirty. Not distinctive.
Feelings	Solitude, isolation. Spiritual. Sense of place. Connotation of holidays, happy memories.	

Figure 14: Combined Factor 1



Combined Factor 2 (see Figure 15)

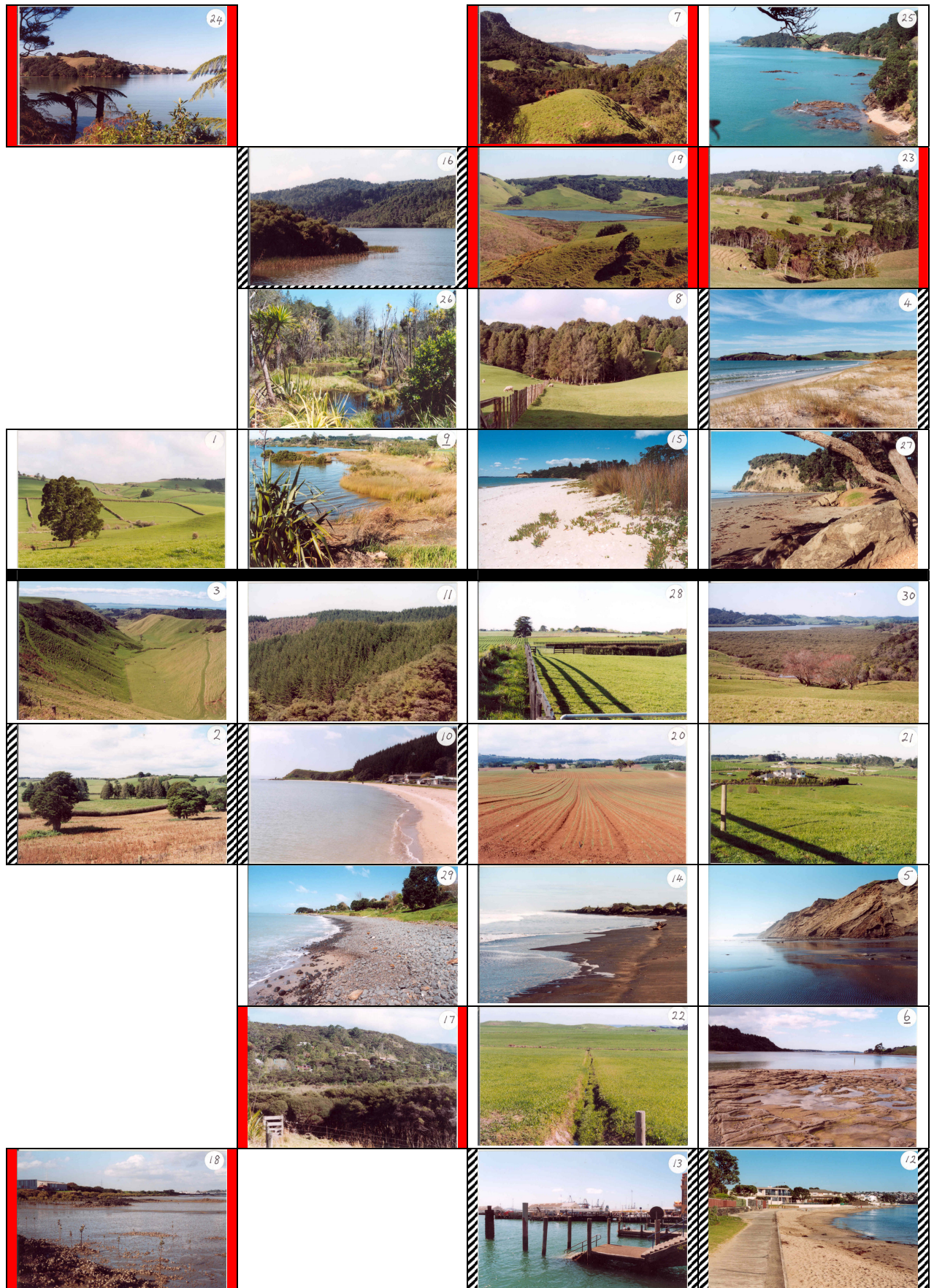
Top 13 “Truly Outstanding”: Coastal bush, mixed pasture and bush, wetland.

Bottom 6 “Least Outstanding”: Mudflats, wharf, buildings on to beach, drained pasture, houses in bush.

Themes from the interviews:

	Outstanding natural landscapes	Not outstanding natural landscapes
Elements	Combination of elements. Trees. Limited signs of development. Natural farmland, natural. Native vegetation. Water, sea view.	Too much development. Houses next to beach. Mudflats and sand. Lack of trees. Industrial development next to water. Power lines. Dead vegetation.
Character	Undisturbed. Tranquil, still. Nice scenery. Clean water. Natural. Active landscape. Versatile.	Boring. Rotten. Not natural. Messy looking. Dull looking. Not good for swimming, can't walk around it. Poorly maintained
Feelings		Boring

Figure 15: Combined Factor 2



Summary for the Combined Q Sort

Factor 1 and 2 are similar with a correlation of 0.55. In the top photographs for Factor 1 the main characteristics are coast, water, wetland and native vegetation with only a small proportion of pasture. Among the least outstanding natural landscapes are extensive areas of pasture, a structure in the sea, fences and cultivation. The top photographs for Factor 2 includes coast, bush and open pasture with bush remnants, and the bottom six include mudflats and mangroves and a bush covered hill with houses.

Comments show that Factor 1 emphasises pristine environments with visually interesting combinations of trees, water and vegetation with an absence of man made influences and a strong sense of solitude, that evoke strong feelings of NZ identity. Factor 2 also emphasises interesting combinations of trees, water and vegetation but includes farm land. There is less emphasis on pristine environments and more on scenic qualities.

Table 4 shows the different emphasis placed by each of the Combined Q sort factors upon the different land types. It is derived by assigning the Q sort score (used in the factor analysis) to each photograph in the Q sort and summing for each landform. The results show that Combined Factor 1 emphasises Coastal and Estuary and Harbour as outstanding natural landscapes within the combined Q sort, while Combined Factor 2 emphasises Lowland and Hills as outstanding natural landscapes

Table 4: Sum of Scores for Each Landform in the Combined Q sort

	Coastal	Estuary	Lowland	Hills
Factor 1	12	3	-11	-4
Factor 2	-4	-5	3	6

The truly outstanding landscapes that are common between the combined factors include examples of most kinds of unmodified landscape in the region (Figure 16). They include coastline backed with cliffs and/or bush-covered hills, coastline with beaches, dunes and open hills with pasture. They include estuaries and harbour shorelines with bush or other tall vegetation, hill country with mixed bush and pasture and sea views, and well vegetated lowland wetlands. The difference between the truly outstanding landscapes in the two factors in the combined Q sort are that Factor 1 features the west coast beaches and rocky estuary, while Factor 2 features inland rolling hills and mixed pasture and bush. As noted above, Factor 1 appears therefore to favour more unmodified 'wild' natural landscapes, while Factor 2 favours a more 'cultured', Arcadian mix of pasture and bush.

The significance of this combined Q sort analysis is that it shows that landscapes in all four land types are valued by different parts of the regional community, but that not everyone places the same emphasis upon any particular land type. Everyone recognises the special qualities of a range of unmodified or little modified Coastal, Estuary and Harbour, Hill and Lowland landscapes that feature water and tall vegetation. Part of the community places greater emphasis upon Coastal and Estuary and Harbour landscapes, the other part emphasises

inland Hill country and Lowland landscapes. All appear to warrant consideration under the section 6(b) of the RMA.

Figure 16: Outstanding Natural Landscapes in Combined Land Type



Factor 1

Factor 2

Chapter 4

Discussion and Conclusion

4.1 Distinctive Viewpoints

The survey of 219 respondents providing 229 Q sorts has identified a small number of distinctive evaluations of the outstanding natural landscapes of the Auckland Region. There are two dominant factors associated with each of the coastal, estuary and harbour, and lowland land types, and three factors associated with the hills land type. These factors account for an unusually high proportion of the total number of respondents interviewed (Coastal 83%, Estuary 97%, Lowland 87%, Hills 90%). This means that we can be confident that the factors take into account nearly all of the views of people interviewed.

The identification of two or more factors in each of the land types indicates that there are some differences in emphasis in the way people in the community evaluate what constitutes an outstanding natural landscape. In the case of the Coastal land type the differences between the two factors at the ‘upper’ (truly outstanding) end of the distribution are very subtle and appear to reflect a greater familiarity with either east or west coast. Similarly, for the Hills land type, although there are three factors overall, there are only subtle differences in evaluating what is ‘truly outstanding’, and a high degree of agreement about the basic features of a ‘truly outstanding’ landscape. For the Estuary and Harbour land type, the difference between the factors lies in whether salt marsh is considered outstanding or not. In the case of the Lowlands, the differences between the factors are more marked, and respondents emphasise either wetlands, *or* pastoral landscape.

4.2 Consistency between Factors on a Particular Land Type.

Despite these differences shown by the factors, there was still a reasonably high degree of similarity between the dominant factors regarding coastal land types (0.72 correlation), and a modest degree of similarity between each of the estuary, lowlands and two hills viewpoints (0.5-0.6 correlation). Hence whilst there are significant statistical differences between the factors taken as a whole, there is also a degree of consensus. Typically, this consensus was greater in relation to what constitutes an outstanding natural landscape, than in what was least outstanding. This will be helpful in developing an overall evaluation. The consistencies are evident from the basic descriptors, and given the focus of the study upon identifying outstanding landscapes in a policy context, the following discussion is primarily focused upon the areas of consensus.

4.3 Summary of Viewpoints of ‘Truly Outstanding Natural Landscapes’

The following section summarises the descriptions of the landscape characteristics that are most evident within, and distinctive to, the top-rated photographs that are described as truly outstanding in each land type.

Coastal:

Undeveloped coastline framed by medium to high relief with cliffs, bush cover or rough pasture and only very low levels of human modification that are visually subservient to the overall setting.

Estuary and harbour:

Open water, intertidal margins and shoreline which is highly natural backed by low to medium relief with significant areas of tall vegetation, bush and pasture, and only very low levels of human modification that are visually subservient to the overall setting.

Lowland:

Unmodified wetlands with areas of open water and well-vegetated margins, and, open rolling pastoral landscape with lakes or watercourses, remnant bush and very low density of settlement.

Hills:

Relatively high relief with significant areas of maturing native vegetation interspersed with rough pasture and extensive open views. Landscape structure and vegetation patterns are visually diverse, and clearly express the underlying geology, landform and natural drainage. There is a very low density of settlement that is visually highly integrated into the overall setting.

The key elements that are identified in truly outstanding landscapes are medium to high relief, water, tall vegetation, beach or rocky shorelines, and an absence of human artefacts.

The key qualities are legible and coherent landscape structure and patterns, variety, a sense of tranquillity, indigenous New Zealand identity, and a sense of openness and visual access.

Features which particularly detract from outstanding landscapes are presence of human artefacts, lack of trees, intensive production monocultures, modified or degraded ecosystems, and visual monotony or lack of variety.

4.4 Consistencies across Different Land Types: Wild Nature and Cultured Nature

There were also some consistencies in the results across different land types. This is shown in two ways. The first way is by the similar values and sentiments expressed in each equivalent factor across land types. Factors 1 & 2 Coastal, Factor 1 Estuary and Harbour, Factor 1 Lowlands, and Factor 1 Hills all express a set of values concerning outstanding natural landscapes described elsewhere (Newton et al., 2002) as ‘wild nature’. This is a position which values natural landscape most highly when there is little or no evidence of human presence, modification or management. This becomes expressed in the selection of photographs as ‘truly outstanding’ which are closest to the pristine environments in the land types under consideration.

In contrast, Factor 2 Estuary and Harbour, Factor 2 Lowlands, and Factors 2 and 3 Hills, all evaluate some types of modified environment as outstanding natural landscapes. This may be equated to a ‘cultured nature’ position (Newton et al., 2002), in which the presence of humans undertaking recreational activity, or some forms of low intensity productive activity, is quite consistent with a landscape being natural and may complement or even enhance its outstanding qualities. The main expression of ‘cultured nature’ values in these factors is an acceptance of mixed pasture and bush on hills, and a rejection of salt marsh and most forms of wetland.

These two overarching patterns of response (wild and cultured nature) were clearly expressed in the combined Q sort, in which two factors accounted for 97 per cent of respondents who did

that Q Sort. Factor 1 identified unmodified environments as outstanding natural landscapes. These were largely concentrated upon coastal, estuary and lowland wetland landscapes. This is a 'wild' nature position. Factor 2 expressed a more 'cultured nature' viewpoint, favouring coastal bush, and mixed hill pasture and bush (an Arcadian sentiment).

4.5 Relationship to Previous Studies

The overall distinction between 'wild' and 'cultured' nature described above is consistent with the findings of the Coromandel study of natural character (Fairweather and Swaffield, 1999), and with recent studies in Kaikoura, Rotorua, and South Westland (Newton et al., 2002). These consistencies and similarities add weight to the validity of the findings.

The overall pattern of responses also has some significant similarities with the 1984 Auckland Regional Landscape Study (Brown, 1984), and largely confirms the findings of that study. It indicated that unmodified landscapes with either rocky or beach coastlines, open water, tall vegetation, and some measure of vertical relief were most highly rated, whilst developed, forested and agricultural landscapes were less highly rated. The 1984 study also showed that wetland and salt marsh was relatively poorly rated.

However, the 2002 study adds several important dimensions to the 1984 results. First, the 2002 factor analysis has identified several distinctive sets of values. This reveals that whilst some landscapes and landscape attributes are very widely recognised as outstanding by all respondents, there are others which are recognised by some respondents but not by the others. Furthermore, by separating out the different land types into four different Q sorts, the 2002 study has identified public preferences for types of landscape that tend to be squeezed out of the reckoning in a single combined rating. The main examples of this are salt marsh, and mixed pasture and bush on hills, both of which are more widely and more highly rated in the 2002 results than in the 1984 study.

It may be that this finding is partly a result of the greater sensitivity of the 2002 methodology. However, the results of the combined Q sort suggest that there have also been some structural shifts in public preferences. Coastal landscapes, mixed pasture and bush hill country, and lowland wetlands have gone up in relative value compared to the 1984 results. This finding is entirely plausible in the wider policy and socio-economic context. The increased value of coastal landscape is self-evident in the real estate market, reflecting population growth, increased wealth, better cars and willingness to travel. The increase in value of lowland wetlands reflects a growing appreciation of indigenous ecology, and awareness of the increasing rarity of these landscapes, due to drainage and agricultural intensification. The increased value attached to agricultural landscapes with pasture may also reflect the growing demand from urban commuters for rural lifestyle, and the consequential pressure on the more picturesque inland landscapes.

The sample demographics also hint at another dimension of change, which is the influence of the growing ethnic diversity in the regional population. Data on the detailed breakdown of factors by ethnicity for each land type Q sort are shown in Appendix 3. The table shows that the Asian respondents in the sample had a greater tendency to load onto the 'cultured nature' factor in the inland land types and for the combined Q sort, and analysis of the interview comments confirms the value placed by these respondents upon well-managed productive landscapes. This is not a perspective that is limited to Asian respondents, nor do all Asian respondents load onto the 'cultured nature' factor, but it is worthy of note. European New

Zealanders dominate the wild nature factor 1 in the combined Q sort and their comments emphasise this focus upon pristine environments. It is also notable that whilst Maori, Polynesian and European New Zealand respondents are spread across all factors, there are very few respondents of European ethnicity loading on the ‘cultured nature’ lowlands factor 2 (characterised by open pastoral landscapes). There is also a suggestion of a distinctive Maori/Polynesian coastal factor (Factor 3 noted in the introduction but not analysed in detail), which is focused upon rocky shorelines suitable for food collection. These observations are very tentative, but do suggest that growing ethnic diversity may be part of the change in landscape values, and warrants further research.

4.6 Implications for Stage 3 of the Project

The aim of this report is to present the basic findings of the Q sort interviews in stage 2 of the project. It is not intended to provide a final identification of the Auckland Region Outstanding Natural Landscapes, nor to develop a policy response. These tasks will be undertaken in succeeding stages of the project. However several issues have emerged from the analysis which will require consideration and resolution.

The identification of at least two Q sort factors on each land type require a decision about what level of agreement is needed in order for a particular type of landscape to be accepted as ‘truly outstanding’. The interviews have identified some common landscape values, but also show some differences in the way certain types of landscape are valued. This is demonstrated in the summary illustrations of the ‘truly outstanding’ landscapes in each factor. To what extent is it necessary to have total agreement on what constitutes outstanding? Is it sufficient that a significant view exists within the regional community that particular landscapes and values warrant recognition and protection? There is no suggestion in either the legislation or Environment Court determinations that there must be total consensus upon the recognition of outstanding landscapes. The very high loadings on the factors in this study (accounting for 80-97% of all responses), the small numbers of factors, and the relatively high level of consensus across factors, all suggest that if a landscape is identified as truly outstanding in any of the factors, then it warrants consideration at a policy level. However this must be qualified by the need to be consistent with Section 6(b).

The second issue therefore is how to resolve some inconsistencies that have emerged between public perceptions, and legal precedent regarding the definition of outstanding *natural* landscapes. In the lowland and hills land types in particular, there are several landscapes identified as truly outstanding in one or more factors that show a relatively high level of human modification, for example field cropping, which would not meet the established criteria used for evaluating outstanding natural landscapes by experts. It will therefore be necessary to cull several landscapes from the set, before field application.

4.7 Conclusion

Distinctive viewpoints upon the characteristics of what constitutes outstanding natural landscapes in the Auckland Region have been identified. These viewpoints have been described in some detail. Taken as a whole, they indicate sets of values that are consistent with other studies and which can be associated with different types of landscape that occur with the region.

The qualities that characterise outstanding natural landscapes in each of the four land types can be summarised as:

Coastal: Undeveloped coastline framed by medium to high relief, with cliffs, bush cover or rough pasture and only very low levels of human modification that are visually subservient to the overall setting.

Harbour and Estuary: Open water, intertidal margins and shoreline which is highly natural backed by low to medium relief with significant areas of tall vegetation, bush and pasture, and only very low levels of human modification that are visually subservient to the overall setting.

Lowland: Unmodified wetlands with areas of open water and well vegetated margins, and, open rolling pastoral landscape with lakes or watercourses, remnant bush and very low density of settlement.

Hill Country: Relatively high relief with significant areas of maturing native vegetation interspersed with rough pasture and extensive open views. Landscape structure and vegetation patterns are visually diverse, and clearly express the underlying geology, landform and natural drainage. A very low density of settlement that is visually highly integrated into the overall setting.

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Appendix 1

Comments on Photographs

These are presented in the following order: Coastal, Estuary, Lowlands, Hills and Combined.

Coast Factor 1				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
10	High in native vegetation. Visible natural processes. Uncorrupted by mm development. Excitement of sea hitting land. Refreshing cleans and unpolluted.	Visible sign of human intervention. Residential development too close to beach. Roads impeding into coastal marine area. Lots of exotic vegetation. Development interrupting ridgeline. Power lines unnecessary.	Development through ridgeline. Pollution, rubbish. Clearing native vegetation. Structures in water. Residential development.	More natural elements used for infrastructure. More focus on native vegetation.
22	Lack of human modifications. Sense of remoteness. Untouched. Sense of grandeur. Steeper and more rugged. Water looks clear and clean. Native vegetation.	Unnatural structures. Lots of hard surfaces. Vegetation removed. Unsympathetic structures. Exotic vegetation. Hard structures imposing on foreshore. Development too close to shore.	Any man made structures. Exotic vegetation. Intensive recreational activities. Commercial activities. Removal of vegetation.	Remove hard structures proximal to foreshore. Planting natives – remove exotics.
23	Remoteness – open space. No man made structures. Drama of steep dunes. Pleasant places to visit. Variety of elements. Natural beauty.	Amount of development. Importation of sand. Lack remoteness. Evidence of human intervention.	Any human modification on beach. Buildings out of character. On ridgelines or above bush line. Removal or change of vegetation to exotics.	Tidy promenade. More attractive interface between road and beach – not materials.
31	Coastal and not pastoral (not majorly so). Undeveloped, no people. Naturally formed.		Any commercial development. Housing, Roding. Get away with walkways properly looked after.	
33	Untouched by man, people. Spectacular nature of nature – cliffs – beachscape. Lack of pollution. If people to go need adequate provision e.g., rubbish bins.		Any gross human intrusion – roads, power lines – indiscriminate rather than blending ie. straightening of contour by cutting through headland of tunnel. Roads can enhance natural coastscape.	

34	Less inhabitation. No housing. White sand – natural vegetation. Clear water. Remoteness (8). No people. Reminds me of Karatai beach – no people.		Housing. 24 has house but hidden. Wharves/marina. 8 can't do much to upset it.	
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Coast Factor 2				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
7	Natural. Foliage in all of them. Slightly rugged appeal.		Reduction of foliage. Artificial untidy – ie. Rock walls. Man made intrusions.	More planting (grass or trees). Back from foreshore ie. Facilities. Development should improve the environment.
12	Untouched. No buildings (or very few). People are free to roam.	Compromised by development. Many look tidal and not so attractive.	Jet skis and motorboats. Remote housing in pristine areas. Roothing.	Tidy rubbish off beaches.
16	Colours of water and bush. Textures. Distinctive geology and landscape. Depth of colour. Nice places to visit. Untouched – lack of dwellings and people.	Concrete artificial looking. Houses too close to beach with poor transition between. Beaches look untidy. Lack picturesque qualities. Power lines.	Power lines. Any development.	Housing set back with natural transition to beach. Power lines underground. Beach cleaning.
20	Not urban – few houses. White sand. Unspoilt. Uninhabited, rugged. Dune grasses for protection. Distinctive ridgelines/landforms. Steep topography. Clear water – blue. Waves. Peaceful, serenity.	Rocks, pebbles, difficult to walk. Untidy, seaweed. Too urbanised. Too many elements (busy)	Roothing (cars, motorbikes). Cluttered housing. Commercial, industrial.	Clean beaches. Walkways over difficult terrain. Planting of trees.

25	Dramatic. Sense of drama and atmosphere. Sense of discovery. Want to explore them. Diversity is an element.	Intrusion of urban is a detractor. Scrappiness. Lack of distinctive natural character. Little bit transient, lacks permanent form.	In appropriate development. Infringes on those natural. Pollution, siltation, disruptions to the land form. Loss of vegetation.	Softening the interface between natural/man made. More sympathetic siting of man made elements. Removing anything that tries to look natural to attempts to dominate or control the natural process.
28	Good vegetation growth. Dynamic water. Alive. Good for using (recreation). Integration of houses, rocks and bush. "Summer holidays". Natural state.	Contrived. Passive recreation not possible (poor access). Untidy state of beach. Lack of vegetation adjacent to beach. Presence of power lines. Stagnant.	Roading adjacent to beach. Litter. Removal of vegetation. Sympathetic development OK.	Remove concrete, soften with vegetation. Planting of trees. Undergrounding services. Better transitions to beach (buffer zones).
38	Quietness. Social fishing, recreation. Like to drive around coast (roads OK people not). Native trees, natural vegetation. Contrast of rock and vegetation. Easy to access.	Populated. Less healthy environment. Looks artificial.	Build up sand dunes. Man made structures. Losing vegetation from exotic wildlife.	

Coast Factor 3				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
42	Accessibility for a large family which include old people. Good sandy beach. Some protection and some shade.	Not accessible. Hard rocky terrain.	Litter. No toilet facilities. Development? (not really)	Nothing really
45	Green trees. Lots of trees. Nice sand	No trees. Nowhere to sit.	Not sure. Development? leave it.	Tidy up (#3). Tree planting.
46	Rocks. Colour of water. Looks reasonably clean.	Plain. Grass. Houses, buildings. (water not as clear, undeveloped areas)	Rubbish. Sewage. Polluted with boats. To much development. Development? not really.	Clean up beaches, rubbish bins.
47	Clean clear water. Sheltered from wind. Not too popular, crowded, quiet. Quietness.	Population. Crowded. Dirty. No privacy.	Buildings around the area would ruin the environment. Development? Lots of walkways, definitely. Access, no heavy development.	General tidy up.

Estuary Factor 1				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
01	Left most natural. Beautiful. Regenerating bush. Good habitat. Appealing places to be. Quietness.	Too much activity. Not appealing to visit.	Housing level. Farming. Removal of vegetation. Camp grounds.	Level of natural materials. Planting of vegetation.
5	Naturalness, few people living there. Complexity of environment. Indigenous vegetation. Distinctive landforms, headland. Lack of human modification. Remote feeling, peaceful. Clean, healthy.	Lack of naturalness. Aesthetically displeasing. Altered. Artificial. Dirty (7).	Any development. Non intensive rural OK. Obtrusive buildings and tracks (grass and fences OK) jetties, sea walls, drainage.	
07	Haven't been taken over to man. Regrowth is regeneration. Not really any great factories or housing right on the verge. People need access but try not to interfere too much.		Factories. Housing. Removal of natural bush. Reclaiming the estuary into liveable human space. Plant exotics ie. Norfolk Pine, Palms would degrade areas.	Replant native trees ie. Pohutakawa. Buy back coastal properties when up for sale and turn into parks etc. Walkways in bush and on farm areas to let people in to educate people as to what's there.
22	Typical of NZ clean green. Water clear. Abundant vegetation. Good habitat for native fauna. Hidden away. Absence of houses and beds. Peaceful, good vibes.	Pollution. Houses. Destroyed habitats. Not peaceful. Bad energy.	Houses. Sympathetic housing OK. Unlimited development. Roads. Removal of vegetation. Water pollution.	Remove human intervention. Plant native trees.
24	Lack of man made structures. Pure clean look. Natural vegetation. Unpolluted looking. Minimal human interference.	Presence of built structures. concrete. Lack of natural transition structures – water. Obtrusive scale of structures. Mangroves unattractive.	Intensive built structures. Unsympathetic structures. Removal of vegetation. Marine farms. Structures too close to shore.	Vegetation planting (natives). Remove rubbish. Retain public access. Limit recreation. Sympathetic buildings.

29	No artificial things. Beautiful. Not sure.		Buildings. Pollution.	
30	Cannot see any human activity. Some in the other photographs but not great disturbance. I came from a rural place in India.	Small hut or power cables. Any construction, any human activity. Cows grazing, still natural but not as much.		
31	No houses – concrete. No development. No rubbish – pollution. More bush the better.		Business, industrial development. Housing. Too many houses. Too artificial. Polluted looking.	
33	Except 22, they all have water and no signs of habitation. Therefore 22 and 9 have them, but all still very natural. 22 therefore it has ferns. More special cf 18 has good composition. Could be anywhere cf. 22 is more ours. Combination of vegetation and fern types. Like these, in terms of outstanding natural landscapes. Important part of being Kiwi is going to beach. Like beaches.	Inappropriate human involvement! Rocks brought in. Boat house, hard to walk past. Public space! Buildings, square box and pylons	Encroachment of human activity. Structures, buildings etc. Roads not sensitively done. Cutting and filling contours.	
38	Clean, tidy, natural.	Man made. Dirty	Pollution. Development.	Clean up.

Estuary Factor 2				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
01	Sandy shores nice to be on. Clean looking water. Typical of NZ.	Dirty looking. Not good for swimming. Nasty looking shores to walk on. Presence of industry.	Pollution. Too many building.	Waste of time.
6	More natural. Not interfered with. Brighter photographs. Clean and tidy.	Sludgy, muddy. Factories leading to pollution. Dull looking.	Boat ramps. Any housing. Any development. Loss of access.	
14	Balance of trees and water. Lack of buildings. Serene. Female	Swamp like, unattractive. Barren. Neglected. Appears polluted. Difficult to walk on	Minor development only would be OK. Most development would degrade.	Remove building. Some areas are necessarily so. Planting of trees.
17	Combination of vegetation and water. Different shades of green. Colour contrast. Lack of development.	Looks dirty. Rocks and shelves unpleasant to walk on. Man made structures and development.	Buildings, roads, paths. Boats and passive recreation.	More grass. Less factories. More safety.
20	Natural look. Absence of houses. Peaceful.	Unnatural. Too much development.	Roads. Buildings, factories, houses.	Remove man made structures.
25	Isolation. Enjoyable places to visit. Looks natural. Undeveloped state. Looks clean.	Mangroves! Prolific growth around Auckland. Unnatural. Silt build up, choking water weed. Appears polluted due to industry. Tidal protection walls. Houses too close to shore. Rubble infill.	Any development causing runoff. Any development too close to the shore. Intensive recreation. Removal of vegetation. Leave pristine areas alone.	
26	No more structures. Represent a diverse sample of estuarine environs. Ecologically improvement – habitats. Typical NZ scenes. Holiday type places. Remote unspoilt.	Degree of built structure. Modification to coastline. Power lines. Urban areas not natural. Could be further modified without detriment.	Any buildings. Artificial structures (sea walls). Removal of vegetation (uncontrolled). Intensive recreation. Boat mooring.	Prevent pollution and remediate. Prevent pedestrian access. Limit boating activities. Limit further modification. Setback buffer zones for buildings. Sympathetic design. Prevent tree removal.

36	Variety of elements in the picture. The way it's set out. Native trees	Lack of colour. Not very pretty.	Removal of trees.	Enhance with variety and some greening.
37	Scenery. Water. Trees. Clean. Blue water. Unspoilt.	Dirty. Not a holiday destination. Dull.	Factories. Wiping out trees.	Clean it up.

Lowlands Factor 1				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
03	Totally natural, not modified by man. Lack of any sign of man. Coastal marine area appeals. Coastal margins important to protect.	High percentage of man made structures. Plants although crops better than non organic.	Any loss of vegetation or clearance. Divert or pollute water or ecosystems. Intrusion of man made structures. Keep pristine.	Planting of natives. Removal of houses, fences etc.
05	Variation in landform. Water, land, vegetation, sky. Textures and colours. Native vegetation. Lack of man made structures. Dying vegetation shows cyclic nature of vegetation. Little sign of modification.	Lacks variety, boring. No colour or texture. Not distinctive. Human patterns obvious. Cultivation.	Drain wetlands. Motorbikes destroying dunes. Removal of vegetation even dead trees. Access needs to be limited. No development appropriate within these landscapes.	
09	No addition of exotics. No man made as can see. Mostly no structures or weeds.		If the water was diverted or depleted. Addition or exotics. Addition of weeds. Man made structures.	Add trees to pastoral land. Shelter belts to hide fences. Eradicate things like gorse.
12	Close to original. Natural landscape before human intervention.		Pollution (runoff mainly). Human interference. Removal of trees. Walking track removes the adventure.	No, leave completely alone. Nothing really except addition of trees.
14	Water. Untouched by human look. Natural ridgeline. Vista (view from land over sea to land again)		Commercial development. Concentrated residential.	Not sure. Access (minimal). Board walks (1). Dune retention to help landscape.
15	Most natural. More native indigenous plants. Unspoilt. Water. Left in natural state	Built up with house structure. Land been ploughed and farmed	Water aromas. Native plant cleared. House built on	A lot more native planting.

21	Presence of water. Presence of native vegetation. Rolling hillsides. Very natural and pleasant to visit. Good habitats. Lack of human intervention.	Strong evidence of human activity. Large modification. Power poles. Denuded of vegetation and drained. Spartan, exotic trees. Artificial. Highly modified.	Draining wetlands. Planting of exotics. Removal of vegetation. Man made structures. Roads. Passive access OK, not major. Over staking.	Screening planting. More trees. Sympathetic colour schemes. Evergreen natives.
28	Limited human intervention. Ban animals but little built landscapes e.g., Dwelling, poles, power lines		Roads, disturbance to ground, dunes. Anymore removal of vegetation. Any more grazing.	Could be enhanced by revegetation, eg. 5 still <u>is</u> outstanding. eg. 24, track blocked off or made into board walk.
36	Native forest. Water. More natural, looks how it's suppose to.	Farmland everywhere. Not different to any other farm anywhere. Residential development.	Farming. Residential development. Heavy development.	Native planting. Pond. Board walks would last better.

Lowlands Factor 2				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
04	Presence of water. Presence of trees. Pasture and Animals. Rolling hills	Obvious human intervention. Cultivated patterns. Too flat.	Residential development. Traffic and roads.	Plant trees – natives -not forestry blocks. More animals, Non uniformity, no straight lines.
07	Clean green image. Natural, no humans. Green not dead. Untouched nature. Colour contrast (blue/green). Hills (presence of). Trees (presence of).	Brown, look like pollution. Human intervention. Houses – pollution. Dead looking messy vegetation.	Large buildings. Loss of trees. Commercial development. Any housing.	
10	Water and green. Vista, outlook. Uncluttered. 30 creek, sea, trees for shelter. People with the landscape. Different shades.		Dry looking plants. Bush fire.	Shade for the cattle. Fencing, got to have it. Fix the dryness.
11	Water. Lots of green. Trees		Pollution. Less of the natural look. Drained. Factories. Human traffic.	Planting. Removal of brown plants. Walks but nothing else.
16	Clear water. Scenic shots. Tidy and well maintained.	Looks untidy. Water not clear. Messy.	Development for conservation would be OK. Roads and houses OK. Complex structures not OK.	Not sure.
17	Presence of water. Contrast of colour – water and land. Variety of elements (trees). Openness. Tidy. Patterns.	Mud – unattractive. Untidy – not well maintained. No order.	Any development. Person track OK, but not roads etc.	Control of weeds. Maintenance. General tidying and order.
22	Natural looking. Green. Presence of water and its combination with natural landscape matches well.	Dry looking – or dying. Impression of damage or rotten. Muddy and dirty. Not natural. Abandoned and poorly managed.	Pollution. Commercial/industrial. Residential OK. Drainage of water. Roading. Fences.	Introduce clean water. Leave to revert or look after better – better planning.

32	Versatile, water, colour.	Too much scrub, Water looking dirty. Looks polluted.	Chopping down the trees. Rubbish in nature. Buildings.	
33	Like the landscape. Water. View. Nice colours.	Messy. Colour.	Some housing.	Clean out messy plants. Replant.
38	Water. Natural looking. Native vegetation. Clean. Unspoilt.	Mucky. Development. Brown.	Removal of trees. Having development.	

Lowlands Factor 3				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
34	Versatile, water and hills. Tidy.	Not tidy. Not clean and nice.	Pollution	Tidy up. Development? leave as they are.
35	Looks good. Water. Animals.	Plain. Dirty (#3).	Building houses on them.	Not really.
37	Good land for farming and for people to live.	Swampy. Muddy. Can't use.	Heavy development. Causes soil erosion.	To cover the swamp with fill.

Hills Factor 1				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
01	Truly natural. Wild natural, untouched.		Vegetation cover. Less native. Less cover/density.	
04	Natural beauty. Presence of water with tree right down to it. Undisturbed. None (trees?) actually fitted, purely naturally.	Farm land. Trees have no authentic appeal. Dead, dull looking, lack of water. Don't look accessible. Presence of barriers, fences and hedgerows.	Development OK but appropriate. Industrial not OK.	Blocks of big trees (native). Access and infrastructure. Install some order to the landscape, no paths currently.
07	Water/land interface. Native bush.		Clearance of vegetation. Structures on significant ridgeline.	Revegetation. Subtle development. Well screened. Not too large in terms of dwelling size.
10	Naturalness. Untouched. Don't seem man made. Pure. The real NZ before it was touched. Green and water. Serene and magical.		Removal of trees. Housing. Putting in docks (waterways, boats)	No development.
13	Unspoiled. Water. Trees. Vistas (large)		Removal of trees, slips, houses, fires	Protect the trees that are there. Tourist facilities that don't impact heavily on the environment or landscape.
27	Natural looking. Diversity of natural elements. Combination of natural elements.	Housing in rural area too dense. Concrete.	Too dense housing development. Small lifestyle block. Commercial and industrial. Forestry (pine).	Sympathetic placement and design of housing. Avoid urban roading, patterns and building in rural area.
29	Least human contact, pure bush, no clearing, fence roads, houses. Like 2-300 years ago. Pristine.		Concrete! – ie. Removing trees, green.	

31	Near the sea. No human elements eg. Houses. Can “smell” the landscape. Native trees.	Cultured. Presence of houses. Shows wealth is palatial compared to family home.	Boats. Housing. Pine Plantations. Development ancillary to housing OK – already compromised.	
37	Green. Rugged hills. Native bush. Open vistas. Sea views.	Brown. Development. To much development.	Cutting down trees. Obstructing sea views with buildings. Pollution.	Maybe to make green growing trees. Couple of holiday houses. Walkways.

Hills Factor 2				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
06	Overall vista. Presence of sea. Complex lighting.	Cluttered looking with trees and houses.	Commercial development. Any residential.	
16	Clean water. Appreciate farms and livestock. Nice countryside. Plenty of trees. Combination of hill forest and water elements,	Man made structures. Brown and dull. Crops not yet grown.	Remove vegetation. Pollute water. No houses.	Less messy trees, provide ordered planting. Get away from monocultural crops which leave areas barren looking all at once.
18	Presence of water and its contrast with the land. Contrast of elements in each photo. Well vegetated with trees. Distinctive ridgeline/landform. Undisturbed.	Dull and brown. Grass is dying. Signs of human intervention.	No development.	Replanting of trees (native).
19	Sea in background (#27). Trees (#19). Contrast of landscapes (#12).	Scrappy. Untidy. Not well looked after by owner.	Built up a lot. Leave how they are.	Cleaned up with nice trees planted.
21	Pasture, water and forestry make a nice ecological balance. Retention of trees and pasture.	Heavy residential for a rural area (#3). A lot of weed and scrub that looks untidy and messy.	To further subdivide with residential development. Lots of treescape features.	Planting of trees in steep gullies or areas of erosion. Better pasture management. No factories. Could be sympathetically developed with low density rural/urban development.

24	Lack of houses. Native bush. Coastal element. Natural landform of hills. Natural	Scraggy bush. Housing. Modified by humans. Forestry unattractive. Man made structures on skyline.	Large scale earthworks. Forestry. Laws. Vegetation removal. Structures in water. Pylon/masts. Intensive residential (3 or 4 houses). Roding. Intensive farming.	Screening of houses with vegetation. Retain bush – remove exotics. Limit residential development especially skyline.
32	Smooth contour and vegetation. Land to sea contrast. Distinctive. Presence of water. Rolling pleasing.		Bulky development. Breaking pattern.	

Hills Factor 3				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
02	Diversity of elements (water ecosystems, etc.). Obvious ecosystem. Land is wooded to waterline. No obvious erosion. Wooded backdrop. Familiar. Trees preserved. Ridgeline has been preserved.		Any removal of ground cover, particularly near waterway. Intrusion of pasture in wooded area.	
15	Native bush. Lots of trees. Close to way it would have been originally. Space for development in terms of food source etc. Need bush. Diversity, not barren. Humans in harmony not overtaking		Spray, insecticide. Opossum. Dams. Industrialisation. Farm run off. Waste. Removal/felling of trees	Some completely natural area. No development in untouched areas. (there should be a similar survey on the apartment block – and ideas for limits etc).
20	Pure. Middle of nowhere. Countryside. Bush/country. Relaxing. Water view.	Scruffy looking.	Over population.	Remove dead wood. Not much really.
22	No man made structures. Natural vegetation (native). Nice vista combination of elements. Looks well managed. Steeper country looks better. Forested. Interesting patterns. Sympathetic housing. Presence of water.	Barren bare dirt. Unkempt, scruffy – little care. Weeds- gorse – ugly. Not well managed.	Man made structures. Marine farms. Denuding of vegetation particularly. Steep land and river valleys. Noxious pests. Unnecessary clearing for development, man made patterns. Obstructing vistas. Loss of coastal vegetation.	Planting of clumps preferably evergreens or natives particularly riparian. Reduce monoculture appearance. More permanent vegetation. Allow regeneration.

23	Combination of ,bush, water and hills. Most natural. Water important. Presence of bush frames vista. Ruggedness, interesting ridgeline (little erosion). Presence of trees not necessarily natives. Pastoral landscape.	Modification. Bland nothingness. Pine trees! Bare green nothing to break up vista.	Removal of vegetation. Obtrusive housing. Dominance of man made structures. Roads.	Planting of trees. Screening of development with trees.
28	Bush clad hills, and sea combination and contrast with pasture (modest). Hills, sea, bush. Good mixture.	Pines not natural.	Tourist Hotel. Cable cars. Motorway. Felling of bush.	
38	Native bush. Open view. Ocean view. Hills. Natural	Development. Clear land. Farm (and man made forest)	Plant forestry. Build houses	Replant native trees. Tracks for people to walk through so they can understand why it should be preserved.

Combined Factor 1				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
04	Natural. No influence of man. Rugged beauty. Combination of bush and water.	Lack of trees. “no trees – man is dead”. Ecosystem crumbling. No thought for environmental systems. Development to intense. Squares – not flowing like nature. Artificial.	Removal of vegetation. Man made disasters (nuclear, oil slicks). Development OK but not degrade ecosystems.	Habitat belts hedgerows. Improve soil structure, organic. Get rid of some cows.
17	Presence of water/beaches. Beautiful native bush. Little if any housing. Isolation. Cleanliness. Untouched.	Would not like to be there. All worked looking and artificial. Dirtier looking.	No housing and road development. No commercial development. To be left untouched.	Planting of native trees (development does have to occur in some places).
19	No sign of civilisation. Untouched. No man made structures.	The more sign of human impact the lower the photo.	Any sign of human pampering. Native vegetation, removal of man made structures.	Allow native regeneration. Remove or hide buildings behind natural buffers.
23	Presence of water and beaches. Lack of people or signs of people. Feeling of solitude. Colour contrast. Texture contrast. Naturalness. Undisturbed.	Been modified, fences, houses. Pine plantation. Not distinctive. Nondescript.	Any development.	All areas have some value.
25	Sea. Combination of vegetation, rocks and sea.		Housing to close. Sea activities (should be careful).	Additional vegetation. Maybe very basic tracks that blend in.
28	Appearance of being untouched by human. No people in it. Natural.	Commerce and people. Touched by people.	Commercialisation. Residential development. Pollution (oil spill etc). Industrial pollution ie. (#18).	Nothing really.

	Represents New Zealand. Ecological value. Pristine.			
44	Relationship between coastal marine land and water – natural transition. Pleasant water setting. Dynamic landscape with water shots – tidal weather.	Obviously modified, not natural. Obtrusive development in some areas.	Degradation of water and vegetation. Non sympathetic marine development. Some sympathetic development ore intervention is not detractive.	
49	Most natural and unmodified. Representative of pre- human New Zealand, important to retain. Water is very important visually. Spiritual, connected to life. Sense of place, especially Auckland. Recreation. Fishing. Contrast appears obvious.	Highly modified landscape. Water polluted. Scale of development. Agriculture equally bad as structures. Drainage of wetlands.	Man made structures. Boat ramps, wharves. Commercial development, houses. Changing from indigenous to exotics. Roads and power lines.	
52	Distinctive landform, typical of New Zealand coast. Attractive to look at. Lack of human modification.	Most modified.	Any housing. Any development. Annoying combination of houses and bush.	Clustered development.

55	<p>Presence of water. Drama. Rarity, unusual. Isolation. Ecology. Calendar stuff – colour of water. Trees right down to water. Peaceful with elements of drama.</p>	<p>Monoculture of cropping or forestry. Bleakness. No trees. Human modification has degraded landscape. Lacks interest. Unnatural coastline.</p>	<p>Too much human intervention. Loss of coastal vegetation. Siltling leads to mangroves. Built structures in coastal areas (small jetties are OK). Planting unsuitable trees (Norfolk pines, Phoenix palms).</p>	<p>Planting of trees, Houses back form coastline. No monocultures or intensive horticulture. Sympathetic buildings.</p>
56	<p>Wilderness, natural beauty. Typical of New Zealand is combination of sea coast all unspoilt. Clean water. No rubbish. Coastal. Interesting. Connotation of holidays and happy memories.</p>	<p>Industrial tidal interface. Highly modified. Man made structures. Lack of access even perception of it, not inviting or welcoming.</p>	<p>Clearance of vegetation. Non sympathetic development. Rubbish. Exotic forestry. Man made structures. Marinas.</p>	<p>Plant suitable coastal species. Open access to public. Need some areas of development.</p>
58	<p>Natural water bodies. Mix of vegetation. Dramatic landforms. Lack of modification. Broad open vistas.</p>	<p>Extent of modification. Narrow range of land uses. Lack of native vegetation.</p>	<p>Significant building. Small scale dotted through is OK. Extractive industries. Large scale aquaculture. Removal of native vegetation. Modification of water's edge. Large scale infrastructure.</p>	<p>Introduce predominant native vegetation. Mixing land uses.</p>

Combined Factor 2				
Subject No.	Truly outstanding	Least outstanding	Degrade	Improve
02	Combination of element. Not overdone with detail. Presence of trees. Nature undisturbed.	Boring. Too much development.	Commercial and industrial development. All development.	Break up monotony.
03	Tranquil. Very limited sign of residential development. Natural farmland (with bush). Undisturbed.	Mangrove swamp looks rotten. Not natural. Houses next to beach. Invades on beach experience. Suburbia. Too much development.	Residential development, industrial, commercial development. A couple of houses OK	Add vibrancy to beachfront. Public access. Planting of trees.
06	Natural look. Combination of land and water. Peaceful to the mind. Great vistas	Messy bush. Mudflats and sand. Dull looking. Messy beaches.	Residential development. Vegetation removal. Litter, pollution. Resorts etc.	Cleaning beaches. Planting more trees.
14	Very still, growing, nice scenery.		Built things – houses, sheds, factory work, wharf	Clean up stones or sand, flatten area.
15	Clean, clear, nice water. Combination of water and trees. Place that would be fun to live. Places for recreation. Safe places for recreation. Good wildlife spots. Good access.	Lack of trees. Not so nice for recreation (swimming). Houses.	Deforestation. Slips. Pollution of water by any measure. Rubbish. No development beyond rural. Some structures OK.	Planting of trees for shade and to prevent slips.

42	Peaceful. Native vegetation. Boats in tranquil setting. Natural state. Active landscape. Combination of landscape elements. Animals. Presence of water. Ruggedness of bush.	Industrial development next to water. Low tide appearance of mudflats. Power lines. Poorly maintained (nothing breaking it up). Unsympathetic coastal development. Dead vegetation in 2 (foreground).	Industrial development on water. Scouring land with not vegetation. Power lines. Loss of vegetation. Inappropriate development.	Services underground. Planting of trees. Clustered development. Intensive industrial development in low quality landscapes. Maintain public access to beaches.
63	Versatile. Sea view. Green. Natural.	Power lines. Can't walk around it (18). Too many stones.	Power lines. Rubbish.	Nothing much

Appendix 2 Q Sort Recording Sheet

ARC Landscape Study

Subject No.:_____ Date:_____ Location:_____

Coast		Estuary		Hill		Lowland		Combined	
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Please order the photographs from those which represent the most outstanding natural landscapes to those that least fit this description

												MOST OUTSTANDING

Please identify those landscapes which you regard as truly outstanding. (Choose as many or as few as you like).

What are the characteristics / qualities that make these landscapes truly outstanding?

What changes or modifications would degrade these outstanding landscapes?

☐ **RESPONDENT'S DETAILS**

Please could you provide the following information:

▪ Gender Male ☐

- | | | |
|--|--------|--------------------------|
| | Female | <input type="checkbox"/> |
|--|--------|--------------------------|
- Age

Under 20	<input type="checkbox"/>
20-30	<input type="checkbox"/>
30-40	<input type="checkbox"/>
40-50	<input type="checkbox"/>
50-60	<input type="checkbox"/>
Over 60	<input type="checkbox"/>
 - Ethnicity

European NZ	<input type="checkbox"/>
Maori	<input type="checkbox"/>
Polynesian	<input type="checkbox"/>
Asian	<input type="checkbox"/>
Other	<input type="checkbox"/>
 - Occupation: _____
 - Where Do You Live? _____
(Suburb/Town/Area)
 - How Long Have You Lived in the Auckland Region? _____
- ☐ **NOTE:**
- This information will only be used for Analysis.
 - You will not be identified individually.

☐ **Purpose**

The purpose of the exercise is to identify the outstanding natural landscapes of the Auckland Region.

Outstanding natural landscapes should be reasonably self apparent and reflect values held by the community at large.

Appendix 3

Factors by Ethnicity for each Landform Q Sort

	Factor					
Coastal	1	2	3	-3	NL	Total
European	19	12			3	34
Maori	1	2	1			4
Polynesian	0	1	0	2	1	4
Asian	2	2	1	0	0	5
Other	0	0				0
Total	22	17	2	2	4	47
Estuary						
European	14	10				24
Maori	1	3				4
Polynesian	1	2			1	4
Asian	3	1				4
Other	2	1				3
Total	21	17			1	39
Lowlands						
European	21	2	0		1	24
Maori	1	2	1			4
Polynesian	1	1	2			4
Asian	0	4	0			4
Other	2	1	0			3
Total	25	10	3		1	39
Hills						
European	9	7	8		3	27
Maori	3	1	1			5
Polynesian	1	1	0		1	3
Asian	1	2	1			4
Other	0	0	0			0
Total	14	11	10		4	39
Combined						
European	34	9			1	44
Maori	4	1			1	6
Polynesian	1	3				4
Asian	0	5				5
Other	3	3				6
Total	42	21			2	65