Decision No. C80 /92

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application for a declaration pursuant to section 311 of the Act by the CHRISTCHURCH CITY COUNCIL

(ENF 56/92)

AND

IN THE MATTER of an application for a declaration pursuant to section 311 of the Act by the CANTERBURY REGIONAL COUNCIL

(ENF 85/92)

BEFORE THE PLANNING TRIBUNAL

His Honour Judge Skelton (presiding)
His Honour Judge Sheppard
Mr P A Catchpole
Mrs R Grigg

HEARING at CHRISTCHURCH on the 13th, 14th, 15th, 16th and 17th days of July 1992

THE SEAL OF THE PLANNING TRIBUNAL : NEW ZEALAND

APPEARANCES

Mr J R Milligan for the Christchurch City Council
Mr G J Venning for the Canterbury Regional Council
Mr K Robinson for the Minister of Conservation
Mr C Horn for the Christchurch Estuary Association

INTERIM DECISION

INTRODUCTION

These proceedings comprise two applications for declarations under section 310 of the Act.

On 23 March 1992, the Christchurch City Council (hereinafter referred to as "the City"), filed application ENF 56/92 seeking a declaration “as to the mouth of the Heathcote/Avon River(s)" pursuant to section 2 of the Act and/or a declaration "as to the 'point' at which the landward boundary of the coastal marine area crosses that river (or those rivers) (s.310(3))." In support of this application, the City filed an affidavit by John Gordon Dryden, its Planning Policy Manager, which had been sworn at Christchurch on 19 March 1992.

This application was duly served on the Canterbury Regional Council and the Minister of Conservation, both of whom are directly affected - see section 311(3) and section 312 of the Act.

On 14 May 1992, the Canterbury Regional Council (hereinafter referred to as "the Region") filed application ENF 85/92 seeking a declaration "that the mouth of the Waimakariri River be at the point on the coast where the river enters the sea (as shown on the attached plan)" and/or a declaration "that the point at which the landward boundary of the coastal marine area

crosses the Waimakariri River be one kilometre upstream from the mouth of the river so that the area including the Brooklands Lagoon be in the coastal marine area (as shown on the attached plan)". In support of this application, the Region filed an affidavit by Lawrence Robert McCallum, its Land and Water Resources Planner, which had been sworn at Christchurch on 11 May 1992.

This application was duly served on the City and the Minister of Conservation, both of whom are directly affected - see again section 311(3) and section 312 of the Act.

A pre-hearing conference was conducted by the presiding Planning Judge over two sessions on 4 May 1992, and 5 June 1992 in the course of which the Christchurch Estuary Association was admitted as a party. Directions were also given regarding procedural matters and counsel agreed to file memoranda setting out in more detail the position taken by each of the principal parties in respect of both applications.

The Christchurch Estuary Association supports the Minister of Conservation (hereinafter referred to as "the Minister") and at the substantive hearing it made submissions and tendered evidence to that end.

These proceedings have become necessary because the principal parties, namely the City, the Region and the Minister have been unable to agree upon the landward boundary of the coastal marine area as it relates to the mouths of the Waimakariri River and the Heathcote and Avon Rivers. Section 2 of the Act, to which more attention will be given later, contemplates either that agreement will be reached or that in the absence of agreement this Tribunal is to make a declaration.

The position taken by each of the parties in respect of both applications will be dealt with in more detail later, but we record at this point that the importance of the Tribunal's

decision in each case lies in the fact that each will lead to a determination of part of the landward boundary of the coastal marine area for which the Region and the Minister have administrative and resource management responsibilities under the Act.

Because this is the first time that the Tribunal has been called upon to exercise this particular jurisdiction, and having regard to the importance of the matters in issue, it was decided that on this occasion the Tribunal would comprise two Planning Judges, as well as two Planning Commissioners.

The hearing took the best part of five days. We heard evidence from 11 witnesses and detailed submissions were made by each party. In the company of the parties we also inspected the lower Waimakariri River and its environs and the estuary of the Avon and Heathcote Rivers and its environs.

Again, because these proceedings are novel, we will now set out in some detail the relevant provisions of the Act. This will be followed by a summary of the evidence tendered by each party in respect of each application. Then, referring to the submissions made, we will discuss each party's case. After that we will set out the approach we have decided to adopt for the purpose of determining these two applications. Finally, we will record the conclusions that we have reached and indicate the nature of the declarations we propose to make.

THE RELEVANT PROVISIONS OF THE ACT

Although these applications seek declarations pursuant to section 310(e) of the Act, it is desirable to begin by referring to several definitions in section 2 and in doing so we bear in mind that this section opens with the words "In this Act, unless the context otherwise requires, - ...". The definitions we consider to be relevant are as follows:

"'Coastal marine area' means that area of the foreshore and seabed -

(a) Of which the seaward boundary is the outer limits of the territorial sea:

(b) Of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of -

(i) 1 kilometre upstream from the mouth of the river; or

(ii) the point upstream that is calculated by multiplying the width of the river mouth by 5:

...

'Coastal water' means seawater within the outer limits of the territorial sea and includes -

(a) Seawater with a substantial fresh water component; and

(b) Seawater in estuaries, fiords, inlets, harbours, or embayments:

...

"'District', in relation to a territorial authority, -

(a) Means the district of the territorial authority as defined in accordance with the Local Government Act 1974 but, except as provided in paragraphs (b) and (c) of this definition, does not include any area in the coastal marine area:

(b) Includes any area reclaimed in the coastal marine area for which a consent authority has issued a certificate under section 245(5)(a)(ii) or (5)(b)(ii), but which has not yet been included within the boundary of the territorial authority:

(c) Includes for the purposes of section 89, any area in the coastal marine area:

..

'Foreshore' means any land covered and uncovered by the flow and ebb of the tide at mean spring tides and, in relation to any such land that forms part of the bed of a river, does not include any area that is not part of the coastal marine area:

'Fresh water' means all water except coastal water and geothermal water:

...

'Geothermal water' means water heated within the earth by natural phenomena to a temperature of 30 degrees celsius or more; and includes all steam, water, and water vapour, and every mixture of all or any of them that has been heated by a natural phenomena:

"'Mouth', for the purpose of defining the landward boundary of the coastal marine area, means the mouth of the river either -

(a) As agreed and set between the Minister of Conservation, the regional council, and the appropriate territorial authority in the period between consultation on, and notification of, the proposed regional coastal plan; or

(b) As declared by the Planning Tribunal under section 310 upon application made by the Minister of Conservation, the regional council, or the territorial authority prior to the plan become operative, -

and once so agreed and set or declared shall not be changed in accordance with the First Schedule or otherwise varied, altered, questioned, or reviewed in any way until the next review of the regional coastal plan, unless the Minister of Conservation, the regional council, and the appropriate territorial authority agree:

...

'Open Coastal Water' means coastal water that is remote from estuaries, fiords, inlets, harbours and embayments:

...

'Regional coastal plan' means an operative plan approved by the Minister of Conservation under the First Schedule and includes all operative changes to such a plan (whether arising from a review or otherwise):

...

"'Restricted coastal activity' means any discretionary activity or non-complying activity -

(a) Which, in accordance with section 68, is stated by a regional coastal plan to be a restricted coastal activity; and

(b) For which the Minister of Conservation is the consent authority:

'River' means a continually or intermittently flowing body of fresh water, and includes a stream; but does not include any artificial watercourse; and for the purposes of Part X only means a river or stream whose bed has an average width of 3 metres or more:

...

'Territorial sea' means the territorial sea of New Zealand as defined by section 3 of the Territorial Sea and Exclusive Economic Zone Act 1977:

...

'Water' -

(a) Means water in all its physical forms whether flowing or not and whether over or under the ground:

(b) Includes fresh water, coastal water, and geothermal water:

(c) Does not include water in any form while in any pipe, tank or cistern:

'Water body' means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area:

...

"'Wetland' includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions:"

At this point it is convenient to deal with a submission made by Mr Robinson that, in determining these two applications, we should at least have regard to the matters set out in Part II of the Act under the heading "Purpose and Principles". In answer to this, Mr Milligan submitted that we are here concerned with setting boundaries for the purpose of determining who is to be responsible for management, and not what is to be managed. Consequently, the matters set out in Part II of the Act are not relevant.

We think Mr Milligan is right. In our opinion it is neither necessary nor desirable to have regard to the matters in Part II of the Act in order to determine these two applications. In due course when the regional coastal plan is being prepared and provision is being made for the coastal marine area within that plan, it will then be necessary for those matters to be given the weight that sections 5, 6, 7 and 8 of the Act indicate is to be accorded to them. But for present purposes, as will become apparent later when we deal with counsel's submissions, we have put these matters to one side.

However, it is of some importance to notice that in Part III of the Act under the heading "Duties and Restrictions under this [illegible]", specific reference is made to a coastal marine area.

Section 12 sets out the activities that are prohibited in a coastal marine area unless expressly authorised by a rule in a regional coastal plan, or by a resource consent. Similarly, section 13 lists the activities that are prohibited in the bed of any river or lake unless authorised, and it is of interest to notice that section 13(3) states "This section does not apply to any use of land in the coastal marine area". It is clear from these two sections that the Act distinguishes quite specifically between a coastal marine area and the bed of a river. Then, too, section 14 contains restrictions relating to water and in various parts of that section open coastal water is excluded.

In Part IV of the Act specific powers and functions are given to the Minister of Conservation to prepare New Zealand coastal policy statements; to approve regional coastal plans; and to make decisions on applications for coastal permits. The Minister also has a duty to monitor and a power to certify those works and activities to which the Act does not apply. This part of the Act also sets out a regional council's functions and powers in respect of coastal marine areas and makes it clear that these are to be exercised in conjunction with the Minister.

In Part V of the Act section 64 provides that there shall at all times be one regional coastal plan for the coastal marine area of each region, and that the regional coastal plan may form part of a regional plan where that is considered appropriate in order to promote the integrated management of the coastal marine area and any related part of the coastal environment. In section 67 it is made clear that a regional plan is not to be inconsistent with any national policy statement or New Zealand coastal policy statement, and where a regional coastal plan forms part of a regional plan, the Minister of Conservation is required to approve the part that relates to the coastal marine area.

It may also be of some importance to record here that section 424 of the Act, which is one of the transition sections, saves certain bylaws under the Harbours Act 1950 that might now apply to coastal marine areas. In the case of the area known locally and hereinafter referred to in this decision as "the Estuary", this has led to a complicated situation that was helpfully explained to us by Mr Milligan in the way now set out.

There has never been a harbour board controlling the Estuary, but the City has had bylaw-making powers under the Harbours Act 1950. The existing bylaws have been continued until the expiration of two years, from 1 October 1991, and until about a month ago there was a mandatory delegation of enforcement functions from the Region to the City.

The question as to who is the enforcing body depends on whether the area covered by the bylaws is within or without the coastal marine area - see section 424(2) of the Act and compare that with section 424(3). Then, too, section 7A of the Harbours Act 1950 as inserted by the Resource Management Act 1991 - see the Eighth Schedule - provides that the Region **can** make bylaws, but need not do so.

Having regard to the foregoing, Mr Milligan submitted that there is an ineradicable overlap of powers. If the area covered by the bylaws is within the coastal marine area, the City still has bylaw-making powers under the Local Government Act 1974 because for the purposes of that Act that area is within its territorial district. At the same time, the Region has the responsibility for enforcing the existing bylaws under the Harbours Act 1950 until 30 September 1993. The Region also has its own bylaw-making powers by virtue of section 7A of the Harbours Act 1950. If the area covered by the existing bylaws is outside the coastal marine area, then the above situation remains, except that the City would enforce the existing bylaws until they expire on 30 September 1993.

With regard to the Waimakariri/Brooklands Lagoon area, in this case there was a harbour board and the Waimakariri District Council is its successor.

If the area covered by the existing bylaws is within the coastal marine area, those bylaws would be administered by the Waimakariri District Council until they expire on 30 September 1993. Both that council and the City have within the parts of this 'area that are within their respective territorial districts, bylaw-making powers under the Local Government Act 1974. The Region has no bylaw-making powers. This situation does not change if the area covered by the existing bylaws is outside the coastal marine area.

Mr Milligan concluded by observing that there is no situation in which one single administrative body has all the powers; that is to say, the powers under the Resource Management Act 1991; the power to administer existing bylaws; and the power to make bylaws for the future.

Part VII of the Act provides a system of coastal tendering in specified parts of a coastal marine area, and this, together with the bylaws and rule-making problems just discussed, provide good illustrations as to why it is important that a coastal marine area be properly defined.

We come now to the Tribunal's declaratory powers. These are set out in Part XII of the Act, and more specifically, in sections 309-313 (inclusive). We have already referred to section 310(e), which provides that the Tribunal may declare "the point at which the landward boundary of the coastal marine area crosses any river". Section 311 sets out the procedures for applying to the Tribunal for a declaration, and we have already referred to section 311(3). Section 313 provides that the Tribunal **may** make the declaration sought by an application with or without modification or any other declaration it considers necessary. It may also decline to make a declaration.

During the hearing it occurred to us that in these proceedings we are not really being asked to make a declaration at all, even though section 310(e) authorises this. Under the general law, the making of a declaration by a judicial body is always discretionary, and indeed section 313 of the Act tends to confirm this. However, in this case there is no residual discretion. The Tribunal must make declarations, otherwise there will be at least two gaps in the landward boundary of the relevant coastal marine area. Therefore, while the end result of these applications will be declarations, the Tribunal is really being called upon to resolve, by way of judicial determination, disputes that have arisen between three administrators who have been unable to reach agreement.

Finally, in this part of our decision we refer again to the definition of “mouth” in section 2 of the Act, and note that in determining these disputes, the Tribunal is empowered to declare "the mouth of a river". At first sight, this seems to be inconsistent with the Tribunal's declaratory power in section 310(e). However, this apparent inconsistency is resolved if it is accepted, as in the end we understood all parties to accept, that in defining "mouth", Parliament has recognised that when exercising its declaratory powers under section 310(e) of the Act it will be necessary for the Tribunal to establish the mouth of the river in question. Put another way, it would be impossible to declare the point at which the landward boundary of the coastal marine area crosses a river without determining where the mouth of that river is, because the crossing point is determined by the formula set out in the definition of coastal marine area, and that formula specifically refers to the mouth.

SUMMARY OF THE EVIDENCE

Before setting out our summary of the relevant evidence tendered by each of the parties, we want to make it clear that we have been deliberately selective. This is because

essentially, these proceedings are concerned with the meaning of words, and although there are issues about which of the opinions of some of the expert witnesses should be preferred, there is little by way of factual dispute calling for resolution by the Tribunal. Nevertheless, we have carefully considered all the material put before us, including the various aerial photographs and the plans and maps, and of course, as we said earlier, we have had the advantage of two extensive inspections in the company of the parties.

The City's Evidence

Mr J G Dryden, to whom we referred earlier, outlined what he saw as the main practical effect of areas being either within or without the coastal marine area. He referred particularly to planning and resource issues relating to the estuaries - including the Brooklands Lagoon - and said that these included the protection of ecological values; the protection of scenic values; the functional aspects relating to drainage; the relationships between recreational activities on the water; access to and from and around the estuaries; erosion and movement of banks and edges; water quality and quantity; the setting of the estuaries and buffers with other urban activities; and tourist potential.

In his view, consideration of these issues establishes quite clearly the close relationship which many of them have with the land that adjoins the estuaries. He went on to say that the close ecological relationship between an estuary and the adjoining land is emphasised by the fact that around the Brooklands Lagoon several adjoining reserves are covered in part by water.

The City then called Mr L J Reilly, who is its Legal Surveyor (design). He gave evidence about the difficulties, as he saw them, associated with establishing mean high water springs.

But in the end, as we later established with other surveyors, in reality there is little, if any, difficulty with this matter.

The City then called Mr K W Blue, who is also a Registered Surveyor employed by it. His evidence was concerned with the practical determination of the line of mean high water springs. He referred to both the Estuary and the Waimakariri River mouth, and illustrated two different approaches to determining the mouth of a river. The first was to select the river mouth at a position roughly equivalent to a prolongation of the line of permanent vegetation along the coast; and the second was to take the mouth as being the narrowest part of the river in the general vicinity of where its mouth is thought to be. These were illustrated on plans prepared by him. As were his determinations of the landward boundary of the coastal marine area.

In the case of the Estuary, Mr Blue took the mouth of the Avon and Heathcote Rivers to be just inland of Shag Rock and applying the formula set out in the definition of coastal marine area, he then determined the landward boundary to be a line across Moncks Bay.

In the case of the Waimakariri, taking the mouth of that river to be at the prolongation of the line of permanent vegetation along the coast, Mr Blue established the landward boundary of the coastal marine area at a point one kilometre upstream from that mouth. He went on to say that in his view the Styx River which runs into the Brooklands Lagoon, and a small stream on the northern side of the Waimakariri River sometimes called Saltwater Creek, can both be regarded as rivers. Consequently, the formula should be applied to them as well.

The other witness called by the City was Dr J A Robb. He is a Biologist and Environmental Scientist employed by the City's Drainage Unit, and gave evidence about salinity values in the Estuary. On 11 March 1992 he supervised the collection of water samples from three sites around the Estuary, at South

Brighton Bridge, Ferrymead Bridge, and Shag Rock. The samples were then tested in the laboratory for conductivity. The results showed that at South Brighton Bridge the seawater values of the water collected varied between 4.1% and 54.7%. At Ferrymead Bridge, the seawater values varied between 39.2% and 81.6%, and at Shag Rock they varied between 81.8% and 93.4%.

With regard to this last set of results, Dr Robb expressed the view that these closely approximate the value likely to be obtained from samples taken some distance out from the coast because of the influence of Canterbury rivers and the effect of coastal currents. He went on to say that the results just referred to, which were a summary of three series of results that he set out in a table attached to his evidence, were much as he would have expected. They showed that in or near the mouths of rivers there can be considerable variation in salinity, depending on tidal influences and upon the volume of riverine flow at any particular time.

Later in his evidence, Dr Robb said that in the course of his employment he had particular involvement with the Heathcote and Avon Rivers and was aware of such things as the extent of saline influence in these rivers. In the Avon River it is possible to detect an appreciable saline influence as far upstream as the Avondale Bridge, which is at the lower end of Kerrs Reach. Also, movement in water levels brought about by the rise and fall of the tide can be identified further upstream than Fitzgerald Avenue.

In the case of the Heathcote River appreciable salinity can be detected well above the Opawa Road Bridge, and as far as Armstrong Avenue, which is further upstream than Ainsley Terrace. Similarly, rises and falls in this river brought about by the tide can be detected as far upstream as St Martins Road.

Dr Robb was unable to make any comments about the Waimakariri River because he has not had any particular involvement with it.

In cross-examination-by Mr Robinson, he agreed that water entering the Estuary moves in two directions, that is to say, towards the Ferrymead Bridge and towards the South Brighton Bridge, and that there is progressive dilution of the seawater. For the purposes of the Resource Management Act 1991 he was unable to say what is meant by fresh water, which it will be recalled is defined as meaning "all water except coastal water and geothermal water", but he would not agree that salinity is necessarily a good test for determining where a river ends and the sea begins.

He was also asked questions about the presence of flora and fauna and the conclusions that might be drawn from observing the presence of fresh water-tolerant and saline-tolerant species, but he was only prepared to say that these could serve as guidelines to assist in establishing the existence of fresh water in a river.

The Region's Evidence

Earlier we referred to an affidavit by Mr L R McCallum, and at the hearing, Mr McCallum expanded on the matters in his affidavit. He confirmed that there is no disagreement between the City and the Region as to the location of the mouth of the Waimakariri River, which, as we have said earlier, both parties claim is established by a prolongation of the line of permanent vegetation along the coast. Nor is there any disagreement between the City and the Region about taking a line upstream from that mouth to establish a landward boundary of the coastal marine area upstream of the Brooklands Lagoon. The point at issue between these two parties is how two lines at right angles to the Waimakariri River should be joined and whether the Act provides for this to be done in any way other than by reference to the line of mean high water springs. Mr McCallum contended that Brooklands Lagoon is not part of the river, but is part of the sea.

The other witness called by the Region was Dr R M Kirk, who is Associate Professor of Geography at the University of Canterbury, and a specialist in land-forms, physical coastal processes and in coastal management. He drew a distinction between the description of land-forms and the understanding of them necessary for planning and management purposes. He told us that geographers describe landscape features according to their-forms and other distinctive aspects of visual appearance that give clues as to origin. However land-forms are best understood, defined and managed as the expressions of an interaction between the processes - that is to say, the forces of Nature that occur - and the resistance of the differing Earth materials acted on by the processes. It is the "outcome of process" view that Dr Kirk applied in preparing and giving his evidence.

At page 2 of his written evidence-in-chief, he said:

> "Characteristics of rivers and river land forms that distinguish them from other expressions of water in the landscape are that the land forms result from mainly two-dimensional, channelised flow and they are eroded and/or built more or less perpendicular to the contours of the land.
>
> In contrast, land forms of large water bodies such as those of ocean, lake and estuary shores are eroded and/or constructed mainly by wave action, though currents can also be locally important. The outcome is that the resulting land forms are all developed more or less parallel to the contours of the land.
>
> The "mouth" (or termination) of a river is, in this view, the line or area where one of these two major land forming regimes gives way to the other and the mouth can take several different appearances (e.g. straight, curved in plan, bell-shaped, enclosed by one or more spits, split

> into more than once(sic) channel etc.). It is simple to imagine situations where this change occurs landward of a regional ocean shore, at the ocean shore, or even seaward of it (as where deltas are being built into the ocean). This view is consistent with the Oxford English Dictionary definition of an "estuary" as "the wide tidal mouth of a river", though it must be noted that the definition is deficient in that there are many estuaries where inflowing rivers exert little or no control over hydrology, sedimentation or land forms. The last mentioned situation is the case in the Avon-Heathcote Estuary."

Dr Kirk then went on to refer more specifically to the Avon-Heathcote Estuary. He described its geological history and gave his opinion that it is dominated by essentially marine (coastal) processes, particularly at its inlet between Shag Rock and South Brighton Spit. He said that the Estuary is intertidal and he described the tidal cycle and range in detail.

At page 5 of his evidence-in-chief, he gave his opinion that it is not appropriate to regard the inlet, as he had earlier described it, the processes that occur there, or the management of them as being those of a "river mouth". Dominantly, they are marine coastal processes occurring in an arm of the sea. He also gave his opinion that it is not correct to regard the land-forms, processes or management of the Estuary to the west of Shag Rock as being akin in any way to the corresponding aspects of rivers.

Commenting on the approach later to be advocated by the Minister and his departmental advisers based on distinguishing between fresh water and saltwater to decide where the mouth of a river should be, Dr Kirk pointed out that adopting this view results in a situation where the land-forms, physical processes, and management problems in respect of extreme events such as flooding are similar in many respects and closely related both upstream and downstream of the "mouth". That is because the Minister's approach leads to establishing the mouths of the Heathcote River and the Avon River well upstream

of the Estuary. He went on to point out that both above and below these "mouths", the flow is essentially channelised, two-dimensional, and can breach or over-top the banks in extreme conditions.

Dr Kirk concluded that the mouth of the Heathcote River is at or close to the Ferrymead Bridge, and the mouth of the Avon River is near but downstream of the South Brighton Bridge. In both cases this is where the river complex of processes gives way to a marine complex of processes that produce coastal land-forms fundamentally different in character from those of rivers. At or near Shag Rock such changes can be shown not to occur. This site is dominated by the sea. In Dr Kirk's opinion, if this site is a mouth at all, then it is a mouth for the sea through which it "inhales" and "exhales" every 12.5 hours, and:

> "Its 'breath' is tainted by some fresh water'".

Referring to the Waimakariri River and Brooklands Lagoon, Dr Kirk stated that while the tidal regime there is the same as at the Estuary, the fresh water outflow is very much greater. He expressed the opinion that the nature of the land-form in this area <u>suggests</u> (our emphasis) that the mouth of the Waimakariri River occurs at the present ocean coast. He went on to say, however, and here we quote:

> "On the southern side Brooklands Lagoon (which is not a 'lagoon') forms an estuary which abuts the principal channel of the Waimakariri. Because of low freshwater inflow from the Styx and the high proportion of the area that is dry at low tide, it is not correct, in my view, to regard this part of the Waimakariri system as being 'river'. Brooklands Lagoon maintains a free connection with the open sea via the mouth of the Waimakariri River and is never closed by either the river or the sea".

Again, at page 8 of his evidence-in-chief, Dr Kirk gave his opinion that Brooklands Lagoon "is an arm of the sea driven more by the tides than by the rivers", and again referring to Brooklands Lagoon:

> "It has landforms and processes that are properly regarded and treated as estuarine (coastal). It happens that this estuary has its inlet through the southern bank of the lower Waimakariri River near the coast rather than directly into the sea."

Not surprisingly, Dr Kirk was cross-examined at some length, by both Mr Robinson and by Mr Milligan. We will not go into that cross-examination in any detail. It is sufficient to say that in the end his opinions remained intact, despite his acknowledgement that for the purposes of other scientific disciplines, the mouth of a river may have different meanings. However, if this is the case, those differences present him with difficulties as a geomorphologist, for the reasons he had given earlier when discussing the Minister's contentions regarding the Avon and Heathcote Rivers.

In cross-examination by Mr Milligan, Dr Kirk had put to him the meaning of the term "mouth of a river" that is to be found in the 1990 edition of the Concise Oxford Dictionary, namely, "the place where a river enters the sea". He confirmed that this accords with the views that he had earlier expressed in his evidence-in-chief. He agreed too that it follows that both the Estuary and Brooklands Lagoon are, on this view, part of the sea.

The Minister's Evidence

The Minister called four witnesses. The first was Mr N T Kerr, the District Manager/Chief Surveyor in the Department of Survey and Land Information for the Canterbury District. Mr Kerr again gave detailed evidence about the way in which the line of mean high water springs is determined, and referred to guidance

notes that have been published by the Professional Development Committee of the New Zealand Institute of Surveyors. He told us that at the present time there has been no survey of the line of mean high water springs in respect of the Waimakariri River or the Heathcote and Avon Rivers, but he would expect that line to be closely proximate to that which had been established by the Christchurch Drainage Board and accepted for survey purposes as the line of mean high water mark. He also confirmed that there would be no difficulty from a surveying point of view in defining the line of mean high water springs along the banks of a tidal river such as the rivers just mentioned.

The next two witnesses called by the Minister were Dr I D Marsden, who is a Lecturer in the Zoology Department at the University of Canterbury, and Dr T R Partridge, who is a Botanist with Landcare Research New Zealand Limited, a Crown research institute at Christchurch. These two witnesses were called to support the Minister's contention that the mouths of the Avon and Heathcote Rivers and the Waimakariri River are to be established by ascertaining the limits of saline-tolerant flora and fauna in these rivers rather than by the land-form method espoused by Dr Kirk.

Dr Marsden gave detailed evidence about the invertebrate fauna to be found in the Estuary and their distribution in the Avon and Heathcote Rivers. Based on work done by J A Knox and A R Kilner in 1973 she told us that ecologically the Estuary can be divided into three intertidal zones. These are described as:

> "(i) a seaward zone from Monks (sic) Bay to the outlet channel of the Estuary, between the end of the Spit and Shag Rock;
>
> (ii) the main part of the Estuary extending to the Ferrymead and Bridge Street Bridges;

(iii) and the zone extending up the Avon and Heathcote Rivers. For the Avon, this intertidal zone extended up to the Wainoni Road Bridge and, at that time, for the Heathcote River, up to the Radley Street Bridge."

In respect of this last zone, the situation has changed because of the Woolston Cut, which was constructed in 1986 downstream from the Radley Street Bridge over the Heathcote River. This cut, or artificial diversion of part of the Heathcote River, resulted in a significant change in the effects of salt water in the lower reaches of this river. However today those effects, according to Dr Marsden and to Dr Partridge, can be observed as far up the River as the Opawa Rail Bridge.

It is appropriate to add here that we understand from what was said at the hearing that this cut, which was intended to diminish the effects of salt water in the Heathcote River, has not proved to be successful from an engineering point of view - the river continues to flow along its original course, despite the cut - and it is proposed to remedy this by constructing a barrage at the downstream end of the cut at some time in the near future. Apparently, the necessary consents and/or permits have been obtained under the Resource Management Act 1991 and these are not subject to appeal.

With these proposed changes to the Woolston Cut, Dr Marsden said that the zone of estuarine penetration is likely to move downstream closer to the pre-cut transition zones.

Turning to the Waimakariri River, Dr Marsden said that this river, the Kaiapoi River, and the Styx River all contribute to the estuarine system that also includes Brooklands Lagoon. The marine influence extends into the Waimakariri River, with marine species being collected on the west side of the entrance to the Brooklands Lagoon. Marine fauna is still evident on both sides of the Waimakariri River, close to Ferry Road, which is immediately upstream of the Kaiapoi oxidation ponds on the

northern side of the river. From a zoologist's perspective, the boundary of the coastal area could be determined as being close to the confluence of the Kaiapoi River and the Waimakariri River.

Dr Marsden was cross-examined by Mr Milligan, but not by Mr Venning; and again we can record, as we did with Dr Kirk, that her opinions remained intact.

Dr Partridge has worked extensively on the vegetation of estuaries. His evidence demonstrated where the changes from saline-tolerant plants to fresh water-tolerant plants occur in the Heathcote and Avon Rivers and in the Waimakariri River. He said that along most of the coastline of New Zealand the line of mean high water springs marks a very distinct vegetation change. This is especially so in estuaries, as it is the point of transition from the intertidal vegetation known as salt marsh to the more typical land plants. Because this is such a significant boundary, it is his opinion that it is ecologically sensible to include within the coastal marine area the estuarine and river banks up to the point of mean high water springs. Salt marsh is a distinct vegetation that occurs between mid-tide and mean high water springs. The plants that grow there are adapted to flooding by water and are tolerant to the salt that this brings. There is only a small number of plants capable of living in this environment and some are more tolerant than others.

Above mean high water springs salt marsh plants may occur, but they are joined by typical land plants that are absent from the tidal zones. In the combined Avon-Heathcote estuary the line of mean high water springs is clearly defined, despite the fragmented nature of the salt marsh vegetation.

In both the Avon and Heathcote Rivers, however, there is a problem because there are only small areas of appropriate vegetation. These are steep-sided rivers with banks that are managed in such a way that establishment in the tidal zone is

minimised. Dr Partridge said that there are, however, areas with small platforms or low banks where the plants of salt marshes can establish.

In the case of the Avon River, the vegetation of the lower reaches above the narrow opening at the South Brighton Bridge is no different from that of the Estuary proper. Indeed, some of the most extensive areas of salt marsh occur there. The changes in zonation occur further upstream. At the Cockayne Reserve there are still large areas of upper salt marsh, and these species continue along the banks a short distance upstream. Above the Bower Bridge at Wainoni Road, there are few remaining, and consequently, in the opinion of this witness, this bridge marks the approximate ecological equivalent of mean high water springs.

In the case of the Heathcote River, the vegetation of the lower reaches above the opening at Ferrymead Bridge is again no different from that in the Estuary proper, and there are large areas of mud flats and salt marsh upstream.

Dr Partridge also referred to the complication caused by the construction of the Woolston Cut, but he went on to say that he has recorded a large number of salt marsh species in the Heathcote River up as far as the Opawa Rail Bridge. However, recent bank collapses along this part of the river have caused most to disappear. Again, in his opinion, the ecological equivalent to mean high water springs occurs at approximately this bridge. If the Woolston Cut is modified, as earlier discussed, it is expected that this will cause a return of the ecological equivalent of mean high water springs at about the position of the proposed barrage, which of course is significantly further downstream than the Opawa Rail Bridge.

With regard to the Waimakariri River, there is a similar problem about definition. Salt marsh vegetation occurs throughout the Brooklands Lagoon and it is onlyadjacent to Spencer Park that there are signs of estuarine species being joined by fresh water plants. This means that ecologically

Brooklands Lagoon falls within the coastal marine zone. Salt marsh vegetation proceeds up the Styx River as far as the tidal gates. Beyond this point, there is a sudden change to fresh water species. This has been caused by the construction of the gates. Were it not for these, estuarine vegetation would have extended further upstream. There is also extensive salt marsh vegetation on the true right bank of the Waimakariri River. However, this gives way quite rapidly to fresh water plants before the confluence with the Kaiapoi River. The ecological equivalent of mean high water springs is therefore slightly downstream of where those two rivers join.

Dr Partridge was also cross-examined by Mr Milligan, but not by Mr Venning, and acknowledged that his evidence led to the conclusion that from a botanical point of view the mouth of the Heathcote River is presently at or about the Opawa Rail Bridge. From the same point of view, the mouth of the Avon River is at or about Bower Bridge, and the mouth of the Waimakariri River is slightly downstream from the confluence of that river with the Kaiapoi River. He agreed, too, that mean high water springs is not necessarily coincident with tidal influences, and that tidal influences remain longer than saline influences.

By and large, we can make the same observation about the cross-examination of Dr Partridge that we made about the cross-examination of Dr Marsden and Dr Kirk.

The final witness called by the Minister was Mr P D Palmer, who is the Senior Conservation Officer (Statutory and Management Planning) in the Department of Conservation for the Canterbury Conservancy. Mr Palmer is a Registered Surveyor and has a post graduate diploma in Natural Resources. He produced a series of photographs illustrating various features of the Avon and Heathcote Rivers and the Estuary. These had been taken from the South Brighton Bridge and the Ferrymead Bridge. He also produced some photographs showing tidal flats west of the Ferrymead Bridge and an area of land further east along the Estuary.

Mr Palmer described these photographs in detail and we were able to see all these views in the course of our inspection.

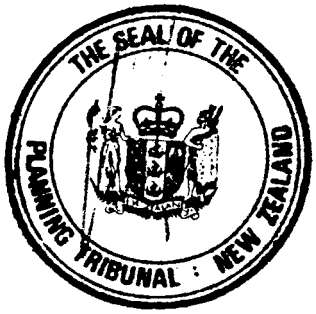
The Christchurch Estuary Association's Evidence

The Association called evidence from one witness, Mr R A Harris, who is a Resource Management Consultant. Mr Harris has had 20 years' working experience in ornamental horticulture, with a focus on native plantings and ecology. His formal qualifications are an apprenticeship and trade diploma in horticulture, and between 1984 and 1990 he returned to university, gaining degrees from the Universities of Canterbury and Lincoln in Social History and Resource Mangement, the latter having a focus on land classification.

Mr Harris gave detailed evidence about the Estuary and about the way in which he considered it should be managed in the future. This evidence was given to support that part of the Minister's case, which is also the Association's case, that in determining the landward boundary of the coastal marine area, regard should be had to Part II of the Act, and in particular, to section 5, which sets out the purpose of sustainable management.

EACH PARTY'S CASE

In this part of our decision, we will outline the case presented by each party, giving first the general approach taken, and then the application of that approach to the Avon and Heathcote Rivers and to the Waimakariri River. We will also summarise the criticisms that were offered to each of these approaches.



The City's General Approach

It was the City's case that the mouth of a river is the place where the waters of a river system meet the sea; so that there can be a number of rivers entering the sea through a single mouth.

Mr Milligan submitted that generally the legislative intent is that the boundary of a coastal marine area should follow the line of the coast and it is to be presumed that the legislature had in mind an administrative boundary that is conveniently ascertainable so that people can tell without difficulty which set of rules governs their activities.

Mr Milligan further submitted that there is no magic in names, so that what something is called (for example on maps or in local parlance) does not determine what it is for the purposes of the Act. He contended that when the Act speaks of the mouth of a river it is not to be understood as referring to a place where a body of water that is called a river enters the sea, but the place where the water of a single river system meets the sea. The matter at issue, so he argued, is "the establishment of an administrative boundary across a river and not across any particular river". This is to be done by identifying the mouth of the river system of which a river forms part.

For the purpose of defining the landward boundary of the coastal marine area, Mr Milligan submitted the mouth of a river is to be understood as represented by a line at right angles to the main water flow; the relevant distance upstream should be measured along the line of water flow; and once the boundary line has been constructed across the river its ends must join the line of mean high water springs.

Mr Milligan went on to contend that the mouth of a river must be at some place where there is fresh water, a term that excludes coastal water. The Estuary and the Brooklands Lagoon are not part of the sea because the water in them has not been taken from the sea, and is not coastal water regardless of its saline content; and is therefore fresh water with the consequence that both are part of river systems that extend to the sea with their mouths being where they meet the sea.

Because "the mouth of the river" is a single, nominal phrase for a separate concept it is not reducible to its component parts and it is not appropriate to apply the defined meaning of "river" in section 2 of the Act.

The Region's General Approach

This was in two steps. First it was submitted that where the line of mean high water springs crosses a river, the landward boundary of the coastal marine area at that point is a point upstream of the mouth of a river with the consequence that the first question to ask is whether the line of mean high water springs crosses a river. A river can include seawater that is not coastal water, so that a flow of water in a channel (before it reaches an estuary, fiord, inlet, harbour or embayment) may have a mixture of seawater and still be river water.

The second step is to ask the question: Where is the mouth of the river? Because there is no definition of the term "mouth of the river" in the Act, it should be given its natural and ordinary meaning. The dictionary meaning of "mouth" in relation to a river, is the outfall of the river and in the context of the Act, this means the point where an otherwise enclosed flow opens and gives way to other features.

Mr Venning submitted that this is consistent with the geomorphologist's understanding that a river mouth is the line or area where one of the major land-forming regimes (riverine and coastal) gives way to the other. As estuaries are

essentially coastal bodies of water, and as the Act recognises them as part of the coastal water system, the mouth of a river is to be found where it enters an estuary.

The Minister's General Approach

For the Minister, Mr Robinson submitted that the Act indicates a clear preference for a surveyable line and that it is appropriate to test the landward boundary of the coastal marine area by its relevance to the matters that the Act seeks to promote, as set out in Part II. Mr Robinson also submitted that in the definition of the term "coastal marine area" in section 2 of the Act, the phrase "where that line crosses a river" refers to a "statutory" river, and not to what might ordinarily be described as a river. He argued that a flow of water ceases to be a statutory river at the point where it substantially mingles with seawater and ceases to be fresh water, and that the mouth of a river is the point where that change occurs.

Mr Robinson accepted that as a matter of hydrology, this point will vary considerably according to river flows and tidal levels, but he contended that the point is defined with an acceptable degree of clarity and certainty where the saline-tolerant flora and fauna yield to those intolerant of saline influence.

Mr Robinson went on to submit that because the line of mean high water springs is the landward boundary of the coastal marine area except where that line crosses the river, the first inquiry must be: Where does the line of mean high water springs cross the river? Because the definition of "river" is exclusive, being introduced with the preposition "means", it is not permissible to look to ordinary or dictionary meanings of that word, unless no sense can be made of the statutory language as it stands. Two characteristics are necessary for a river as that word is defined in the Act. The body of water must be flowing and it must be fresh water.

Fresh water is relevantly defined to mean "all water except coastal water"; and coastal water means "seawater within the outer limits of the territorial sea and includes - (a) Seawater with a substantial fresh water component...". Consequently, to determine whether the threshold question has arisen, it was Mr Robinson's submission that it is necessary that the body of water is both flowing and is water that is neither seawater nor seawater with a substantial fresh water component or put positively, it is at least water with only an insubstantial seawater component.

Mr Robinson went on to submit that although the Act does not spell out the relationship between the quest for the place at which the line of mean high water springs crosses a river and the location of the river mouth, there is a clear inference that there is to be a close relationship. The line is to cross a river, and it is the mouth of that river that is to provide the basis for calculating the actual boundary. Therefore, the mouth of the "statutory" river - that is to say, the body of flowing, fresh water - is where that flow of substantially fresh water becomes so mixed with seawater as to cease to be fresh water. The coastal ecology extends up rivers and to interpret the Act in the way just described gives due weight to the purpose in section 5(2)(b) and the provisions of section 6(a), (c) and (d) and of section 7(d) and (g) by which the ecology is to be safeguarded, recognised and provided for, and given particular regard.

In addition, Mr Robinson pointed out that section 12 of the Act provides for the protection of the foreshore and section 13 provides for the protection of river beds, but foreshore is defined so as not to include any area that is not part of the coastal marine area, and therefore section 12 provides protection for precisely the areas with which the Tribunal is concerned, provided they form part of the coastal marine area.

He went on to say that it is the Minister's case that land-form is not the test, but rather what happens on the land or the waters covering it, because the Act lays emphasis on the line of mean high water springs and the presence of fresh water or coastal water rather than on land-form. The coastal environment, wetlands, rivers and their margins are all worthy of recognition.

Finally, Mr Robinson submitted that because the Act contemplates that the relevant authorities may agree about the location of a river mouth, acting of course within the bounds of reasonable and sensible administrative decision-making, by implication at least, the Tribunal is empowered to adopt a similar approach.

The Christchurch Estuary Association's General Approach

This association submitted that the coastal marine area boundary should be where the coastal marine and estuarine attributes intersect with the fresh water river system.

This submission was based on three grounds: first that Parliament has given only coastal issues a separate, distinct and mandatory policy and planning process and intends the establishment of coastal marine areas to result in the protection of sustainable management of the features that delineate and make up the attributes of the coast. Secondly, it would better facilitate the management purposes of the Act if the landward boundary of the coastal marine area is defined where a coastal marine and estuarine environment becomes a clearly fresh-water riverine environment. Salinity is the underlying and unique difference and is the essential indicator of a coastal marine environment. Thirdly, it would be difficult to promote the sustainable management of an area if due recognition is not given to the position, shape and influence of such key factors as the extent of tidal and saline influence, or to the biological, chemical or physical indicaters that define the extent of those influences.

As we said earlier, the Association supported the Minister's case in respect of both the Avon and Heathcote Rivers, but did not seek to be heard in respect of the Waimakariri River, in which, of course, it has no particular interest.

We turn now to each party's application of these general approaches to the two applications that are the subject of these proceedings.

The Avon and Heathcote Rivers

It was the City's case that the Avon and Heathcote Rivers share a joint mouth at the landward side of Shag Rock and that the boundary of the coastal marine area is at Moncks Bay.

It was the Region's case that the Avon and Heathcote Rivers have separate mouths where those rivers enter their combined estuary, that is to say, where the dominant process is that of the sea rather than the rivers. In the case of the Avon River, this was said to be at the South Brighton Bridge, and in the case of the Heathcote River, at the Ferrymead Bridge.

It was the Minister's case that the mouth of the Avon River is to be regarded as being half way along the Cockayne Reserve and the mouth of the Heathcote River is to be found at or about the Opawa Rail Bridge. From this, the Minister submitted that the landward boundary of the coastal marine area where it crosses the Avon River should be determined as being 10 metres downstream from the seaward side of the Bower Bridge and the landward boundary of the coastal marine area where it crosses the Heathcote River should be determined as being 10 metres downstream from the seaward side of the Opawa Road Bridge.

The Waimakariri River

It was the City's case that the Waimakariri River, the Styx River and the Kaiapoi River share a joint mouth, and that the mouth of the Waimakariri River system is the place where the river meets the sea, which is established by extending the line of the seaward edge of the coastal vegetation across the river. The City contended that the landward boundary of the coastal marine area is then to be ascertained by measuring from the mouth a distance upstream in both the main stem of the Waimakariri River and in the Styx River that is equivalent to five times the width of the river mouth as earlier described. The result would be that the major part of the estuary called the Brooklands Lagoon would be outside the coastal marine area.

The Region agreed with the City as to the mouth of the Waimakariri system, but disagreed with regard to the landward boundary of the coastal marine area. It contended that to establish this it is necessary to measure upstream along the main stem of the Waimakariri River only and not into the Styx River as well. The result would be that all of the estuary called the Brooklands Lagoon would be in the coastal marine area, because the line of mean high water springs follows around its edge before it crosses a river.

It was the Minister's case that the mouth of the Waimakariri River should be found to be adjacent to Ferry Road, immediately to the west of the oxidation ponds. From this the Minister contended that the landward boundary of the coastal marine area should be determined as being at the confluence of the Waimakariri River and the Kaiapoi River to the intent that the whole of the Brooklands Lagoon, the Styx River as far as the tide gates at Kaianga Road, Saltwater Creek as far as the tide gates at Beach Road, and an unnamed creek lying to the south of the oxidation ponds, should each, to some extent, be within the coastal marine area.

Criticisms of Each Party's Approach

The City's Approach

Mr Robinson contended that for the greater part of the tidal flow the waters of the Estuary have been shown to have in excess of 50% salinity. From this, we understood him to be further contending that the City could not realistically regard, the Estuary as part of a river system.

So far as the Waimakariri River is concerned, he submitted that the City's position would involve a division of the Brooklands Lagoon, in circumstances where that lagoon justifies being treated as a single entity.

For the Region, Mr Venning contended that there are two principal difficulties with the City's approach. First, that in respect of the Avon and Heathcote Rivers, applying a single mouth to the two rivers does not accord with the ordinary natural meaning of the word "mouth". Secondly, the position at or near Shag Rock which the City maintains is the mouth of the Avon and the Heathcote Rivers is dominated by the tide, and the influence of the rivers is minimal. He submitted that if anything, this locality is the mouth of the Estuary and not the mouth of the rivers. He too, referred to the City's evidence about salinity values.

The Christchurch Estuary Association contended that the City's position does not give due recognition to the extent of tidal and saline influences and the specialised life forms adapted to live in the harsh conditions of changing salinity and periods of exposure, and thus avoids satisfying the main purpose of the Act, which is to promote the sustainable management of natural and physical resources.

The Association maintained that the City's position confuses open estuary with a fresh water channelled river system; does not answer ecological questions; does not adequately distinguish or apply criteria for deciding what is a marine coastal attribute and what is not; and does not recognise that

the line of mean high water springs crosses the rivers at points that are some kilometres inland from Shag Rock and from the Estuary.

In response to these criticisms, Mr Milligan submitted that for water to be coastal water it must be seawater, that is to say, it must be in the sea; and if it is, it does not cease to be seawater, merely because its saline content is low. He submitted that that part of the definition of coastal water after the word "includes" clarifies but does not extend the meaning of the term, and fresh water must be understood in a sense that is different from the statutory definition, otherwise circularity results in that coastal water may mean seawater plus fresh water, but fresh water is water that is not coastal water.

He went on to say that the question is one of statutory construction on which ecological relationships of salinity, vegetation, recreational capacity, bird life, and benthic fauna do not bear, but if those matters are relevant, then it is impracticable for the Estuary and the Brooklands Lagoon to be administered for activity control purposes by a different body from that which administers the surrounding areas and with which, in activity control terms, it is intimately connected.

Finally, Mr Milligan submitted that the definition of "coastal marine area" does not imply that the mouth of a river is at or about the place where there is fresh water. The word "where" and the reference to "that point" are to be understood in the sense of "in that case", not in the sense of "at the place that". Once it is established that the line of mean high water springs crosses a river, the formula takes over, so determination of the position of the mouth is independent of the determination of the extent of saline influence. There is no statutory basis for selecting biological indicators for determining the position of the mouth of a river. Nor are they a logical basis for delineating which public authorities are to control surface activities.

The Region's Approach

Again, on the Minister's behalf, Mr Robinson observed that the Region's position is based on land-form distinguishing what is coastal from what is riverine, and contended that the Act does not invite this basis for distinction. Rather, it lays emphasis on the line of mean high water springs and the presence of fresh water or coastal water.

The Christchurch Estuary Association acknowledged through its representative Mr C Horn, that the Region's approach recognises the distinction between a specialised coastal marine estuary and a combined river system and has merit in terms of satisfying recreational distinctions.

For the City Mr Milligan observed that the Region's approach seemed to have more to do with what the predominant river is called, an approach which he had already submitted was incorrect. He went on to submit that if the Region's approach is accepted it follows that the Estuary, Brooklands Lagoon and the lower Waimakariri must be seen as parts of the sea.

The Minister's Approach

For the Region, Mr Venning identified five difficulties with the Minister's approach. These were, first, that downstream of the positions nominated by the Minister as being the mouths of the Heathcote and Avon Rivers, the land-forms, physical processes, and management problems in respect of events such as flooding are identical to those upstream of those positions and apart from the biological distinction, there is no good ground for making the distinctions at those positions.

Secondly, adopting the Minister's and his Department's views, any major work such as the Woolston Cut would affect the extent of saline influence, and could lead to re-definition of the river mouth.

Thirdly, the Minister's and his Department's approach could lead to uncertainty in definition in changeable reaches of rivers. The sites proposed are not visibly river mouths in any ordinary sense of the word, and are dominated by flows that have essentially river qualities.

Fourthly, the basis of establishing a mouth is unclear and does not follow the ordinary meaning of the word.

Fifthly, because of the second part of the definition of "foreshore", the fact that part of the bed of a river is covered and uncovered by the flow and ebb of the tide at mean spring tides does not necessarily mean that it is in the coastal marine area.

For the City, Mr Milligan observed that whether ecological systems are preserved does not depend on which authority has charge, because the various provisions of the Act apply, whoever has control. He submitted that the Minister's case is difficult to understand. This is because in each case the mouth indicated by biological indicators is upstream of the place where the Minister contends the boundary of the coastal marine area should be. We note here that as it turned out, we do not think this was in fact the Minister's case.

Mr Robinson responded to these criticisms by reiterating that the Act places emphasis on the coastal marine area by creating special controls; that all seawater in the context being considered is going to be coastal water; and that the questions: What is a river? and What is an estuary? are questions of fact and degree. It is possible to use the word "point" in the sense of a place; that there is a sense of the word "taken" which is less active in which water in an estuary may be said to have been taken from the sea; that one must apply the word "river" in the definition of "coastal marine area" in its defined sense, so that it has the same meaning in both places; and that it is not salinity as such, but it's effect on the particular ecosystem that is important. The coastal marine area is not defined to protect salinity, but to protect the consequences of salinity.

THE TRIBUNAL'S APPROACH FORMULATED AND APPLIED

It will be evident that the crux of the conflict between the parties is the differences among them about the correct basis for finding the mouth of a river.

There is no definition in the Act of the term "the mouth of a river". In the ordinary sense of language, as the Concise Oxford Dictionary tells us, it is "the place where a river enters the sea". However, this meaning of the term, while no doubt adequate for most purposes, is not entirely adequate for present purposes. This is because the Act requires the mouth to be at a definite place, in order that the formula provided in the definition of "coastal marine area" can then be applied to determine the position of the landward boundary. We add here that we accept Mr Milligan's submission that in the definition of the term "coastal marine area" the word "where" and the reference to "that point" are to be understood, in the sense of "in the case that", rather than in the sense of "at the place that". It is to be noticed that in the definition the word "except" is followed immediately by the word "that".

Then, too, if the entry of the river water into the sea were to be found where the change from fresh water to sea water occurs, there again would be no definite line in the mixing zone. Further, the place of the mouth of any river will vary with time according to the interaction of the fluctuating river flows and the tides of the sea, and sometimes it will be influenced, too, by wind and wave action.

On this fundamental point, there were two main issues between the parties. The first was whether the estuaries in this case, that is to say the Estuary and the Brooklands Lagoon, are to be regarded as parts of the coastal system, as contended for by the Region, or as parts of river systems, as contended for by the City.

The second was whether the relevant feature to be taken as the indicator of the mouth of a river is land-form, again as contended for by the Region, or the limit of saline-tolerant flora and fauna, as contended for by the Minister.

We propose now to consider these two issues.

Are the Estuaries Part of the Coastal System?

We have concluded that the two estuaries in this case are parts of the coastal system. There are five reasons for this conclusion.

First, we find from the evidence of Mr Reilly and Dr Kirk that each is mainly foreshore in that it is covered and uncovered by the flow and ebb of the tide at mean spring tides.

Secondly, we find from the evidence of Dr Robb and Dr Kirk that in respect of the Estuary, and we infer from their evidence in respect of Brooklands Lagoon, the water of each is substantially seawater, even though at times and in places it is mixed to varying degrees with fresh water.

Thirdly, as the evidence of Dr Kirk showed, the land-forms of the subject estuaries below the South Brighton Bridge and the Ferrymead Bridge in the case of the Estuary, and Brooklands Lagoon in the case of the Waimakariri, are not characteristic of riverine action, but are forms that result where riverine action has given way to coastal action and are dominated by essentially marine coastal processes.

Fourthly, as the evidence of Dr Marsden showed, most of the fauna of the estuaries are not fresh water biota, but are saline-tolerant coastal marine species and estuarine species. Then, as Dr Partridge deposed, intertidal vegetation known as salt marsh occurs in the Estuary and in Brooklands Lagoon.

Fifthly, the Act itself recognises that estuaries are coastal - see the definition of "coastal water" in section 2(1).

We do not accept Mr Milligan's submission that the water in these estuaries, regardless of its saline content, is fresh water and not coastal water. This argument depended on the water not having been "taken", in the active sense, from the sea. This was a reference to the meaning of "seawater" given in the Concise Oxford Dictionary. However, dictionary meanings should not be construed as if they are legislation, and we can find no support for the notion that water in an estuary is not seawater by reason of it not having been actively taken from the sea but having entered the estuary from the sea by tidal action. In the Act, fresh water is defined so as to exclude coastal water, and coastal water is defined so as to include seawater in estuaries.

We consider that the subject estuaries are to be regarded as parts of the coastal system, and not as parts of the river systems.

Is Land-Form or the Limit of Saline-Tolerant Flora and Fauna The Relevant Indicator of the Mouth of a River?

As we discussed earlier in this part of our decision, there is no definition of the term "the mouth of a river", and dictionary meanings are not entirely adequate. This means that whatever meaning we give to that term, for present purposes, will be a derived meaning.

We have been presented with two alternative means of deriving a satisfactory and workable meaning, both of which have been supported by scientific evidence that commands respect. However, the selection of one or other alternative does not depend wholly on the acceptance of one scientific approach and the rejection of the other. Rather, it depends on applying common sense when giving meaning to words, testing that

application in the context of the relevant statutory provisions, and testing it also in the light of the scientific evidence.

Our earlier finding that the estuaries are part of the coastal system is probably sufficient to dispose of the City's case in respect of the Avon and Heathcote Rivers. This is because its argument in respect of those two rivers depends on an acceptance of the proposition that the Estuary is part of a river system and it will be apparent from what we have already said, that we do not accept that this is so.

In addition, however, we take the view that the City's approach with respect to the Avon and Heathcote Rivers must be rejected for two other reasons. First, its own evidence does not support it, and here we refer particularly to Dr Robb's evidence about salinity. Secondly, as Dr Kirk pointed out, if the physical land-form at or about Shag Rock is the mouth of anything, it is the mouth of the Estuary.

However, these conclusions are not sufficient to dispose of the Minister's approach, which, as we have already said, relies on an acceptance of the limit of saline-tolerant flora and fauna as being the relevant indicator of the mouth of a river. It also relies on the submission made by Mr Robinson that for the purpose of determining the mouth of a river we are bound to accept that the river is a 'statutory' river, that is to say, relevantly "a continually or intermittently flowing body of fresh water". This submission forms the basis for Mr Robinson's argument that the evidence of his scientific witnesses, having demonstrated where fresh water ends and seawater begins in all three rivers, the mouth of each is thereby identified and established. However, this argument overlooks the fact that the definition of "fresh water" does not wholly exclude seawater and it also overlooks the fact that section 2 of the Act opens with the words "unless the context otherwise requires".

The Minister's approach also relies on an acceptance of Mr Robinson's proposition that in determining this question and the ultimate question as to the point where the landward boundary of the coastal marine area crosses a river, we should have regard to the matters in Part II of the Act. For the reasons set out in an earlier part of this decision under the heading "The Relevant Provisions of the Act", we have already rejected that proposition.

Nevertheless, we have felt it necessary to give close attention to the Minister's approach, because it has a certain logic about it that is superficially appealing. However, in the end we have been driven to conclude that it would not be sensible to accept this approach.

Mr Robinson submitted at one stage that the Act contemplates a close link between mean high water springs and the landward boundary of the coastal marine area. However, all the evidence points to the fact that accepting the Minister's approach does not accord with that proposition. In all three cases mean high water springs is some distance from the Minister's landward boundary.

Then, perhaps a more serious objection must surely be the one referred to by Dr Kirk. If the Minister's approach is adopted, then the mouths of the Avon and Heathcote Rivers have to be found at places where both upstream and downstream of those places, for all practical purposes, no physical distinction can be made. Our inspections confirmed Dr Kirk's opinion in this regard.

Finally, we note that the coastal marine area is defined in the Act as an area of the foreshore and seabed, but there are parts of the rivers upstream of the South Brighton Bridge and the Ferrymead Bridge that are not substantially in either class. They are plainly not seabed, and although strips of varying widths of the river banks between those bridges and the mouths intended for on behalf of the Minister are foreshore, in that

they are covered and uncovered by the flow and ebb of the tide at mean spring tides, they are substantially river and not foreshore. Below the South Brighton Bridge and the Ferrymead Bridge the same does not hold true.

For the foregoing reasons, we reject the Minister's approach.

This leaves us with the Region's approach, which, in principle, we accept and adopt. We found this approach compelling, and we found Dr Kirk's evidence in support of it equally compelling. We consider that if the ordinary reasonable person was asked to point out the mouth of the Avon River and the mouth of the Heathcote River, he or she would do as Dr Kirk did, and point to positions at or about the Ferrymead Bridge and a short distance downstream from the South Brighton Bridge, respectively. Again, our inspection assisted us in this regard.

It follows that in our view, land-form is the appropriate indicator of the mouth of a river. This also accords with the view we have already expressed about the estuaries being coastal and part of the sea, rather than riverine and therefore part of river systems.

In applying the appoach that we have decided to adopt we have encountered a small difficulty when it comes to the Waimakariri River, and we should deal with that now.

The City and the Region have agreed that the mouth of the Waimakariri River is represented by a line that is a prolongation of the line of permanent vegetation along the coast. This, it will be recalled, was also an approach applied by one of the City's witnesses, Mr Blue, in respect of the Avon and Heathcote Rivers, so to that extent the City has been consistent, even if, as we have already held, incorrect. However, this approach does not necessarily accord with the approach that we have accepted, which is largely the Region's approach. This is because, as we have already accepted, the Brooklands Lagoon, which is upstream of the mouth contended for, is part of the sea.

In his evidence, Dr Kirk has attempted to explain this by accepting that Brooklands Lagoon maintains a free connection with the open sea **via** the mouth of the Waimakariri River. Earlier he had said that in his view:

> "The nature of the land form suggests (our emphasis) the mouth of the Waimakariri River occurs at the present ocean coast."

At the end of his evidence-in-chief, he said that the City's proposal for Brooklands Lagoon would mean treating it as part of the larger Waimakariri River when it is not. It has land forms and processes that are properly regarded and treated as estuarine. He concluded by saying:

> "It happens that this estuary has its inlet through the southern bank of the lower Waimakariri River near the coast rather than directly into the sea."

Nevertheless, again he had earlier said that Brooklands Lagoon is an arm of the sea, "driven more by the tides than by the rivers".

With respect to Dr Kirk we have found it difficult to accept the reasoning that leads to his apparent acceptance that the mouth of the Waimakariri River occurs at the present ocean coast. This seems to be inconsistent with his earlier firm and completely understandable opinion that the mouth of a river occurs where its land-forming processes give way to the land-forming processes of the sea.

Applying the approach that we have decided to adopt leads us to say as a general statement that the mouth of the Waimakariri River is at or about the landward side of Brooklands Lagoon. Everything seaward of that is coastal. This, so it seems to us, also accords with the land-forms we observed on our inspection. Seaward of that point the river channel is not

evident. We derive some support for this from the way Dr Kirk expressed himself. It seemed to us that he was not confident that the riverine land-forms are evident seaward of Brooklands Lagoon.

INTERIM CONCLUSIONS

For all the foregoing reasons, we have concluded that for the purposes of determining the landward boundary of the coastal marine area in the two cases before us, the mouth of the Heathcote River is at or about the Ferrymead Bridge, the mouth of the Avon River is at or about the South Brighton Bridge, and the mouth of the Waimakariri River is at or about a point represented by the end of its channelised form westward of Brooklands Lagoon.

We have used the phrase "at or about" because in the case of the Avon River Dr Kirk actually thought the mouth was some 100 to 150 metres downstream from the South Brighton Bridge and we are unable to be more precise about the other two river mouths either. However, in this respect we agree with Mr Robinson that absolute precision is not essential.

It follows that we are not prepared to make the declarations sought by the City. Nor are we prepared to make the declarations sought by the Minister. However, with the exception of the Waimakariri River, we are prepared to make declarations generally as sought by the Region. Then in the exercise of our powers under section 313(b) of the Act, we are prepared to make a declaration in respect of the Waimakariri River based on our findings as to its mouth.

To ensure that these declarations will be capable of practical application, it will be necessary for their wording to be further considered, and we ask the parties to do that. We think, too, that it would be at least desirable if not

necessary that the declarations be accompanied by survey plans delineating in each case the landward boundary of the coastal marine area.

We would hope that in the light of what we have now said the parties will be able to agree upon the detail and present us with the appropriate material to enable us to issue a final decision in respect of each application.

However, in case agreement cannot be reached, or in case any further directions are required, leave is reserved for any party to apply, and if necessary, to have the hearing resumed on 21 days' notice.

Costs

This has been a case where the Tribunal has been asked to break new ground. It has also been a case where the principal parties are public authorities. As we indicated at the conclusion of the hearing, we are grateful to all parties for their competent and comprehensive presentations, and in all the circumstances we think it appropriate that each party bears its own costs.

Consequently, there will be no orders for costs in these proceedings.

DATED at CHRISTCHURCH this 28TH day of Augest

THE SEAL OF THE PLANNING TRIBUNAL : NEW ZEALAND

P R Skelton
Planning Judge