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**PLANNING A MARKET:  
TRANSFERABLE PLANNING MECHANISMS  
IN NEW ZEALAND**

**Planning A Market:  
Transferable Planning Mechanisms in New Zealand**

A thesis  
presented in partial fulfilment  
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## ABSTRACT

New Zealand's Fourth Labour Government undertook radical reforms of the public sector during the mid 1980s. This Government implemented policy changes associated with the neo-liberal ideology, resulting in re-regulation of the national economy and an affirmation of the role of the market in decision-making. The Resource Management Act 1991 (RMA) is a product of this changing political environment; it recognises market forces as legitimate methods of resource allocation and resolution of land-use conflicts.

This thesis investigates the potential of using economic instruments, in the form of *transferable planning mechanisms*, to allocate water and land resources under the RMA. Specifically, *transferable development rights* and *transferable water rights* are examined in the context of achieving desirable environmental outcomes. The RMA promotes sustainability in the management of natural and physical resources through the concept of *sustainable management*. Any policy using transferable rights to achieve planning objectives is required to meet sustainable management criteria.

This thesis explores issues associated with the adoption of transferable rights as planning techniques. The exploratory nature of the research reflects the limited application of such mechanisms in practice in New Zealand. Transferable planning mechanisms were conceived and first implemented in the United States, which provides a base for defining principles and evaluating practice. Commentary on the American experience is used in the thesis to gauge the potential benefits of using transferable planning mechanisms in New Zealand.

Three New Zealand-based case studies were examined in the empirical phase of research. The case study analysis concluded that transferable development rights can be exercised in New Zealand's rural-urban fringe environments in the form of *transferable title rights*. This adjustment to the transferable development right concept is a result of New Zealand's more restrictive institutional environment (when compared to the United States) with regard to landowners' development rights. However, transferable title rights can only function effectively under certain conditions. There must be a positive

demand differential between the areas of preservation and development, in favour of the designated receiving area of title rights. This is the greatest impediment to the successful implementation of transferable title rights in New Zealand.

The thesis research highlights that, there is extensive scope for the effective use of transferable water rights in New Zealand; these have fewer logistical problems and greater market certainty than the application of transferable title rights. Planners should recognise the potential use of nonattenuated property rights as a means of allocating resources sustainably and reducing externalities in resource use decision-making.

This thesis is dedicated to Grandad Gibson, whose intelligence and integrity is  
an inspiration.

*Genius, that power which dazzles mortal eyes,  
is often perseverance in disguise  
~ Henry Willard Austin ~*

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# CHAPTER ONE

## INTRODUCTION

New Zealand is a society based on the capitalist mode of distribution, production and consumption (Le Heron and Pawson, 1996, 10). As a capitalist nation, New Zealand is exposed to social and economic pressures that occur at both national and international levels. These pressures can manifest themselves in organisational crises that require intensive restructuring of political, economic and cultural processes to resolve them (ibid). An extensive period of economic and social stability began immediately after the second world war and continued into the 1970s. This so called 'long boom,' was dominated by the process of product internationalisation and Keynesian economic policies. Like most other capitalist societies during the long boom, New Zealand had a social democratic government giving priority to full employment and the continuity of production. The implementation of policies to sustain these objectives required the state to shield manufacturers from international competition and make (or influence) key resource allocation decisions.

Financial crises during the early 1980s led New Zealand into a political and economic transformation. The 1984 general election saw the Fourth Labour Government assume power and direct New Zealand towards a *market liberalism* approach to regulating the economy. This policy shift occurred in conjunction with an international transition toward globalised competition, focussing on the private absorption of capital rather than state-supported demand (Le Heron and Pawson, 1996, 13). The market liberalists (the 'New Right') reregulated the New Zealand economy to cater for the shift toward market led decision-making. This was an attempt to regain New Zealand's competitive advantage and ensure that financial resources were used more efficiently. The concomitant of this new competitive approach to the domestic market place was the assumption that government was not capable of making the most economically effective resource decisions. The New Right favours the use of market rules for the allocation of environmental and welfare services (ibid).

The resulting commitment to changing the way resource allocation decisions were made in New Zealand was reflected through: the re-allocation of government functions (Environment Act (1986), State Owned Enterprises Act (1986), Conservation Act (1987)), local government reorganisation, and in the case of regulating environmental effects, the Resource Management Act 1991 (RMA). The RMA creates a rational and streamlined approach to resource decision-making, by integrating fifty nine complex statutes into one statutory framework (Memon, 1993, 117). The RMA is part of a wider agenda of movement toward a minimalist approach to government (McDermott, 1996). Direct intervention by government was reduced, and greater decision-making responsibilities assumed by resource users rather than administrators.

The RMA provides a flexible, non-prescriptive framework allowing planners to use a range of methods to allocate resources and control environmental effects. *Economic instruments* are a collection of methods designed to mitigate externalities resulting from market failure. Economic instruments are financial incentives fabricated to influence decision-makers to reduce costs imposed on those outside the market-place. A subset of economic instruments attaches the concept of property rights to environmental resources, in an attempt to eliminate inefficiency and reduce social costs. These rights create markets for resources to facilitate their transfer and arrive at more efficient allocations. However, the property rights must be defined or *nonattenuated* before markets can arrive at more desirable outcomes (Randall, 1987, 158). Several natural resources are suited to allocation using market mechanisms (also referred to as *transferable planning mechanisms*), including both land and water. This is illustrated by the separation and definition of development rights attached to land and the subsequent trading in markets: hence *Transferable Development Rights* (TDRs). Similarly, water resource permits may be nonattenuated and made exclusive and traded in markets: hence *Transferable Water Rights* (TWRs).

## THESIS AIM, OBJECTIVES AND RESEARCH QUESTIONS

This thesis explores whether or not transferable planning mechanisms are suitable for implementation in New Zealand, in light of the reregulated environmental decision-making processes and local government structures. The thesis aim is to address the following research problem:

*Are transferable planning mechanisms capable of shaping equitable resource allocations under the institutional environment of the Resource Management Act 1991?*

The research problem is informed by four research objectives, which define a number of subordinate research questions to guide the study.

### **Objective One:**

Provide a conceptual overview of how economic instruments are used to address market failure.

#### *Research Questions:*

- What are economic instruments?
- How do they operate?
- What is their theoretical basis?
- What differences exist between economic instruments and regulation-based policies?

### **Objective Two:**

Explore transferable planning mechanisms as methods suitable for resource management.

#### *Research Questions:*

- What are the characteristics of Transferable Development Rights and Transferable Water Rights?
- In what context are they best applied?
- How are they best implemented?

- What are the alternative mechanisms to transferable planning mechanisms?
- What are the advantages and disadvantages of implementing transferable planning mechanisms?

**Objective Three:**

Clarify New Zealand's institutional environment.

*Research Questions:*

- How should we interpret sustainable management as embodied in the RMA?
- How are economic instruments, specifically TDRs and TWRs, facilitated by the RMA?

**Objective Four:**

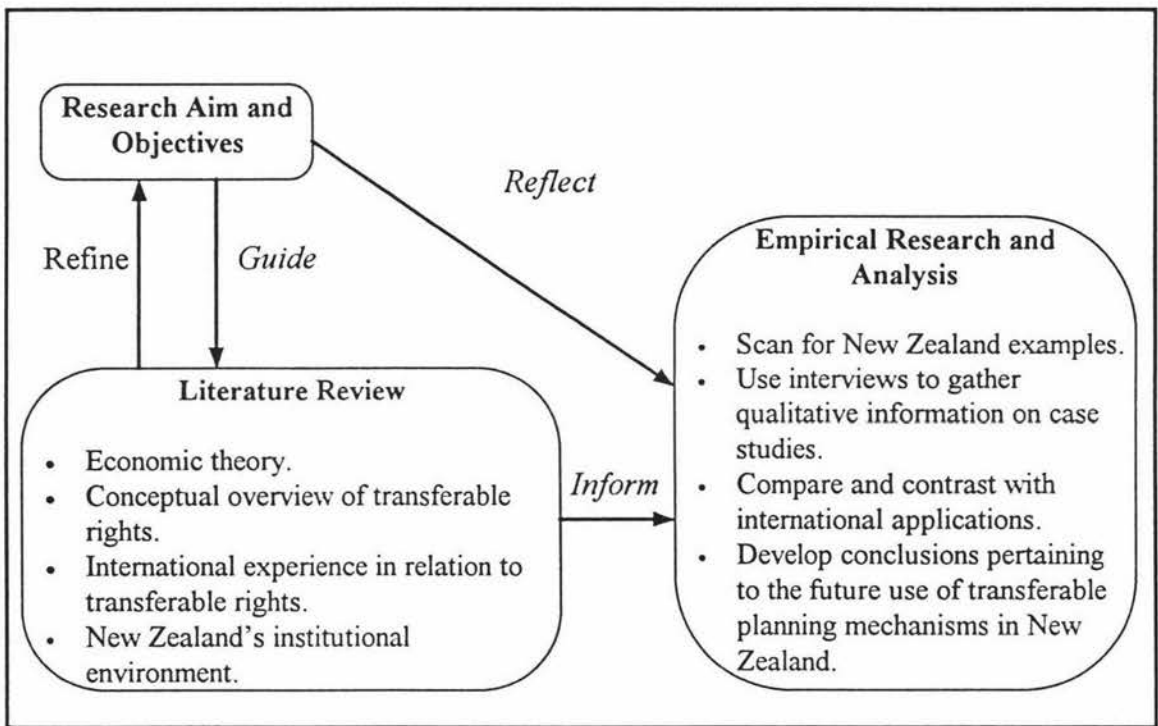
Provide a comprehensive assessment of the potential for using transferable planning mechanisms in local government New Zealand, based on experience to date.

*Research Questions:*

- Are councils exploring the use of transferable planning mechanisms in achieving the purpose of the RMA?
- Have councils successfully implemented policies relating to the use of transferable planning mechanisms?
- How do the practical examples compare with the theory?
- Do local government politics influence or interfere with planners' ability to use transferable planning mechanisms?
- What are the public perceptions of economic instruments and do these influence the final form of the transferable planning mechanism adopted?
- Are councils realising the potential use of economic instruments under the RMA in terms of sustainable management?

## RESEARCH METHODOLOGY

This thesis has adopted an exploratory approach to research on transferable planning mechanisms in New Zealand. These instruments have not been used extensively in this country, and there is minimal experience with which to assess their compatibility with New Zealand's institutional environment. The research methodology reflects this, drawing first on American experience, and secondly, on three New Zealand-based case studies.



**Figure 1.1: Research Design**

The research design (figure 1.1) has three main components. Each component has a different role in contributing to an understanding of transferable planning mechanisms in New Zealand. These differing roles are represented by flows of information. The literature review plays a pivotal role in answering the research problem. It provides the basis for more refined research questions and informs the interviews and case studies. Empirical research reflects the research aim and objectives, forming a triangular research strategy ensuring all information gathered is relevant to the research problem.

## **Literature Review**

The literature review makes extensive use of written and previously researched material. The most significant source of information is planning related academic literature. Other sources include media coverage, New Zealand Planning Tribunal cases, seminars and conference papers.

Literature traversing theoretical issues provides insight into the research questions, and is used to address the nature of transferable planning mechanisms, especially the questions of *why* they are needed and *how* they operate. For example, market-based planning instruments establish a relationship between transferable tools and traditional economic theory. Chapter two outlines the economic theory underlying the distinction between public and private goods. The process of using markets to provide public amenities, or solutions to civic problems, is theoretically sound yet technically problematic.

Other sources of literature are used to assess the effectiveness of transferable rights. The interface of theoretical expectations and actual experience, in a variety of contexts, is critical to the application of market instruments in New Zealand.

## **Empirical Research**

The concept of transferable planning mechanisms is not new to New Zealand, although little practical consideration has been given to their implementation under the RMA. The scarcity of examples means that the empirical research has been limited, and deals with cases where transferable mechanisms have been proposed but not implemented. Investigating the reasons for their abandonment identifies certain characteristics of the New Zealand context which inhibit the use of these market instruments.

### *Case Studies*

The empirical research is based on case studies which provide tangible evidence regarding the likely success of transferable mechanisms in New Zealand. Yin (1989, 19) notes that:

in general, case studies are the preferred strategy when ‘how’ or ‘why’ questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real life context.

This strategy matches the research aims of the thesis, given the contemporary nature and qualitative characteristics of economic instruments.

### *Interviewing*

Interviews were directed toward obtaining information from key players involved in the case studies. The process of constructing and drafting a successful interview schedule involved a number of considerations including: the degree of rigidity of the interview structure, the selection of respondents, the development of a suitable interview format (with particular reference to prompts and probes, and types of questions).

Sarantakos (1993) argues that the interview design must be conducive to and coordinated with the purpose of the interview. An interview can be categorised as structured or unstructured, depending on the type of information the interviewer wishes to extract from the respondent (Strauss, 1987). The distinction between quantitative and qualitative research methodologies dictate which form the interview should take. Qualitative research lends itself toward a less structured interview technique.

## **THESIS OUTLINE**

Chapter two provides an overview of economic instruments and how they can contribute towards improving environmental quality and remedying market failures. This chapter elaborates on the characteristics of economic instruments. The broad category of

economic instruments is then narrowed to transferable planning mechanisms: the focus of the thesis. The success of any transferable right is dependant upon the quality of the commodity to be transferred and its associated property right. This concept of property right is discussed in conjunction with the political regime that facilitates the use of transferable planning mechanisms. The chapter concludes with a discussion of the practical and philosophical arguments pertaining the use of economic instruments as a form of regulation.

Chapter three provides a conceptual understanding of both Transferable Development Rights (TDRs) and Transferable Water Rights (TWRs), and how they can be used to achieve planning objectives. This is followed by an investigation into the legal and theoretical foundations underlying the application of TDRs and TWRs. International examples are related to the New Zealand environment to gauge their suitability for implementation here.

Chapter four elaborates on New Zealand's legal and institutional arrangements under which transferable planning mechanisms are implemented. The Resource Management Act 1991 (RMA), and its purpose of sustainable management, is examined in light of the potential for implementing transferable planning mechanisms. The development and structure of the RMA is discussed in terms of the objectives of both the New Right and the environmental lobby.

Chapter five presents the findings from the case study research. The findings include both prescriptive information extracted from documentation, and material attained from interviews undertaken with the key players. Central to this chapter is a comparative analysis which juxtaposes transferable planning mechanisms with other planning methods. Aspects of each case study are analysed in light of the literature review and conclusions are drawn.

Chapter six summarises the results of the thesis and revisits the research problem. The chapter also provides an outline for possible future research in the area of transferable planning mechanisms, and reflects on the appropriateness of the thesis research design.

## CHAPTER TWO

### ECONOMIC INSTRUMENTS

Chapter two explores the concept of economic instruments and how they are used to achieve environmental objectives and remedy market failures. Economic incentives are currently attracting the attention of environmental economists and policy makers as a means of improving planning practice and environmental quality. The inclusion of economic instruments in environmental decision-making heralds a change in approach from strict regulatory measures. This is not to say that direct regulation has been superseded, but rather economic instruments and other measures (such as cooperative agreements) may be used in conjunction with each other to achieve desired environmental outcomes.

#### CHARACTERISTICS OF ECONOMIC INSTRUMENTS

An economic instrument is a tool which uses economic stimuli to incorporate environmental values into decision-making. Economic instruments have the ability to influence cost and benefit, encouraging the user to make more 'efficient' resource decisions. However, there is considerable debate over the precise definition of an economic instrument, and what differentiates an economic instrument from a regulatory or revenue generating policy. Meister and Sharp (1993, 2) have identified four common elements in an attempt to limit their study of economic instruments and provide an operational definition. These encompass:

- The *existence of financial stimuli*: this suggests that there should be financial incentives for the targeted parties to conform with government objectives. Such incentives may include action that either generates future benefit or avoids future cost for the identified parties.

- The *probability of voluntary action*: the economic instrument should encourage parties to find ways of achieving desired outcomes through their own actions, rather than enforce outcomes through coercive regulation.
- The *involvement of government authorities*: this reiterates the purpose of economic instruments to achieve public benefit through implementation by a democratic agency, rather than being initiated by the private sector.
- The *intention of maintaining or improving environmental quality*: this expands on the above characteristic, distancing economic instruments from other policies whose primary objective is the generation of revenue.

Given the four common elements of economic instruments, Meister and Sharp (1993) go on to categorise five different subsets of policy, which fulfil all of the criteria. They include:

- *Subsidies*, which are direct (positive) financial incentives given to actors in return for adherence to environmentally sound (public) policy objectives. For example, government authorities may subsidise the cost of energy conservation measures to the consumer, in an effort to control the pressure on energy resources.
- *Charges* (the opposite of subsidies), where the actors must forfeit financial resources for the continuation of actions that contravene government's environmental objectives. The principle of 'polluter pays' is an example of a charge, where polluters are directly charged for the adverse effects they impose on the environment.
- *Deposit-refund systems*, whereby individuals or industry must pay government entities or agencies a deposit, only refundable if future actions do not contravene government objectives.
- *Financial enforcement incentives*, including the ability for government agencies to administer fines to those who do not comply with specific ordinances. Substantial fines

force decision-makers to consider the financial implications of not conforming to environmental standards.

- *Market creation*, which involves the creation of an artificial market (by government) for a commodity or property right, also defined by government authorities.

This thesis focuses on transferable planning mechanisms, and therefore concerns itself solely with the economic instrument of market creation. Arguably, market creation is the most complex of the five instruments identified above in terms of implementation. However, it has the ability to redistribute natural resources in a manner that is socially and economically acceptable. There are many examples of created or artificial markets throughout the western world, which aim to enhance environmental quality. The resources subjected to these market forces most commonly are water, land and air (with corresponding schemes such as transferable water permits, transferable development rights and transferable pollution permits).

## CONCEPTUAL ISSUES OF PROPERTY RIGHTS

The success of an artificial market depends on many factors, although perhaps the most important is the quality of the commodity. This quality, in an environmental sense, refers to the nonattenuation of the associated property rights (Randall, 1987, 158), which determines their value and ability to be exchanged by means of a market transaction. This section summarises the theoretical basis of property rights. The procedure for allocating resource or property rights is significantly influenced by the political regime operating at the time. An understanding of this relationship allows the planner to determine the appropriateness and practical effectiveness of market mechanisms.

The core theory underpinning the creation of markets, for the purpose of transferring property rights, is based on the Coase Theorem (1960). Coase concluded that conventional Pigouvian economic incentives of government-initiated tax or subsidy programmes can be highly inefficient, costing society more than the net benefits they were designed to achieve. Pigouvian theory suggests that divergences between marginal

social costs and benefits and private costs and benefits, can be corrected with the application of taxes and subsidies. Economic inefficiencies are avoided through *taxes* when production and consumption are excessive, and *subsidies* when production and consumption are insufficient. The alternative theorem advocated by Coase states:

In a world of zero transaction costs, the allocation of resources will be efficient, and invariant with respect to legal rules of liability, income effects aside (Zerbe, 1980, 84).

Coase's theorem is a perfect, yet unattainable solution to problems involving resource allocation. Transaction costs play a significant role in modern day economies, including services such as legal advice, police and judicial systems. Therefore, transaction costs are clearly no trivial expense and are almost impossible to eliminate (Randall, 1987, 158). Furthermore, the assumptions of perfect competition and no income effects make the utility of Coase's theory debatable. Despite this, Coase stimulated academic debate and practical research into the use of property rights to address environmental externalities.

Since the development of the Coase theorem, economists have been much more careful than they once were about using terms such as *market failure* and recommending governmental regulation of market activity as the solution to perceived inefficiency (Randall, 1987, 189).

Establishing clear property (or ownership) rights to a resource is a mechanism that allows government agencies to rectify market failure (Johnson, 1992, 26). The purpose of establishing nonattenuated rights is to transfer economic externalities into financial consequences for the party incurring them, ie internalise the externalities. In this way, the environmental consequences of resource use or abuse are more likely to be taken into account in management decisions. The transferability allows the rights to be sold or otherwise transferred to the group or individual who value the resource most highly (Fenmor and Markham, 1994). It is dangerous to assume that property rights account for all market failures, as it is difficult to internalise abstract and intangible externalities.

The conceptual issue of property rights refers to enforceable rights "pertaining to the permissible use of resources, some tangible others intangible" (Easton, 1991, 10). The concept relies on exclusive use rights to the resource and the notion of scarcity. This results in a situation where one party has control of the resource, and an economic value

is attached to that control. It is possible that the existence, and exercise, of free market property rights may not coincide with what the general population perceive as *best*. This is illustrated in many conflicts over resource use, where one group exercises their property rights to the detriment of others. For example, the development of open space on the rural-urban fringe may produce negative impacts on aesthetic and intrinsic values of the wider community.

## RESOURCE ALLOCATION REGIMES

Two significant models exist regarding the most appropriate mechanisms for managing resources in developed capitalist societies (McDermott, 1996). The first model involves an interventionist corporate state regime, where the state intervenes in the market place to provide full employment and promote continuity of production. It was this mode of government that dominated New Zealand during the long boom. Whereas the alternative approach assumes that the market will work best if government intervenes only to correct market failure. This model is based on market liberalism, where “economic production tends to concentrate in a smaller number of firms, and market rules are favoured for the allocation of environmental resources and welfare goods” (Le Heron and Pawson, 1996, 12). This latter model gained momentum in New Zealand during the 1980s.

A government favouring an interventionist political regime is more likely to assume the role of resource allocation in decision-making. These regimes, prominent during the 1960s and 1970s, are associated by some commentators with the *Weberian model of bureaucratic organisation* and become dogged by economic and social inefficiencies during times of rapid change (Banerjee, 1993).

The 1980s witnessed a paradigm shift away from the traditional government role of resource allocation. “The Thatcho-Reganite decade saw the beginning of a worldwide affirmation and celebration of the market economy” (Banerjee, 1993, 353). Political and economic restructuring occurred, as the existing capitalist regime had reached its pinnacle. This was evidenced by financial constraints and diminished profitability of

producers, resource owners and employees (Le Heron and Pawson, 1996). The ideologies of the reformed political regimes included reregulation of the economy, privatisation and user pays; all of these emphasised the economic efficiency of private operations. The prevalence of private decision-making through market mechanisms, and society's obsession with efficiency, resulted in the transformation of how resource decisions were administered. Greater market influence was perceived as more flexible and democratic. Bromley (1988) suggests that governments should encourage the definition of property rights and utilise the market as a means of allocation.

## **MARKET FAILURE**

The concept of a perfect market, developed by neo-classical and welfare economists, suggests that competitive economic systems are completely efficient (McDonald, 1989). Under ideal conditions, free competition working through the price system will produce a pareto optimum (Randall, 1987). Pareto optimum is defined as a state of the economy in which all economic resources are allocated and used "efficiently", such that it is impossible to increase the welfare of one party without decreasing the welfare of another (Grundy, 1995, 26). However, even a predominantly market-based economy can never meet the assumptions required to achieve this level of efficiency. The undesirable consequences of private decision-making that may occur, under dynamic market conditions, are referred to as market failures. The phenomenon of market failure can be attributed to a number of factors, including imperfect competition, decreasing cost industries, externalities and public goods. Ignoring the obvious inadequacies of monopolies and the like, "the most important and commonly recognised failure of markets relates to their failure to cope with social costs and benefits" (McDonald, 1989, 327). The two most significant categories of market failure are associated with externalities and public good characteristics.

### **Externalities**

"An externality is said to occur when there is a divergence between private and social costs" (Hide, 1987, 10). Externalities are impacts that occur outside a market decision-

making process, but result from activity determined within a market. The external impacts can affect parties in a positive or negative manner; however, given the context of this thesis only negative externalities will be discussed. Negative externalities can usually be characterised by the fact that the private marginal cost is less than the social marginal cost; and by implication the private marginal benefit is greater than the social marginal benefit (Randall, 1987).

Where externalities occur, the realignment and definition of property rights via economic instruments have the potential to produce more desirable resource allocations (McDonald, 1989). This process is complex; it usually involves the consideration of income distributions and may become very political.

### **Public Good Characteristics**

There are many goods, services, amenities and resources that cannot be efficiently allocated or provided by the market. The two most significant characteristics that determine market failure are that public goods are *non-divisible* and *non-excludable*. The extent to which a good displays these characteristics will determine the depth of its consideration in the market place in determining its allocation.

“Nonexclusiveness is an attenuation of property rights and results in inefficiency” (Randall, 1987, 165). Resources that have inadequately defined property right regimes are often abused by the community that use, consume or harvest them; the users remain unaccountable for their decisions. This notion of non-excludability is evident in the fishing industry, where the fishers have an open access resource. Without effective property rights to the fish, the industry brings about its own demise through unsustainable catches (*The Economist*, 1994, 1). New Zealand addressed this issue in the fishing industry by introducing the Individual Transferable Quota (ITQ) system in October 1986 (Young, 1991). “The fundamental point about New Zealand’s ITQ is that it is a transferable property right allocated to fisheries in the form of a right of harvest to surplus production from stocks” (Kula, 1994, 73). As such, the ITQ system has effectively established sustainable parameters for the New Zealand fishing industry.

The characteristic of non-divisibility refers to the supply function of a commodity. This is illustrated by a good that can be consumed by any individual without adversely affecting the supply of that good to other consumers. Visual and environmental amenities, such as open space and historical architecture are examples of such resources.

Given the two major characteristics of public goods, it is unrealistic to expect private organisations to provide them, as it is impossible to isolate and demand payment from any one consumer. This is due to the consumer's ability to *free ride*, that is avoid paying for a resource, while still sharing in its benefits. There are also *merit goods* that are deemed desirable by society but potential suppliers are unable to justify their production. This purchaser-supplier difference leads the same situation as a public good. The appropriate definition of property rights may, in theory, alleviate market failure in the supply of public goods.

McDonald (1989) suggests that if individuals are guided only by their self-interest to maximise private benefit from land-use, public policy is required to ensure that societal benefits and costs are brought into the decision-making process. There are two significant methods for intervening in the market place to provide equitable outcomes or more appropriate resource distributions; one method is direct government regulation and the other is the application of market instruments.

## **ECONOMIC INSTRUMENTS VERSUS DIRECT INTERVENTION**

There is considerable debate as to whether economic instruments are able to achieve environmental outcomes and objectives in a way that is *better* than traditional controls and regulations imposed by governments. Some commentators (such as Richardson and Gordon, in Banerjee, 1993, 354) perceive regulatory control to be inefficient in attaining desired outcomes, producing inequitable resource allocations. Conversely, others view regulation as a stable and absolute means of manipulating resource allocation for the purpose of public interest.

Each of the broad policy options: economic instruments and regulation, will be compared in terms of theory and practice. The comparison is qualified by the fact that economic instruments are not totally removed from regulation. Johnson (1992, 25) suggests that "economic instruments should be seen as a management option within a broader regulatory framework," and not used to the exclusion of regulation. However, for the sake of this discussion, regulations are defined as rules and quantifiable restrictions placed upon users of environmental resources.

### **Arguments in Favour of Regulation**

The proponents of strict environmental control, through regulation, cite a range of advantages, from ease of implementation through to their ability to ensure positive results. These advantages are discussed against several criteria including uncertainty, political attributes, monitoring advantages and welfare or distributional impacts.

Government-implemented regulations are guaranteed to produce desired environmental results as they are non-negotiable. Conversely, typical market mechanisms are inherently uncertain, due to the dynamic nature of a market and volatile relationships between the components of a market. Uncertainty also impedes the ability to ensure international conventions and standards are met and maintained. The flexibility of regulation extends the ability of decision-makers to react to changing social and physical systems and ideologies (by manipulating quantifiable controls).

Some environmental practitioners perceive regulatory mechanisms to be better suited to the political environment and more likely to be adopted by government. Prior to the implementation of any methods and rules, they must first pass through the political process. This observation is especially relevant to local government decision-making in New Zealand, where councillors are members of the community and do not always possess the required expertise to fully comprehend complex policy instruments (Reardon, pers. comm., 1995). This favours the application of regulation, as these controls are politically and socially acceptable and are readily understood (by the politicians and the community). This advantage hinges on the conservative nature of local government

politics in New Zealand and their apparent reluctance to adopt the unconventional. There are businesses and environmental interest groups who prefer the application of regulatory measures for political reasons. These groups and organisations are able to lobby and use the political process to promote regulatory controls that reflect their own self-interest. The uncertainties associated with economic instruments are not suited to the lobbyist in terms of their time and resources.

Coupled with the political acceptance of regulation is transparency in its implementation. Transparency relates to the community's ability to physically see and understand exactly what the environmental objectives are, and how they are going to be achieved. Conversely, market or economic instruments are more abstract, less defined and their environmental outcomes can only be estimated.

The monitoring process is very important in the evaluation of the success of any mechanism that is intended to generate specific environmental outcomes. It is significantly easier to monitor the outcomes of regulations; economic instruments tend to encompass a 'grey' area, as there are no quantifiable measuring sticks.

### **Arguments in Favour of Economic Instruments**

The proponents of economic instruments cite economic efficiency as the most significant advantage. Economic instruments have the capacity to achieve desired environmental results at a cost much less than that of regulation. It is argued that economic instruments provide an approach that can lead to the achievement of identified standards at the lowest possible cost. Economic instruments give the decision-makers the ability to internalise externalities, and therefore produce a cost structure that is more equitable than many of those produced under regulatory regimes. This is illustrated by measures which assign economic costs on the party who create social, physical or economic costs (Streeting, 1993, 25).

Technological advances can be instigated with the implementation of economic instruments, due to markets providing economic incentives for enhanced environmental

performance and technological innovation. This is particularly evident in industries where economic instruments aim to reduce pollution output. With schemes such as transferable pollution permits, individual industries have the potential to profit from selling excess permits where technology has reduced total pollution. This allows each industry to work within the constraints of the market, while reducing public costs in the most efficient manner (Oates et al, 1991, 13).

## CONCLUSION

This chapter has addressed objective one of the thesis, by tracing the key theoretical issues of economic instruments and the practical situations where they may be applied. The advantages and disadvantages of economic instruments have been outlined, including comparative discussion with alternative measures. In doing so, Chapter two has established an argument for the potential use of property rights, as McDonald (1989, 329) reinforces:

“Property right questions emerge in most cases where externalities exist and the land-use planners’ main task is to devise a composite allocation of property rights (use rights) and fiscal measures to deal with the problem”

Understanding the key concepts of economic instruments is a necessary prerequisite to chapter three, which examines the intricacies of transferable planning mechanisms.

## CHAPTER THREE

### CONCEPTS OF TRANSFERABLE PLANNING MECHANISMS

Chapter three provides a conceptual understanding of transferable planning mechanisms, and an operational perspective of how they achieve planning objectives. Transferable planning mechanisms in New Zealand are discussed in the context of TDRs and TWRs. The elements of a TDR system, namely, preservation districts, receiving districts and the market, are identified and discussed. The conceptual and legal foundations for TDRs vary with differing political and legal regimes. The conception of TDRs was a direct consequence of legal constraints (with regard to zoning) in the United States constitution. This gives rise to a bias towards United States examples (and literature) in determining the history of TDRs. The examination of TWRs broadens the scope of the chapter, and examines how transferable rights theory can encompass another natural resource.

#### TRANSFERABLE DEVELOPMENT RIGHTS

*Development rights* are “the difference between the existing use of a parcel of land and its potential use under existing law” (Pizor 1986, 203). The potential use may also be interpreted as the speculative value of the property. Accordingly, TDRs are a mechanism facilitating the permanent transfer of development rights from one location to another. Ideally, the landowner transferring rights will be compensated for the loss of land development potential. TDRs have the capacity to employ market characteristics to compensate and facilitate the transaction. TDR exchanges can protect public and environmental amenities, which only significant public expenditure could traditionally achieve.

## ELEMENTS OF TRANSFERABLE DEVELOPMENT RIGHTS

Three elements are central to the separation and transfer of development rights: receiving district(s), preservation district(s), and a market. The destination of the transferred development rights is commonly referred to as the *receiving district* (Costonis, 1972; Pizor, 1978; Richards, 1972). The relevant regulatory authority must identify an area that is to be protected from adverse development; such an area is dubbed by Costonis (1972, 593) as the *preservation district*. The third element is the *interactive market*, which facilitates the transaction between receiving district and preservation district parties. The market also gives the development rights an appropriate economic value. The transaction process of TDRs is illustrated in Figure 3.1.

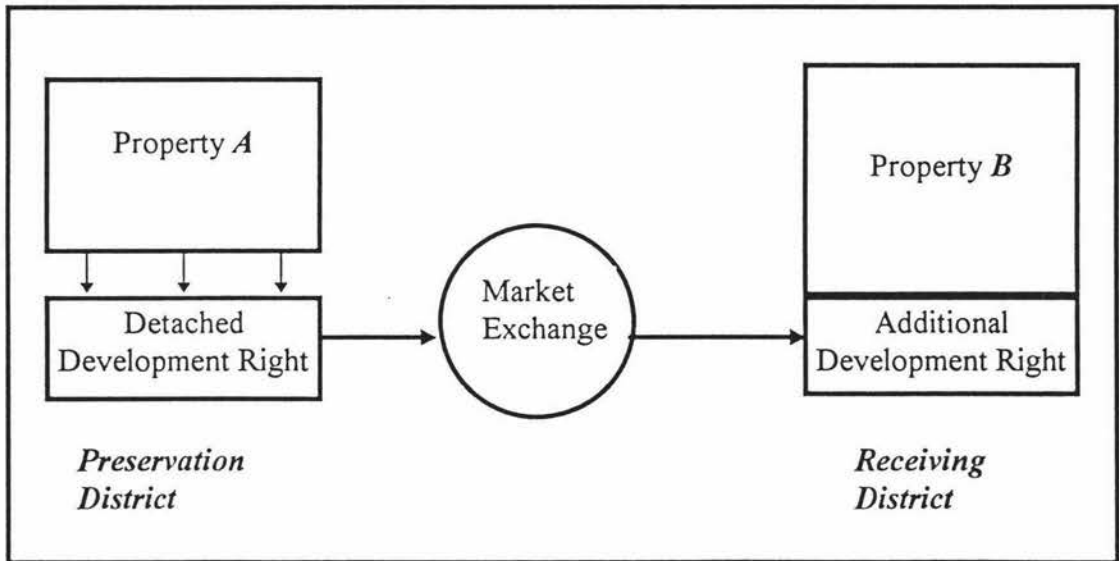


Figure 3.1: Transaction Process of Transferable Development Rights

### Receiving Districts

The receiving districts of all TDR proposals share common characteristics. Receiving districts are locations identified for their capacity to endure further development and growth. The presence of adequate infrastructure, such as sewage systems and communication networks, is often a prerequisite for a receiving district (Pizor, 1986, 210). The clear designation of receiving districts on public documentation and zoning maps provides necessary information for the property market to adjust values, and gives

freedom of information. This allows the market forces the opportunity to adjust accordingly.

### **Preservation Districts**

Preservation districts are areas valued by the community for their unique environments or desirable characteristics. Implementing a TDR scheme assumes the social cost of losing the resource is greater than the benefit obtained from its development. Just et al (1982, 147) consider the quantification of social benefit to be difficult, although many planning processes facilitate the reflection of community values. The reasons for preservation may therefore be extracted from the district planning process and plan preparation. This is a safeguard against the possibility of political hijacking by decision-makers or lobby groups, although hijacking itself remains possible.

As a prerequisite, a TDR scheme demands a high probability of serious irreversible impacts in the preservation area. This ensures that the market works for the public good rather than private profiteering from an improbable event. The removal of development rights from the preservation district must be legally secure, eliminating development potential. The development restrictions are ideally registered on the Certificate of Title as a binding covenant. The intent of any restrictive covenant is for public benefit, and involves market facilitated betterment, and is therefore binding in perpetuity.

It is claimed by Barrese (1983, 236), that those individuals who derive direct benefit from the protection of amenities in the preservation district should also have to bear the costs of increased development. This opinion implies that it is unfair to place the burden of increased development on those who have no relationship with the amenities being preserved (ie the receiving and preservation districts must be in close proximity). This assertion by Barrese is consistent with his field of expertise (social economics). Other commentators have implicitly contradicted this by advocating sizeable TDR areas, where it is impossible to define individuals or groups who benefit.

## The Facilitating Market

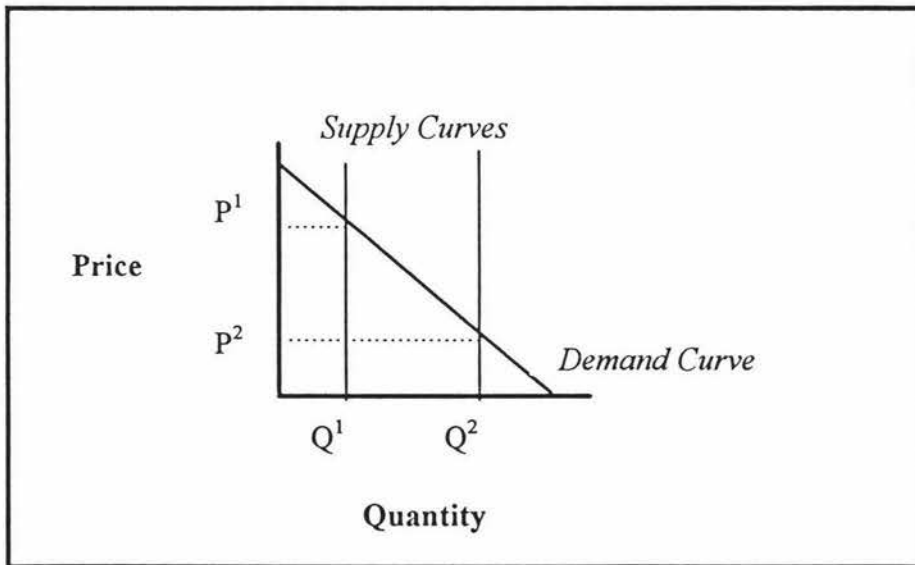
The market mechanism is the pivotal element in the application of TDRs. The dynamic nature of the market necessarily creates a different context for each TDR application. The market determines the monetary value of a development right, although its price can be monitored, ensuring each party is satisfied. The level of government intervention into a TDR market is flexible, depending on what the regulating authority views as desirable and fair. In New Zealand it is unlikely that the government authority will interfere with the marketplace (Reardon and Hartley, pers. comms., 1995). Gans (1975) posits three possible market roles for the local level of government: a *broker*, a *purchaser* and an *exclusive market*.

- *The broking role* involves the local authority maintaining records of development right holders and potential purchasers, and liaising between the two. The willing buyers and sellers directly negotiate a market price for the rights. It is difficult for the local authority to establish control over the price or ensure equity.
- *The purchasing option* involves the local authority purchasing development rights in competition with other potential investors. The authority would then sell the commodity at a fixed price, or auction them. In effect, the local authority acts as a stabilising factor in the market place, maintaining or influencing price. Under such an option the council can also purchase and retire the development rights. This achieves preservation objectives, but at the public's expense.
- The local authority acting as an *exclusive market*, administers all development right transactions. Acting as an exclusive buyer and seller, the local authority would effectively eliminate the possibility of speculation and ensure a reasonable supply of development rights. However, the administration costs would exceed that of the previous two alternatives.

The market mechanism for transferable development rights is similar to most other classical markets, in that they are sensitive to uncertainty regardless of the form they

take. Gans (1975, 281) suggests that any “TDRs allowed to float off the land would cause uncertainty as to the availability of the supply and could encourage hoarding and speculation”. The simultaneous transfer of development rights from the preservation property to the receiving property would eliminate this effect.

Establishing a market to transfer development rights promises real flexibility in environmental planning. Unlike most competitive markets, local authorities have the capacity to manipulate the TDR market, to ensure a higher probability of success. Regulatory authorities are able to direct high density growth, via zoning or similar methods, to more geographically suitable areas. The authority can then eliminate high density zones, only allowing developers to transgress zoning limitations with the purchase of development rights. This course of action produces a potential situation where no privately held TDRs are available to developers, thereby exhausting supply and increasing price per right, as illustrated by  $Q^1$ - $P^1$  in Figure 3.2.



**Figure 3.2: Demand and Supply of Development Rights**

The local authority has three alternatives to balance the above market position, as described by Gans (1975). These include:

- granting more TDRs to other zones ('upzoning');
- utilising TDRs from public land; or

- granting TDRs on an arbitrary basis rather than deriving them from land.

The alternative demand and supply problem (illustrated by the  $P^2-Q^2$  in Figure 3.2), arises from separating too many development rights; this creates an over-supply, rendering the rights financially worthless and thereby reducing the incentive to trade.

The three functional elements of TDRs establish the inherent link between TDRs and planning practice. It is important to comprehend the mechanics in order to grasp the more conceptual underpinnings of the market driven technique. This is illustrated by TDRs dependency upon law, regulation and more specifically, the definition of property rights.

### **TRANSFERABLE DEVELOPMENT RIGHTS IN ADDRESSING MARKET FAILURE**

TDRs have the ability to redress market failures associated with urban heritage preservation, ecologically sensitive areas, and areas of open space.

#### **Urban Heritage Preservation**

The preservation of urban heritage is an issue of considerable importance and the subject of much public concern (Power, 1991, 27). The destruction of buildings with architectural or cultural significance is frequently the result of a private decisions. Often these decisions fail to consider public concerns. This was recognised more than twenty years ago, when Costonis (1972, 475) acknowledged:

In part it [the demise of heritage sites] reflects the national penchant for identifying change with progress, even at the cost of destroying the nation's link with the past. More fundamentally, however, it is a product of a system that vests the initiative for most urban development decisions in private property owners, whose choices are shaped by the necessities of the Real Estate Market.

There have been a number of attempts by government authorities in several western nations to reverse this trend, and protect heritage sites, through the use of transferable

rights. Cities targeted include: Sydney (Daines, 1992), New York (Costonis, 1972), Chicago (Pizor, 1978), Christchurch (Meister and Sharp, 1993).

The owners of heritage sites located in areas of high demand, such as Central Business Districts (CBDs), suffer many financial disadvantages if preservation ordinances are enforced upon them by government authorities. Economic imperatives and open market realities encourage the redevelopment of sites, replacing economically obsolete buildings with more functional and efficient structures. Yet such buildings are nevertheless of significant value to the community. It is “unfair and unrealistic to expect a private landowner to meet the full cost of providing for what is generally considered a public amenity” (Power, 1992, 27). This directly influences perceived market risk and market potential, and therefore makes the acquisition of mortgage finance more difficult. Additional financial disadvantages include the structural materials and architectural styles used in turn-of-the-century buildings. Similarly, the architectural styles prominent in classic buildings also render them economically obsolete, with features such as internal structural columns, twelve foot (plus) studs and solid masonry walls. All of these factors reduce the rental efficiency of older style buildings by decreasing net floor area, and diminishing their appeal to modern corporate clients (Garner, pers. comm., 1996).

Enforced regulations have a reduced economic impact on buildings in less desirable locations of a city, outside the CBD. Garner (pers. comm., 1996) notes that such designations may have a positive effect on property values, conferring an element of prestige at the immediate location.

Given the economic disadvantage often associated with ownership of an historical building within CBDs, only compensation equivalent to the costs borne would provide an equitable solution. Conflict between private and social costs creates this dilemma. Therefore, an ideal solution would involve developers externalising the costs of preservation. However, the economic disadvantage is dependant on the price paid for the building and whether development restrictions were built into the market price.

TDRs provide a market mechanism that encourages the preservation of heritage sites without disadvantaging the land owner. TDRs allow restrictive covenants to be traded openly, increasing development(s) beyond existing legal limitations (ie., zones). The local authority has the capacity to establish development rights and create a market. The revenue generated for the landowner, in exchange for conservation orders, comes from the sale of development rights. This is achieved at minimal public expense, and is politically sound (Bindon, 1992, 140).

Under TDR schemes, heritage assets remain in private ownership and may continue to have an economically productive and functional use, while maintaining public benefits from preservation.

### **Preservation of Open Space and Rural Character**

Urbanisation and urban sprawl are geographic phenomenon which place development pressures on areas of open space. Chavooshian (1975, 166) exposed a dichotomy between planning and desirable community environments twenty years ago.

Generally it is realised that open space provides aesthetic, psychological and social values...Yet rarely have these areas been retained and protected for their treasured and essential qualities in the planning zoning and development of a community.

This pressure on space adjacent to the urban area continues today and may be considered a market failure, because the land may have a public value in excess of its production or development value. Preservation of open space has traditionally been achieved through *zoning*, imposing restrictive land regulations on selected properties. The individual land owners are instantly stripped of development potential, in the interests of the public. TDRs are intended to compensate the land owner for the exact development value forfeited.

## Protection of Ecologically Sensitive Areas

The market often fails to consider the existence of unique and often rare ecologically sensitive landscapes in land-use decisions. The rationale behind preservation reflects the complex relationship between the environment and market actions. In some instances, ecologically sensitive resources may be of no economic or exploitative value, but their proximity to urban area places significant pressure upon them (for example, wetlands, mangroves and coastal zones). Additionally, areas endowed with resources of real economic value can also be subject to development pressure; for example private bush lots with potentially high timber values. It is also possible that land may already be developed to its full potential and any further development could create irreversible pollution loads (Evans, 1993, 29).

The implementation of a TDR mechanism to preserve ecologically sensitive areas is often more complex than urban or rural-based TDR applications. Costonis and De Voy in Rose (1975) describe ecological TDRs as being more *metaphorical*. This label emphasises the conceptual transformation required for development rights, in that they are allocated to owners of wetlands and forests and are typically transferred to, and utilised in, the urban environment. The geographic distance of the transfer is also significant under such schemes. The theory of application remains the same, although institutional boundaries may be traversed, creating administration and market implications.

## Costs associated with Transferable Development Rights

TDRs are capable of providing many benefits to a community through protecting a variety of landscapes. However, there are also many costs associated with transferring development potential to another location. These costs must be identified and included in the TDR equation prior to implementation of the scheme. In New Zealand, the RMA regulates this, by requiring that both the costs and benefits be considered before a rule or method is adopted into a district plan or policy statement (section 32, RMA).

TDR costs include direct and indirect expenditure. A prerequisite to the implementation of any TDR scheme is the investigation into the resources to be protected: often an expensive exercise. The authority must ensure that the preservation district is worthy of protection, and assess environmental bottom-lines of the receiving district. Community expectations for the future of the resource, and their attitudes towards TDRs, must also be researched. Transaction costs must be considered, in light of the type of programme implemented and the role of government in the market. Local authorities "must be realistic so that the expectations of the programme do not exceed the capabilities of its administrators" (Wood, pers. comm., 1996).

## **TRANSFERABLE DEVELOPMENT RIGHTS - UNDERPINNINGS AND LEGAL BASIS**

### **Real Property Rights**

Real property rights, as opposed to the more conceptual rendition discussed in Chapter One, are concerned with property in a legal rather than theoretical context. Under English and New Zealand law, the *doctrine of tenure* has governed and shaped the legal and institutional relationship between land, government and tenants. This common law doctrine is the fundamental legal foundation of land ownership, dictating that it can never be individually owned (Hinde, et al, 1986, 15). Under the doctrine, the Crown maintains absolute ownership of all land held within its jurisdiction. This point of law is clearly illustrated through the concept of *eminent domain* found in the Public Works Act 1981. Therefore, even the highest form of private land ownership (fee simple) cannot over-ride the Crown's authority.

New Zealand law has also inherited the *doctrine of estates*, which governs the relationship of tenants to the land. 'Real property' (land) comprises a distinctive set of individual property rights, referred to as a 'bundle of rights'. The doctrine of estates suggests that each right has the capacity to be separated and transferred to someone else, through the *Torrens* (government guaranteed) system of land registration. The most common example of transferability is associated with the *right of exclusive use*, which can be contracted to a third party through a leasehold or periodic tenancy agreement

(Hinde, et al, 1986, 232). The doctrine also provides the basic rights of land tenure. Such legal rights can include:

- right to unrestricted alienation;
- right of disposal, by will;
- right to create a lesser estate in the freehold;
- right of exclusion;
- right to obtain mortgages through use of land; and,
- right of enjoyment.

The legal rights listed above have maintained their link with the doctrine of estates, which developed in the feudal systems of the Middle Ages. Given the social and technological advances since the doctrine's conception, many restrictions and limitations have been placed upon landowners, through common law and statute law. The law of tort relates to limiting certain actions on one's property and preventing damage to neighbouring properties; whereas under statute law, Parliament can enact legislation that limits certain activities for reasons of wider public good, particularly health and public safety.

*The right to develop land* is approached differently under various legal frameworks, regardless of the tenure and estate systems on which it is based. This is due to the development right being attached to the land rather than the landowner (Bindon, 1992). The development right is therefore subject to statutory and land-use planning.

In Australia, the expectation of what constitutes a development right is obscured by several economic, political and social factors (see Foyel and Houston, 1992, 45). These expectations are also apparent in New Zealand. The ownership of property titles is often interpreted as a right to erect a dwelling and associated structures, regardless of planning ordinances. This becomes a problem when large land holdings comprise many small titles, often sold with development expectations. In Australia the Mount Lofty Ranges district is experiencing changes in land-use and increased development resulting from the sale of titles (Evans, 1993). In New Zealand, Waimea basin (*Burnett v Tasman District Council*, 1995), parts of Rodney District (Hartley, pers. comm, 1995) and Franklin

District (Reardon, pers. comm, 1995) are also experiencing increased development from the sale of titles. As a result of the legal uncertainty pertaining to development rights, the concept of transferable title rights (TTRs) was established or considered in some of these areas. This concept is a variation of TDRs, involving the amalgamation of smaller titles to eliminate development potential. The regulating authority can facilitate this amalgamation by creating a market for the title rights rescinded. A developer, in an identified receiving district, can purchase title rights from the amalgamator, for bonus development potential. This is the typical form of TDRs in New Zealand and Australia with regard to rural-urban fringe development.

#### **LEGAL PRECEDENTS FROM THE UNITED STATES.**

Traditional direct regulation is based upon the principle of reasonable oppression of private property rights in order to maintain public interest (Rose, 1975). State and national governing bodies delegate this power to local regulating authorities.

The regulation of private land-use in the United States of America can only be enforced within the bounds of the fifth amendment to the constitution: "nor shall private property be taken for public use without just compensation" (American Constitution, in Woodbury, 1975, 3). The clause not only refers to eminent domain, but also land-use planning that removes or reduces property value. It is the judicial system that interprets the extent to which reducing value constitutes the *taking* of real private property, although it does so inconsistently (Woodbury, 1975, 3). This uncertain legal environment was the catalyst for TDRs, as they facilitated fair and reasonable compensation to the landowner, who was seen to be unfairly inhibited by regulation.

#### **Applications of Transferable Development Rights in the United States**

The extensive use of TDRs in the United States was a direct result of legal and constitutional uncertainty, as opposed to any pareto improvement ideology. Their conception in the early 1960s led to a first phase of implementation centred around the

protection of urban structures with architectural or historical significance, and open space (Pizor, 1986, 204).

Implementation of 'first generation' TDRs included the Chicago Plan (Costonis 1972, Woodbury 1975), and the New York Plan (Pizor 1978, Rose 1975). These illustrated the acceptance of the theory relating to TDRs, bringing them into the realm of local government and planning practice. This, however, was an unsuccessful introduction. "The first generation programmes were ad hoc responses to the dilemma of trying to preserve a valued local resource in the face of continued growth pressures" (Pizor 1986, 204). The failure of many TDR programmes gave researchers the practical knowledge they required to develop more sophisticated and effective TDR schemes. These developments are referred to by Pizor (1986) as 'second generation' programmes and include Montgomery County and Pinelands schemes.

*Pinelands, New Jersey (Conservation of Ecologically Sensitive Areas)*

The New Jersey Pinelands area comprises one million acres of delicate wetlands, agricultural land and forest (approximately 25 percent of the total New Jersey land area). Under intense development pressure, the land regulatory authorities considered it imperative to protect the region's eco-system and water resources. *The Pineland Commission* was established in 1979 to devise an effective method for achieving this objective (Pizor, 1986, 206).

Given the enormous land mass involved, the Commission's alternatives were limited by political and financial constraints. The most cost-efficient option was to provide incentives for the private landowners not to develop their properties, via a TDR based mechanism. The commission initiated the largest and most complicated TDR operation ever attempted, transgressing fifty six separate municipal boundaries. The allocation and calculation of the development rights were dependant upon a complex formulae integrating ecological values and development potential. The development rights were referred to as development credits, and each credit allowed the owner to develop four residential structures in specified areas. For every thirty nine acres protected in the

preservation areas, credits were allocated. However, these credit values fluctuated depending on the type of land preserved. For example, the preservation of woodlands derived one credit, whereas the same area of farmland protection warranted two credits, and wetlands were considered the least valuable at 0.2 credits per thirty nine acres.

*Montgomery County, Maryland (Preservation of Open Space)*

During the late 1970s Montgomery County experienced extensive urbanisation and conversion of rural land to urban related activities. Planning authorities initiated a TDR mechanism to preserve agricultural land and maintain landscape diversity. The TDR programme was preceded by an extensive research period, collating information on current farm numbers, distribution and economic characteristics. This process contributed to the minimum subdivision size of 25 acres that maintained open space objectives. The subsequent TDR plan designated 74 000 acres of agricultural land as the preservation district. Regulations enforcing the minimum acreage subdivisions effectively removed the development rights prior to any market transaction. The market transfer merely facilitated the legal compensation to the landowners. Identified growth areas in surrounding districts were zoned as receiving districts.

Wood (pers. comm., 1996) judged the Montgomery County programme to be a successful example of the second generation TDR schemes. Montgomery County has “managed to preserve 39 000 acres (15 600 hectares), nearly one third of its land area for agriculture and open space. Seventy five percent of this area was protected through TDRs” (James, pers. comm., 1996). The relative success was due to enhanced flexibility in strategic planning, illustrated through broader demand focused receiving areas and strict regulation.

*New York Plan (Urban Heritage Protection)*

The New York plan used the TDR technique in an attempt to secure the futures of the many privately owned historical heritage sites during the late 1960s. At the time of

implementation, TDRs was a concept that offered effective protection at a minimal cost to the municipality, although little was known about its practical application.

The New York zoning ordinances, introduced in 1968, allowed the transfer of development rights to approved adjacent properties. The development rights took the form of “authorised yet unbuilt floor area” (Costonis, 1972, 585). The formula used to determine the unbuilt floor area was as follows: “Multiply the lot area by Floor Area Ratio (FAR), Subtract from this the floor area already put to use” (ibid).

The New York Plan took some revolutionary and innovative steps in the preservation of heritage sites; although the presence of several restrictive clauses limited its success. These limitations included both operational and conceptual constraints. Transferring development rights could only be used by owners whose buildings had been officially designated heritage sites by the *Landmark Authority*, which on the surface may appear to be an important operational clause. Further investigation by Costonis (1972) revealed that the registration of a land mark was optional, yet no incentives were prescribed in the plan to encourage such registration. The Planning Commission also made the plan’s operation difficult through bureaucratic complexities in the issuance of permits, which had a negative influence on potential transferors. The main conceptual failure was the scheme’s specification of adjacent transferee properties. This had the effect of eliminating practical alternatives by not having the exact locational requirements.

The New York Plan provided practitioners and theorists with the advantage of viewing TDRs in a real situation. With the benefit of hindsight, the positives can be identified and the negatives researched, to provide greater effectiveness in the application of TDRs.

### **Transferable Development Rights: An Overview of the American Experience**

American literature has provided this thesis with a critical source of information regarding the theoretical and practical considerations of TDRs. Several United States government agencies have experimented with TDRs over the last twenty years, with varying degrees of success (Wood, pers. comm., 1996). Throughout this period, the

concept has evolved and been refined to alleviate many operational difficulties. Despite each TDR scheme being unique, commentators have identified several common factors that influence the success of American TDR programmes. These factors include specific operating techniques, strategic political and planning objectives, and management constraints.

There are two methods of operating transferable development rights: voluntary and mandatory. The mandatory approach to TDRs achieves greater protection ratios compared to the voluntary alternative. This is illustrated by success of the Pineland and Maryland TDR programmes (Wood, pers. comm., 1996). However, the trade-off of the mandatory scheme is the requirement for government intervention in the development and property markets.

Simplicity is also deemed to be critical to the success of a TDR scheme. Pizor (1986, 210) posits that “reducing regulatory complexity improves developers confidence that they will be able to use the rights profitably; that in turn, increases the probability that the rights will be used”. Another policy consideration, impacting on the success of a TDR programme is the strategic motives for its implementation. Wood (pers. comm., 1996) suggests that it is not adequate to implement TDRs for the preservation of open space per se. The programme should attempt to identify the particular characteristics that make certain properties “critical” (for example, wildlife, habitat, scenic road vistas). As with any planning strategy, how a TDR scheme is managed will influence its success. Managers must be aware of the limitations within the administration regime, so expectations do not exceed capabilities (Wood, pers. comm., 1996).

The TDR technique has its theoretical foundations in the United States constitutional legal system. This system of law, outlined previously, differs significantly from the English inherited law found in New Zealand. There is no written binding constitution, which was the catalyst to TDRs in the United States. Thus while the TDR technique can be applied in New Zealand, its format may differ given the contrasting legal environments.

## NEW ZEALAND'S LEGAL ENVIRONMENT

The New Zealand system of law is less defined than its United States equivalent. New Zealand uses a combination of common law and legislation, both of which contribute significantly to the dynamics of property law and resource use. The Resource Management Act (1991) provides the institutional framework for the management of land and water, including the application of policies and rules to achieve desired environmental outcomes.

The fundamental relationship between TDRs and resource and property law in New Zealand, prior to the RMA, was outlined by Boast (1984): what controls can the community expect a landowner to endure for the wider public benefit? This question relates to the threshold of compensation payable to the private property holder. Safeguarding individual property rights from unauthorised actions by the state or its delegated authorities (such as councils) is a traditional role of the courts in New Zealand. Today, the courts are guided in their interpretation of the requirement for compensation by section 85 (RMA). A landowner may challenge a planning provision under section 85(2) (RMA) if she or he considers that "planning provision or proposed planning provisions would render that interest in land incapable of reasonable use". The Court's interpretation of 'reasonable use' is critical in determining the requirement for compensation or the withdrawal of the impinging planning provision. Under section 85(6), reasonable use includes the use, or potential use, of land "whose actual or potential effects on any aspect of the environment or on any other person other than the applicant would not be significant". Therefore, a council must prove the potential for adverse effects before implementing provisions restricting development or the development potential of certain areas.

Given New Zealand's legal environment pertaining to compensation, TTRs have the potential to provide adequate compensation to regulated landowners where adverse effects are not significant. Political conservatism is central to this use of TTRs, in that

councillors often do not want to impose tight regulations where other less severe alternatives are available.

## **TRANSFERABLE DEVELOPMENT RIGHTS IN URBAN NEW ZEALAND**

New Zealand has had very little experience with the application of TDRs. However, the concept is not new to New Zealand and has been used occasionally over the last twenty years. All of New Zealand's attempts to implement TDR schemes prior to the inception of the RMA focussed on preserving urban structures of significant heritage value. New Zealand's three largest metropolitan local authorities have experimented with TDRs.

### **Christchurch City**

Christchurch City Council adopted a restricted form of TDRs during the 1970s. The ordinance enabled one identified owner of a protected site to transfer any unused right to another property in the city, owned by the same party. In reality, this method of TDR implementation was so restrictive a market never had a chance to establish (Meister and Sharp, 1993, 2).

### **Wellington City**

Wellington City Council introduced TDRs in its 1983 District Scheme. This was an effort to protect significant urban heritage sites that were in danger of being lost to a bullish commercial property market. The most successful transfer occurred in 1987, when the Saint John's Presbyterian Church sold a 7,000 m<sup>2</sup> development right to Renouf Property Developments Ltd (Stone, pers. comm., 1996). The compensation allowed the church trust to undertake a refurbishment and maintenance plan, never previously contemplated (van Grondelle, 1987).

### **Auckland City**

Auckland City Council first considered transferring development rights, in exchange for heritage conservation orders, in the Auckland City Central Area Plan in 1974. However,

no actual policies resulted from this discussion (Meister and Sharp, 1993, 2). Over a decade later, Auckland City Council officially introduced a type of TDR programme. This involved planning approval for bonus floor space in central city office buildings in exchange for the provision of social services, such as child care facilities (Markham, pers. comm., 1996). This policy provided financial incentives to property developers to act in the public interest, although no market was actually created. The Fay-Richwhite building in Auckland's CBD took advantage of this ordinance and received a significant floor space bonus in exchange for creche facilities within the building. However, after planning approval was granted and with construction in progress, the developers reneged and in lieu of creche facilities offered the City Council \$200,000 in compensation (Markham, pers comm., 1996). Compensation was accepted by the Council, although the benefit accruing to the developer, as a result of the additional floor space, was far greater than the compensation figure. Additionally, the opportunity for inner city creche facilities was lost. This case illustrates the need for tightly written ordinances, protected from abuse by developers.

Auckland also implemented a TDR initiative in 1987, as an incentive to protect heritage buildings located in the CBD. Bonus floor space is allocated to the owners of each heritage building. This bonus floor space can be used on the original site or separated and transferred to another site in the city.

The bonus floor space becomes a separate and tradeable right distinct from the property right pertaining to the original lot (Power, 1991, 27).

The bonus provisions are assessed on the floor plate of each structure rather than the land area like many other urban TDR schemes (Power, 1991). The maximum floor area to floor plate ratio without transferred rights stands at 13:1 in the central business district; however, this is extended to 14:1 with the acquisition of transferred floor area. The bonus floor area ratio of 10:1 allocated to each owner (of a heritage building) delivers adequate compensation for development restriction. Furthermore, the addition of the total floor plate area to the bonus ratio of 10:1 is a method of providing for the maintenance and renovation of each building. Power (1991, 27) suggests that the provisions for maintenance using the floor plate calculation is unique to Auckland. The proposed site of transfer must comply with other regulations set in the plan, to protect

public interests, and can transgress commercial zones. In recent years the decline of Auckland's commercial property market has reduced development pressure on heritage buildings and the market for TDRs.

### **TRANSFERABLE DEVELOPMENT RIGHTS IN RURAL NEW ZEALAND**

New Zealand has had limited success using the TDR concept in an urban capacity; however, it remains untested in the rural environment. Throughout New Zealand, productive land surrounding major urban settlements is facing dramatic transformation as a result of development pressure in the form of rural subdivision. Williams (1985, 55) identifies three broad categories of pressure facing the rural-urban fringe in New Zealand:

- pressure for expansion due to population and development growth;
- pressure for rural/residential units by people wanting isolation from the metropolitan areas; and,
- pressure by urban commuters who desire a domestic setting with rural character while maintaining access to the city.

These pressures suggest reasons for the demand of rural residential properties. However, the increased demand for subdivided rural land generates economic, social and political pressures. There is an obvious financial incentive for landowners residing on the rural-urban fringe to subdivide. One can avoid the volatility of rural land markets and turn to the security and higher marginal values for smaller parcels of urban land. Foyer and Houston (1992, 46) also identify the political motivation for ambiguous planning ordinances with regard to lucrative rural subdivision. Many local body politicians are conservative businessmen and landowners who may own or fraternise with those who own the land in question.

Auckland is New Zealand's largest metropolitan centre, and as such, it places urban development pressures upon the surrounding rural landscape. The two latter pressures, described by Williams (1985), are transforming the landscape of both the northern and southern extremities of Auckland. Rodney District, to the north, has implemented a TTR

scheme; and Franklin District to the south attempted to implement a TTR scheme included in their proposed District Plan (the scheme was subsequently dismissed).

Most local government planners see it as their responsibility to coerce development away from valuable rural resources towards more marginal (less productive) land with adequate infrastructure (Simmons, 1991, 13). This problem of rural subdivision is not unique to New Zealand, and is already being controlled using TDRs in Australia and the United States (Pizor, 1986, Evans, 1993, Nelson, 1992).

## TRANSFERABLE WATER RIGHTS

### WATER ALLOCATION

Water is an essential resource for sustaining all forms of life. It supports the economic and productive systems of modern society, including the generation of electricity, industry, agricultural and horticultural irrigation, and fisheries. However, the two diverse systems (biological and economic) that water supports are not always compatible. This compatibility problem is heightened when the water resource is scarce, and it cannot fulfil multiple demands. The conflicting values produce many dilemmas in establishing an allocation response. The entire nation has a vested interest in the allocation of all water resources. Therefore, under a democratic regime the responsibility for managing such resources is placed in the government's hands. Allocation is further complicated by the mixed characteristics of water, described by Gray (1983, 47) as being both a public and a private good depending on the context in which it is used. For example, water can be used by private organisations in a production process to generate profit; and it is used by the community for recreation, giving it public good characteristics.

The allocation of fresh water in New Zealand has traditionally been through a labyrinth of statutes and procedures administered by local government and ad-hoc authorities (Forsythe, pers. comm., 1996). The introduction of the RMA has integrated the

management of water into a broader framework of natural resource management. Water management is now subject to the same sustainable management principles as land, with regard to its use and development. The RMA has delegated the responsibility for water allocation to regional authorities. However, this responsibility is not exclusive or peremptory; central government has the power to call-in water allocations that are of national importance. However, half a decade into resource management planning, this statutory provision has not been used for the purpose of water management. A second constraint upon regional councils is that regional water plans must be consistent with national policy statements. However, no relevant national policy statements for water allocations have been implemented to date, nor anticipated in the foreseeable future. The RMA provides significant flexibility in the process of allocating water resources, giving each region the capacity to tailor responses to unique planning problems.

Despite the reform of planning and resource use legislation, the majority of regional councils and unitary authorities have retained their traditional methods of water allocation. These processes are described by CS First Boston (1995, 17) as political decisions based on planning, consultation and rule-making. In a region where the demand for water from a catchment exceeds its supply, the council must consider the different uses and decide which of them have priority, based on guidelines in the RMA and community values. In a situation where the demand for any one use exceeds supply (irrigation for example), permits are granted on a first-come, first-served basis. The water volume allocated to each permit holder under this regime is decided by the council, using assessments of the users' needs. This entire system of water allocation rests upon the councils and requires consistent and detailed monitoring and decision-making.

CS First Boston (1995) suggest that regional council regulations are not the most efficient means of distributing such a precious and potentially productive resource. Inefficiencies can arise from many sources, including inaccurate permit allocations and rationing procedures, that do not consider end-uses. Fenemor and Markham (1994, 145) discovered that many water permits were overestimated, and during dry periods water usage did not reach maximum allowable levels under the issued permits. This was illustrated in the Waimea Basin during a one-in-ten year drought, where the metered

irrigation was never more than 68 percent of the total permit allocation. It was concluded that there were many other potential users, hoarding their water rights, who could have extracted water during these periods without pushing the water resource beyond its calculated capacity. CS First Boston (1995, 19) commented on the inability of the present system to evaluate or weigh up end-use values. Thus, two users seeking water for irrigation are placed in same category and are treated equally despite their potentially diverse production methods and end-uses. "Once a resource is fully allocated, those with permits for low-valued uses have few incentives to transfer them to higher valued uses" (CS First Boston, 1995, 18).

CS First Boston (1995), Fenmor and Markham (1994) and Meister and Sharp (1993) all suggest that more efficient allocations can be achieved by using section 136 (RMA) and implementing a transferable water permit system, in cases where demand exceeds supply.

### **A Conceptual Overview of Transferable Water Rights**

The transfer of water rights is comparable to the transfer of development rights, in that a market is used to reallocate resources where inefficiencies exist. However, the physical nature of water does not allow for the ownership of one particular *piece* of water; this complicates the application of property rights. A suitable property right regime would need to be flexible and give use to a flow or volume of water. Implementation of TWRs requires a shift away from first-come, first-served water rights; recognising water as a valuable public resource held in trust by government authorities (Fenemor and Markham, 1994, 279). TWRs provide a theoretically sound method of using market mechanisms to allocate a scarce resource.

TWRs attempt to define a property right where there was none previously, or where they were intangible or ill-defined. In the New Zealand context, TWRs will mean that an individual or group will have the capacity to secure the right to extract a quantified volume, rather than being regulated by councils. The market price paid for the water right forces the purchaser to address all costs when considering water use, thereby internalising the social cost of inefficient use. TWRs can resolve these inefficiencies

when they are used in areas of continued scarcity; for example, those who can attain the greatest marginal value from the water will use it, eliminating wastage. An additional advantage associated with the use of TWRs over pricing mechanisms is the neutralising of macro-economic variables. The price of any water right immediately incorporates elements of monetary policy, such as inflation and uncertainty.

### **Potential Problems associated with Transferable Water Rights**

Like most other theoretical allocation models, the transfer of water rights is not free of complications and obstacles. The complications include third party effects, market size, implementation, monopoly costs, and environmental baselines.

One of the most significant limitations, identified by Howe (1986) is the consideration of third party effects. A transaction between a willing buyer and a willing seller has the potential to impact on third parties. To achieve economic efficiency, third parties must be considered and compensated if necessary. For example, a party purchasing many water rights, and exercising them all in one location, may affect the recreational value of the water body. Australian and American case studies highlight a need for over-riding agencies to ensure there is no third party injustice (Meister and Sharp, 1993, 117).

The number of potential users (purchasers and sellers) is a crucial component in developing an efficient market mechanism. Empirical evidence from overseas suggests that TWRs operate more efficiently in larger market situations (Howe, 1986). The larger market also aids in the identification of willing buyers and sellers. However, in New Zealand there tend to be many more smaller catchments with intensive abstraction pressures, as opposed to large catchments with unsustainable abstraction pressures. Fenemor (pers. comm., 1995) suggests that TWR schemes covering a small resource, with a few competitive users, are easily implemented given the limited resources of a regional council.

The practical implementation of TWRs is complicated by the diverse and intangible values placed on water resources; some of these values are not considered in the market-

place. Like any allocation system, bottom lines must be considered to define water extraction levels.

We can't introduce them [efficient mechanisms for allocating resources] without some baselines that define the environmental parameters within which trading is confined. For example, if we had a detailed knowledge of all the instream and riparian values within a particular catchment, we could design a system for the trading of water permits within quantified limits (Upton, 1994, 11).

CS First Boston (1995, 30) suggest that environmental bottom-lines may not be required if conservation lobby groups and the recreational users were adequately funded. This would (in theory) allow each conservation group to purchase or participate in the market for permits in order to own the rights and leave the water in stream. However, such a scheme would involve significant funding from public sources, which is unlikely to be forthcoming given New Zealand's current fiscal policy.

The financial advantages of using TWRs have been discussed with reference to economic efficiency. However, there are also financial costs associated with their implementation. The most substantial cost is the research required to investigate the viability of a TWR scheme and the environmental parameters it must adhere to. Other costs include transaction costs of operating a market, enforcement of the permit conditions, and monitoring (Fenemor, 1993, 6). Transaction costs allude to the administrative expenses required to formalise a transfer. However, councils may charge the transferor for these costs under section 36 of the RMA.

Monitoring is an essential part of any planning process, and it is necessary that an effective monitoring regime be employed to oversee any TWR system. This also imposes a cost. Nevertheless, it is important to ensure that each abstractor is adhering to his or her permit conditions. And, given the dynamic nature of water resources, it is imperative to continue monitoring the physical environment. This allows the authority to respond to any movements in the environmental parameters by adjusting the consent conditions.

## **TRANSFERABLE WATER RIGHTS IN NEW ZEALAND**

Regional councils have been slow to pursue the potential for implementing TWRs for the purpose of allocating scarce water resources, given that it is explicitly provided for under section 136 in the RMA. Manawatu-Wanganui Regional Council have implemented one of the first fully operational TWR plans under the RMA to date. Tasman District (Unitary Authority) and Auckland Regional Council are currently in the process of financial and resource investigations that precede any formal TWR schemes.

### **Manawatu-Wanganui Regional Council**

The Manawatu-Wanganui Regional Council has incorporated the concept of transferable water permits into its *Oroua Catchment Water Allocation and River Flows Regional Plan* (1994). The permits are restricted to irrigation water uses and are only effective during periods of low flow (as defined in the Plan). This effectively places limits on the total water available for irrigation purposes, and allows market forces to arrive at an appropriate pattern of allocation. Irrigation is interpreted in the Plan to have a lower priority, behind municipal consumption and industry water demand.

### **Tasman District Council**

The Tasman District Council is currently pursuing the idea of establishing a transferable water allocation system in the Waimea Basin, where demand exceeds supply during summer. The development of the policy framework to implement the proposed strategy is programmed for the 1995/96 financial year.

### **Auckland Regional Council**

New Zealand's most controversial TWR scheme has been proposed by the Auckland Regional Council for the Omaha ground water resource north of Auckland. Controversy surrounds the method of property right allocation, which involves an auctioning system.

The users fear the unknown and resent having to pay for a rationing process. They users are also concerned about the possibility of conflict amongst themselves, as they compete for the resource on financial grounds (Fenmor, 1993, 5).

Fenmor (1993, 8) identifies a number of areas and catchments that would be suitable for the application of TWRs, as a means of allocation. They include: South Canterbury, Pukekohe, parts of the Wairau Plains, Wairarapa streams and Kakanui.

## CONCLUSION

This chapter has provided a conceptual overview of how transferable planning mechanisms operate and their potential to achieve planning objectives (objective two in Chapter One). The examination of TDRs is dominated by the American experience. United States planners conceived and developed the TDR system to overcome constitutional enigmas. The American experience highlights complications early in the evolution of the TDR technique, and identifies later procedural improvements. An effective TDR scheme must have a solid regulatory foundation to influence demand and provide market certainty, without reducing market freedom. The political, legal, demographic and physical differences between the United States and New Zealand mean that much of the literature is not directly applicable to developing TDRs in this country. New Zealanders are limited in their right to develop land by local government, and unique statutes such as the RMA.

New Zealand's brief history of TDR experience has been described in this chapter, with the emphasis on future use of TDRs in rural environments. This potential is due to the 'crash' of the commercial property market in 1987, and the growth of the semi-rural lifestyle market exerting pressure on valued rural landscapes. The introduction and development of TWRs demonstrates how transferable planning mechanisms can be implemented to manage resources other than land. Economic theory suggests that the nonattenuation and transfer of property rights pertaining to water would allow market forces to develop more efficient allocation regimes. It is argued that water can take the form of a private good, in a productive sense, and should be allocated to maximise

community benefit. The next chapter introduces the concept of sustainable management and the ability of transferable planning mechanisms to achieve more sustainable environmental outcomes.

## CHAPTER FOUR

### RESOURCE MANAGEMENT IN NEW ZEALAND

Chapter four examines New Zealand's resource management regime in terms of the capacity to implement transferable planning mechanisms. The two previous chapters have outlined the *conceptual elements* of economic instruments: specifically transferable planning mechanisms. This chapter establishes the *contextual environment* in which these tools are administered in New Zealand. The degree to which economic instruments are conducive to New Zealand's resource management regime is determined by a number of factors, all of which are detailed in chapter four. Decentralised decision-making and an increased influence of the market in resource use decisions impinges on the prospect for utilising economic instruments in resource management. The relationship between the RMA, sustainable management, and economic instruments is examined in this chapter to establish an understanding of the context in which transferable planning mechanisms can be implemented in New Zealand.

#### SUSTAINABILITY

The notion of sustainability, ensuring that the present use of resources does not limit resource options in the future, has become fashionable (Clark, et al, 1992, 244). There is growing awareness that the pressures imposed on resources of the environment are becoming intolerable. In the last three decades a global consciousness has surfaced, initially in the environmental movement, which in time has transmitted itself to governments (Merrett, 1994, 164). The concept of sustainability is not new; incorporating the principle in a statute is. The quest for sustainability has required a shift in environmental and resource management to an approach that is no longer development orientated. Again, this is reflected in the emphasis of the RMA, which directs policy towards dealing with environmental effects rather than activities.

International debate on the interpretation of sustainability has been substantial. "What should be sustained, and for whom should it be sustained?" (Bosselmann, 1991, 7). There have been three significant documents that have embraced the concept, and in doing so have raised the profile of sustainability internationally. The 1980 *World Conservation Strategy* introduced sustainable development in an effort to reach international agreement on the definition and implementation of sustainability. The Strategy was heavily criticised for its exclusion of economic issues. The 1987 *Brundtland Report* attempted to redefine sustainable development. Unlike the 1980 Strategy which advocated a *national* response, the Brundtland Report promoted a *policy* response. The Report sought compromise between the opposing ideologies of development and conservation, recommending ecological considerations be included in policy decisions. The 1991 *Caring for the Earth Strategy* introduced local responsibility into the sustainable development concept. This Strategy was essentially action orientated, and became a blueprint for Primary Environmental Care programmes in many nations.

Sustainable development advocates the adoption of social and environmental values into the industrial and economic sectors. It recognises limits to growth, standing in direct opposition with unlimited industrial growth (Bosselmann, 1991, 7). Sustainable development has been criticised for truncating economic advancements. Bosselmann (1991, 7) believes there is "nothing in the vast literature to suggest that sustainability and economic growth could be happily married". This sentiment indicates a dramatic shift in thinking about the environment that has followed the rise of the sustainability ethic. It represents a move from anthropocentric thinking to ecocentric thinking; in doing so it suggests that sustainability is more advantageous to the green movement than economic and technological interests.

New Zealand's commitment to sustainability in planning and resource use legislation is in the form of *sustainable management*, a shift in focus from sustainable development and arguably less embracing of the sustainability ethic.

## SUSTAINABLE MANAGEMENT

The purpose of New Zealand's RMA is to promote the sustainable management of natural and physical resources. The definition of sustainable management (section 5, RMA) is less encompassing than the concept of sustainable development popularised by the documents discussed above. There has been extensive academic debate as to whether socio-political and economic concerns are given reasonable emphasis in the RMA. The Act does not explicitly address these concerns, thereby creating ambiguity. There is potential for conflicts between different groups and their values as a result of this ambiguity. However, an optimistic interpretation of the Act's purpose views sustainable management as progressive notion which allows for the integration of developmental aspirations and environmental concerns (Upton, in Grundy, 1994b).

It has been argued that by concentrating on *means* (and not *ends*, as sustainable development does), sustainable management does not afford adequate emphasis on sustainable decision-making outcomes.

Alternatively, sustainable management in the RMA may be viewed as neutral with respect to the environment and development. The Act gives local authorities the capacity and flexibility to make decisions affecting their area and plan for the sustainable management of their natural and physical resources. This scope allows local authorities to tailor plans and policy statements, which reflect the purpose of the Act, based on particular community issues and values.

Some commentators believe the RMA's purpose limits planning's capacity to intervene in social and economic affairs of New Zealand society, restricting planning's scope to biophysical resources and the built environment (Gleeson in Le Heron and Pawson, 1996, 252).

## THE RESOURCE MANAGEMENT ACT AS A FRAMEWORK FOR PLANNING

“The Fourth Labour Government has been responsible for a period of ‘perestroika’, albeit of a particular New Zealand flavour” (Holland and Boston, 1990, 1). Radical reforms of New Zealand’s public sector, initiated in the mid 1980s by the Fourth Labour Government, heralded shifts in decision-making and democracy. The state sector, the economy, local and regional government, and resource management experienced drastic reform. The new direction was underpinned by the New Right vision of “less government in business, more business in government” (Mascarenhas, 1982, 42).

In addition to the New Right movement, reform of resource management law reflected pressure from the Environmental Lobby. The Resource Management Act, 1991 is the product of sustained political pressure from these two principal interest groups (Gleeson in Le Heron and Pawson, 1996, 250).

The Business Round Table was generally seen as the moving force behind the influence of the New Right (Perry in Le Heron and Pawson, 1996, 85). Buhrs and Bartlett (1993, 116) also link Treasury and its “anti-planning and anti-regulation philosophy” to the New Right movement.

New Right activists were dissatisfied with the town and country planning regime and other resource statutes, all of which they perceived as impediments to economic efficiency, investment and growth (Buhrs and Bartlett, 1993, 116). They lobbied for market-based resource allocation as an alternative to government intervention in resource use decisions. The New Right movement advocated the use of economic instruments in resource use decision-making. As Memon (1993, 90) iterates “[Treasury officials] advocated individual negotiation and the use of economic instruments based on tradeable property rights to achieve good environmental outcomes”.

However, the New Right did not have it all their own way during the reform process. Sustained pressure from the environmental movement was influential in the outcome of

the reform. The environmental movement demanded an holistic approach to resource management and the preservation and enhancement of New Zealand's natural environment. The environmental lobby were damning of the development bias of the town and country planning legislation. Gleeson (in Le Heron and Pawson, 1996, 251), describes the ensuing RMA as an "uneasy legislative compromise" between the two socio-political forces of the New Right and the environmental movement. Embracing sustainable management, devolved decision-making, effects-based planning, integrated management of resources, and market recognition in resource allocation are fundamentals of the RMA.

The RMA represents a more comprehensive and integrative framework for guiding resource use decision-making than the previous Town and Country Planning Act.

The Resource Management Act 1991 provides a statutory framework for a relatively more holistic and integrated approach to environmental planning for the first time in New Zealand. It replaces a large number of separate and in some respects inconsistent and overlapping statutes concerned with the use of resources (Memon, 1993, 86).

The RMA devolves responsibility for environmental decision-making to the local level of government: regional councils and territorial authorities. Power in decision-making is devolved as close as possible to the communities affected by resource decisions, subject to national call-in powers and National Policy Statements. This is a fundamental shift from the previous planning legislation which was reliant on considerable government intervention.

Town and country planning was based on prescriptive zoning schemes which sought to direct, according to 'good practice', the spatial pattern of rural and urban land uses. While these resulting schemes provided an element of certainty in land use decision-making the regime lacked flexibility. The RMA's reliance on effects-based planning rather than activities-based has sought to address this issue. Rather than controlling land use activities themselves, the RMA encourages regulation of the environmental effects of activities. In practice, this means a given activity will be treated in the same way as any other with similar effects on the environment. The ramification of effects-based planning

coupled with localised decision-making means communities have the responsibility of internalising the costs of local resource use decisions.

The RMA seeks recognition of market forces in the allocation of resources. The prescriptive nature of the Town and Country Planning Act had been criticised as “attempting to usurp the market even where market deficiencies [did] not exist” (Hearn, 1987, 23). In response, the RMA is a framework which encourages a more open and competitive economy via decentralised decision-making and the use of economic instruments to achieve good environmental outcomes (Memon, 1993, 96).

### **SUSTAINABLE MANAGEMENT, THE RESOURCE MANAGEMENT ACT, AND ECONOMIC INSTRUMENTS**

Advocated by the New Right during the reform, support for economic instruments has largely been confined to academic and business circles. In general, environmentalists have been much less enthusiastic about their use (Buhrs and Bartlett, 1993, 109). However, since the introduction of the RMA, criticism has arisen from the business faction regarding the limited opportunity to implement economic tools. Gleeson (in Le Heron and Pawson, 1996, 254), notes an ambivalent reaction from business groups regarding the “too limited role which the RMA allows for economic instruments in resource management”. Buhrs and Bartlett (1993, 107) agree the “RMA allows for the introduction of economic instruments, but in a very limited way”.

This perception that there is limited scope for the use of economic instruments may reflect the fact that the RMA is a compromise between the objectives of different interest groups. Alternatively, it may be a reflection of the nature of the RMA as a framework and not an operational code. The RMA is a vehicle requiring planners to consider a range of means for achieving desired environmental ends (Johnson, 1992, 24). As such, the Act does not dictate the inclusion of economic instruments in the planning process, but facilitates their use.

Economic instruments are promoted as a means of internalising environmental externalities. This role suggests economic instruments can be used to address resource

management issues by ensuring that developers and resource managers face the full costs of proposals on the environment. This should adjust the cost-benefit ratio in favour of the environment rather than the development values associated with a particular resource. This requires property rights to be defined and allocated. The review of the resource management law reform:

was concerned with addressing the problem of environmental externality in the context of property rights arrangements...The objective was to identify property right arrangements that would produce an efficient allocation of economic *goods* and *bads* (Memon and Gleeson, 1995, 115).

The RMA's section 32: *Duty to consider alternatives, assess benefits and costs, etc.*, encourages the use of economic instruments, thereby providing a link between the means and ends of sustainable management. Section 32 facilitates the determination of the most appropriate objectives, policies and methods to achieve environmental outcomes, and reflects the resource management law reform's commitment to accountability and transparency in environmental decision-making.

Prior to public notification of local government plans and policy documents, an evaluation of alternative objectives, policies, rules and methods must be undertaken in accordance with section 32. The ultimate objective of section 32 is to provide enhanced efficiency and effectiveness in decision-making, while reducing the probability of excessive regulation. Section 32 embraces the principles of accountability and transparency, which have been cornerstones of both the resource management and local government law reforms (Young-Cooper, et al, 1993, 10).

The use of economic instruments under the RMA requires an analysis in accordance with section 32. As part of this evaluation, the expenditure of resources must be justified. The analysis may be expressed through a cost benefit analysis, although it is not mandatory to produce a formal report (Young-Cooper, et al, 1993, 23). The evaluation may be far-reaching, and may encompass distributional impacts and labour implications of plan and policy provisions.

The inclusion of economic instruments in section 32 is implicit in clause (1)(a)(ii), which requires individuals operating under the Act to have regard to *other means* of achieving the purpose of the RMA.

Consideration of economic instruments features in provisions relating to the Minister for the Environment. Under section 24(h) the Minister for the Environment is bound to consider the use and implementation of economic instruments in the course of achieving the purpose of the RMA. Additionally, under section 45(2)(i), the Minister may regard the need to identify measures, such as economic instruments, in determining whether it is desirable to prepare a National Policy Statement. Two other provisions are of particular relevance to the implementation of economic instruments. As part of the resource consent procedure, section 108 outlines conditions that may be required as part of a resource consent. One of these conditions refers to the requirement for bonds before a consent may be exercised. Section 7(b) encourages the use of economic instruments to achieve the efficient use and development of natural and physical resources. Finally sections 136 and 137 provide planning directives for the provision of transferable water and discharge rights. These provisions are significant in the Act, as the instruments they describe are likely to take an economic form.

In conclusion, while the RMA does not dictate the use of economic instruments, there is considerable scope to incorporate such tools in resource management practice. A number of parties in the environmental decision-making process are given the opportunity to apply economic instruments. Part II encourages their use; functions of the Minister for the Environment include consideration of economic instruments, the consent process facilitates their use, and local government plans and policy documents are bound to consider economic tools.

The RMA does not promote the use of economic instruments as a direct substitute for regulation-based methods and rules for the purpose of achieving sustainable management. Conversely, the effectiveness of market-based instruments is often enhanced by regulatory measures, such as zoning (Bindon, 1992, 139). When decisions

are made regarding a choice between the two alternatives, many factors require consideration to indicate the most efficient and effective outcome.

### **The Resource Management Act and Transferable Development Rights**

The principle of transferring development potential via TDRs is consistent with the purpose and principles of the RMA. However, the measure of consistency can only be assessed against the policies or objectives the TDRs aim to achieve. These are subjected to the district planning process under the RMA. It must be assumed that they will be utilised to alleviate development pressures which are deemed by the community to be unsustainable or inappropriate.

In addition to conceptual consistency with the RMA, the TDR technique's functional and operational characteristics are consistent with sustainability. Sections 6 and 7 of the RMA: *matters of national importance* and *other matters* facilitate the use of TDRs as tools for the preservation of identified resources.

*Matters of national importance* suitable for TDR application include:

- (a) the preservation of the natural character of the coastal environment.
- (b) the protection of outstanding natural and features from inappropriate subdivision, use, and development.

*Other matters* suitable for TDR application include:

- (c) maintenance and enhancement of environmental amenity values
- (d) intrinsic values of ecosystems
- (e) recognition and protection of heritage values of sites, buildings, places or areas.

Not all property owners who have their development potential restricted, to preserve certain features, may need to be compensated by allowing them to transfer the development rights. Reardon (pers. comm., 1995) suggested that the use of the term development right is actually wrong, as in New Zealand no person has the right to develop their land but are given the privilege to do so by government authorities. This point of law pivots on section 85 (RMA) and the concept of a landowner retaining

'reasonable use' without creating significant adverse effects on the environment (discussed in Chapter Three).

The development privilege is illustrated by *Burnett v Tasman District Council W025/95*, where a piece of rural land was protected from development for the contribution it made to the quality of life. It was interpreted by the Tribunal that:

notwithstanding land's low productivity there is still a "need" for the continued existence of some land in a natural or virgin state free from any development" for future generations.

Therefore, councils can easily prevent the subdivision of land, if that subdivision is likely to create significant adverse effects. This is critical to the thesis, as it distinguishes subdivision from the sale of pre-subdivided titles. In the case of pre-subdivided titles, councils are limited by an existing legal situation where the only option of recovering the titles is to purchase them.

### **The Resource Management Act and Transferable Water Rights**

Unlike TDRs, the RMA specifically allows Regional and Unitary Councils to provide for the transfer of water permits to another person or site in the same catchment, in accordance with section 136. Councils have two options regarding the transfer of water permits. The first involves facilitating the transfer through the planning process, where the two parties must lodge a joint resource consent. This consent procedure is both cumbersome and expensive, and is not likely to enhance the efficiency of resource use (section 136 (2)(ii)). The second option involves the council facilitating transfers through a specifically designed and researched regional plan (section 136 (2)(i)). Forsythe (pers. comm., 1996) suggested that it is "better that the rules regarding such transfers are made known through a plan, so that users have maximum certainty about the likely result".

The Act provides certain limitations to the transferable system developed by respective regional councils. Under section 386 (5), the Act prohibits the transfer of permits emanating from existing authorities established under the Water and Soil Conservation

Act 1967. This ensures that permits to be transferred are up-dated and are subject to the same conditions as those imposed on contemporary permits. Councils are also bound by the Act not to profit from the consent process, thereby restricting the potential to auction water permits as a method of allocation.

## **CONCLUSION**

New Zealand's institutional environment for environmental planning is dominated by the RMA and the concept of sustainable management. This chapter has examined the institutional context and how it pertains to the implementation of economic instruments, specifically transferable rights. It has been proposed that the RMA has created a more suitable institutional environment for the consideration and use of economic instruments than the previous town and country planning regime. The Act encourages the consideration of market solutions to traditional planning problems.

## CHAPTER FIVE

### APPLICATION OF TRANSFERABLE PLANNING MECHANISMS IN NEW ZEALAND

Chapter five describes the application of transferable rights in New Zealand's planning environment. Three case studies are explored to reveal insights into the implementation of transferable planning mechanisms in practice, and to enable comparisons with examples from other countries. The cases are described via an overview of the characteristics defining each district, a description of activities and pressures that led to the planning problem, and an outline of the transferable rights proposal. The case studies are analysed in terms of criteria which expose issues of efficiency, performance and the impact of legal and institutional underpinnings.

#### SELECTION OF CASE STUDIES

Limited use of transferable planning mechanisms in New Zealand eliminated the need for a rigorous case study selection procedure, such as that proposed by Yin (1989). Rather, the cases for investigation were selected by scanning local authority documents to identify which councils were using, or proposing to use, transferable planning mechanisms. Due to the limited application of such mechanisms in New Zealand to date, there was a relative scarcity of information regarding their capacity to operate successfully. As it transpired, none of the case studies investigated had ever experienced an actual market transaction, although two had reached the final stage of implementation.

The three case studies encompass two Transferable Development Right proposals, developed by Franklin District Council (FDC) and Rodney District Council (RDC), and a Transferable Water Right scheme developed and implemented by the Manawatu-Wanganui Regional Council (MWRC). The two TDR cases address the topical issue of subdivision on the rural-urban fringe. The literature review suggests this is an issue of increasing international importance in the planning profession (Nelson, 1992).

## FRANKLIN DISTRICT'S TRANSFERABLE RIGHTS SCHEME

### Characteristics of Franklin District

Franklin District is characterised by diverse natural, cultural and productive resources. Surrounding the district's main settlement of Pukekohe, are some of the most productive soils in New Zealand. Intensive horticultural and market gardening activities are undertaken in this area. The remaining productive land accommodates agricultural activities, including dairy farming, extensive pastoral farming and forestry. Franklin District is dissected by the Waikato River. It falls within the Auckland Region to the north, and the Waikato Region to the south.

The population of Franklin District reached 47 311 in 1996 (a rise of 15.4% between 1991); this growth is expected to continue into the next century. The spatial pattern of Franklin's population highlights significant growth concentrated in the northern rural parts of the district. This is placing significant pressures on the rural resources, and existing residents.

### The Planning Problem

The population growth of greater Auckland has led to distinctive pressures in the Franklin district. In particular, the demand for semi-rural residential properties (lifestyle blocks) has led to major changes in land use. "This pattern of rural sprawl has led to the consumption of arable agricultural and horticultural land for relatively unproductive purposes" (Reardon, pers. comm., 1995). This is clearly illustrated by the continued fragmentation of large economic agricultural holdings into small semi-rural lifestyle blocks. "In 1980, 38 percent of all properties in the former Franklin County rural area were larger than ten hectares. In 1993, this had reduced to only 24 percent (for the same rural area)" (Proposed Franklin District Plan, 1994, Pt 16.1). "Ongoing, irreversible subdivision for non-productive purposes is unsustainable given that Franklin has a *finite* land resource" (ibid).

The following discussion is based on an interview with Mr Noel Reardon, Senior Planner at FDC. The process of rural sprawl is a phenomenon evident throughout the developed world, and is well documented in the literature (Evans, 1993; Nelson, 1992). In Franklin District, the market was inadvertently creating a situation where certain resources and values could not be sustained under such growth pressures. The rural community expressed their concerns and opinions resisting growth, regarding rural subdivision, through a rural issues questionnaire prepared by the FDC Planning Department. The planners at FDC concluded that a fragmented landscape would result in losses of physical diversity and amenity value. This view was consistent with that of the Auckland Regional Council, whose anti-rural subdivision sentiment is longstanding. Despite these conclusions, no attempt has been made by FDC to quantify these social costs. Without adequate analysis of the costs it may be presumptuous to assume market failure (Willig, 1976). However, the complex issue of placing values on public goods, and the measurement of consumer surplus, is beyond the scope of this research.

FDC circulated a rural resources issues document in 1993, to ascertain community opinions and values, as part of the preparation for the Proposed Franklin District Plan. As a result, a number of objectives were developed relating to the preservation of the landscape. For example, objective 17.1.1 of the Proposed Franklin District Plan (1994) states:

To manage land and soil resources in such a way that they remain available to present and future generations for a range of primary productive activities.

In instances where this objective is undermined, through rural subdivision for example, policy three dictates that there must be “significant and sustainable benefits” created to compensate for the loss incurred. FDC have had considerable success in opposing rural subdivisions at the Planning Tribunal (*Balle ISJ Ltd v Franklin District Council*, A116/93; *Pickmere RH & Others v Franklin District Council* AO46/93). In these cases each subdivision proposal was interpreted as contravening the District Plan and the RMA. The cases reinforced the control FDC has over the subdivision of land in its jurisdiction. However, the same degree of control cannot be exercised over previously subdivided titles, which can be sold at will, at the risk of fragmenting valued landscapes.

Preserving the rural character and amenity of open space was expressed as an objective in the Proposed Franklin District Plan (1994, Pt 17.2.6). The intent of this objective goes beyond the protection of the agriculture industry. Reardon (pers. comm., 1995) suggested that “it is not the role of council to intervene in the market place for the sole purpose of protecting a particular industry, such as pastoral agriculture”. The rural landscape “enhances the quality of living for many people, by contributing to amenity values and open space” (ibid).

The FDC’s intention was to develop policy that would stabilise the conflicting processes of preservation and growth, while making provisions for development in areas suitable for subdivision.

### **The Transferable Title Right Proposal**

Franklin’s Proposed District Plan included provisions to redirect rural development away from the most valued landscapes, toward more physically appropriate areas. The principal method to facilitate this movement, was rule 22.8 of the Plan (Appendix). This rule outlines a TDR mechanism designed to use market forces and economic incentives to transfer development potential.

Franklin’s TDR proposal is consistent with the fundamentals of international TDR programmes, in that preservation and receiving districts are identified, and a market established to facilitate the exchange. However, FDC adopted the TDR concept in the form of transferable title rights (TTRs). TTRs are based on the premise that many large land holdings in the preservation district hold multiple legal titles. Under the Proposed Franklin District Plan each title has the capacity to be separated and developed with a single dwelling unit (as per Part 23.1 of the Plan). The TTR scheme encouraged property owners to amalgamate excess titles in such a way that new titles could not be recreated under the RMA. This procedure had the potential to protect valued landscapes by eliminating their development potential. The economic incentive to rescinder excess titles was facilitated by a ‘synthetic title market’.

The market involved the transfer of titles between developers located in the receiving district and the multiple title property owners in the preservation district. The titles were to be removed from one area and re-created in another. This exchange gave developers the right to higher density development while compensating the property owner for relinquishing his/her titles. Through this mechanism there would be no overall increase in the total number of titles in the district, but they would be more appropriately located (Proposed Franklin District Plan, 1994, Pt 16.1).

The initiative for a relatively untried planning mechanism came from the Council planners and was based on their research of American literature. The TTR scheme was seen as a theoretically sound method of achieving RMA objectives without imposing unrealistic regulations onto property owners (Reardon, pers. comm., 1995).

#### *Characteristics of the Preservation District*

The Preservation District is characterised by its high agricultural and horticultural potential (Figure 5.2). Many of the properties in this district have been subdivided into four hectare lots for the purpose of horticultural activities. However, four hectares is no longer seen as large enough for an economically viable horticultural unit. Greater capital gain can be made from converting these lots into rural-residential lifestyle units, rather than persisting with an uncertain horticultural market. As a result the area is rapidly losing land-use diversity.

#### *Characteristics of the Receiving District*

The TTR proposal's ultimate objective was to rectify the planning problem, by redirecting unsustainable growth toward areas less sensitive to development, in effect reducing the cost to society. The receiving district in the Franklin scheme was an area of relatively low fertility and productive capacity, compared with the preservation district. The importance attached to rural character in the receiving district was significantly less than the preservation district. This was influenced by several factors, including

topography and proximity to urban areas. The topography of the receiving district is less conducive to intensive horticultural and agricultural activities (Figure 5.2). It was perceived by FDC planners that this undulating land could easily be excavated into suitable sites for residential dwellings with lifestyle potential (Reardon, pers. comm., 1995). In addition, the physical and environmental impacts of developing necessary infrastructure for rural residential land use was perceived as considerably less in the receiving district than in the preservation district.

### *Market Structure*

The market method preferred by FDC planners was one completely free of any local government intervention, including monitoring for exploitation. It was envisaged by the scheme's proponents that the brokering of title rights would become an open market activity, possibly performed by real estate agents. Most examples of markets in the literature tend to be more interventionist when compared with this approach. However, the small size of the scheme did not justify the investment of further Council resources in the market structure.

### **The Submission Process and Public Consultation**

The RMA ensured that the localised decision-making process invited greater opportunity for the public to voice opinion. Under the RMA all individuals have the capacity to make submissions on notified resource consent proposals, and the development, review and change of policy and planning documents. The following discussion outlines public submissions on the TTR proposal, and the FDC's reaction.

The Auckland Regional Council (ARC) made extensive submissions on the TTR scheme, in the course of which they opposed many submissions made by other parties. The ARC's main argument was based on the location of the proposed receiving district. The ARC advocated the creation of a greenbelt around the metropolitan limits of Auckland. To facilitate this, their submission urged the FDC to relocate their receiving district towards designated residential growth areas, such as Patamahoe. They also suggested

that the proposed receiving district was of a high quality, with regard to soil type, and should therefore be protected. However, the FDC planners were reluctant to act on the submission, and link the transferred rights solely to an identified growth area. Their first concern involved the difference in property values; sections surrounding Patamahoe have approximate market values of \$60 000 and the preservation district had titles worth in excess of \$150 000 (Reardon, pers. comm., 1995). By contrast, the FDC proposal used preservation and receiving districts that could be amalgamated with no adjustment to title values. The second concern centred on the relationship between the growth of areas, like Patamahoe, and the TTR scheme. "Tying the development of a settlement to a TTR programme does not provide the certainty required for a growth area to depend on" (Reardon, pers. comm., 1995).

Some sixteen other submissions were made by individuals who supported the potential of the transferable right concept, and suggested that either the proposed preservation or receiving district be extended.

### Equity Issues

Barrese (1983) suggested that there should be close proximity between the receiving and preservation districts to ensure one party does not benefit at the expense of the other. However, FDC planners did not anticipate significant social costs in the receiving districts as a result of increased density. Conversely, the entire community was expected to reap the benefits of protecting the diversity and productive capacity of the greater area, avoiding a landscape dominated by rural-residential lifestyle blocks.

Compensation is the driving force behind most TDR schemes in the United States. In contrast, the RMA and New Zealand property laws mean that transferable right schemes, such as Franklin's, are not developed for the sole purpose of compensating landowners for development restrictions. In Franklin, transferring title rights was a means to rectify past planning decisions that did not meet contemporary planning objectives under the RMA. The TTR scheme was firstly a method of limiting adverse effects in an equitable

manner and secondly a method of providing compensation for loss of development rights.

### **The Fate of Franklin's Transferable Title Right Proposal**

Despite public support, Franklin District Council abandoned the transferable title rights scheme in October 1995. The decision was based on the intensive title sales that had occurred between the time of the scheme's conception and the decision date.

[T]here were approximately 1200 horticultural lots of four hectares with subdivision consent when first proposed. As at December 1994 there were only 500 of these lots left (*Waiuku and Districts Post*, 1995, 1).

This suggested that it was almost too late to correct the problem. However, the figures suggest that a potential remains to implement TTRs in an expanded form (encompassing a greater land area with more titles). However, FDC did not proceed with this form of TTR scheme, because of the perceived complications of implementing a larger scale scheme. These complications included finance and resource limitations, public resistance, and market uncertainties. Patience (pers. comm., 1996) suggested that more research would be required to assess the impacts and environmental effects of a larger TTR application. The cost of monitoring subdivisions and title transfers would also be considerably higher under an expanded TTR scheme. FDC considered this further investment of financial and human resources to be excessive, perceiving the transaction and enforcement costs to be higher than environmental benefits. The Council also considered the uncertainties of a larger market-based economic instrument to be too great compared with the benefits and financial costs to complete the TTR expansion.

The decision to reject the concept of TTRs was also influenced by several planning complications and political pressure. Patience (pers. comm., 1996) suggested that protests, made by some landowners in the receiving district, regarding purchase rights to develop land beyond current restrictions, were influential; interestingly these were not officially recorded during the submission phase. This could have developed into a significant issue, placing undue pressure on the planning system. This factor was

compounded by the fact that some of these landowners had direct contact with councillors, thereby creating the potential for conflict of interests.

### **The Transferable Title Right Proposal and the Planning Process**

FDC have adopted rural planning policies designed to sustain primary production as a major land use. The rationale behind these policies is to protect the viability of land uses that require large land holdings, avoid conflicting land uses in close proximity, reduce the pressure on rural infrastructure, and maximise the productive potential of high quality soils. To achieve these policies, the Proposed District Plan impedes the subdivision of valuable rural land for rural-residential lifestyle purposes. However, owners of previously subdivided properties (or multiple titles) continue to pose a problem for the Council attempting to minimise fragmentation.

The TTR model is but one method of achieving rural policies and objectives, and dealing with the problem of multiple title ownership. There was no evidence that any alternative methods were considered by FDC planners in a section 32 analysis (RMA). Other methods that could have been considered in an evaluation of alternatives are education and minimum environmental standards. Education aimed at informing and encouraging title holders to act in accordance with the plan policies and objectives may have been useful. This would involve the Council persuading multiple title holders to maintain possession of their land and avoid seeking the financial gain associated with fragmentation. The second method, of implementing tighter environmental standards, pertains to the Council's ability to restrict development of certain land characteristics, rather than regulating land uses per se.

### **Comparative Analysis of Transferable Title Rights and other Planning Methods**

To comparatively analyse TTRs, education and environmental standards, the three alternatives are cross tabulated with criteria derived from the literature review. The cross tabulation quantifies characteristics of each process, where subjective weightings are allocated to each criterion (Figure 5.1). As well as providing a summary of the

strengths and weaknesses of each process, patterns and trends that emerge from this evaluation are crucial to reaching substantive conclusions on this case study.

### *Evaluation Criterion*

- *Performance* - The likely success of each method in achieving the environmental improvements sought.
- *Certainty* - The certainty of outcome associated with their use.
- *Efficiency* - The costs of administration, monitoring, enforcement, and compliance associated with each method.
- *Institutional constraints* - Compatibility with statute and organisational environment of each method.
- *Legal constraints* - The probability of property law complications, and the likelihood of Planning Tribunal hearings.
- *Indirect Effects* - Effects that are unrelated to the functioning and intent of the methods, yet impact on the environment as a result of implementing the methods.

EVALUATION CRITERIA	TTR Market Mechanism	Tighter Environmental Standards	Education
<b>Performance</b>			
Potential for success	MEDIUM	HIGH	LOW
Certainty	LOW	HIGH	LOW
<b>Efficiency</b>			
Development costs	MEDIUM	MEDIUM	HIGH
Administration costs	MEDIUM	MEDIUM	HIGH
Enforcement costs	HIGH	HIGH	NIL
Compliance costs	HIGH	MEDIUM	NIL
User acceptability	MEDIUM	LOW	LOW
Simplicity	LOW	HIGH	HIGH
<b>Institutional Constraints</b>			
Political acceptability	MEDIUM	LOW	LOW
<b>Legal Constraints</b>			
Property law complications	LOW	HIGH	LOW
Planning hearings	LOW	HIGH	LOW
<b>Indirect effects</b>			
Benefits of concentrated development	HIGH	NIL	NIL

#### KEY

Red	>	Negative weighting
Green	>	Positive weighting
Black	>	Neutral weighting

**Figure 5.1: Comparative Analysis of TTRs and other Planning Methods**

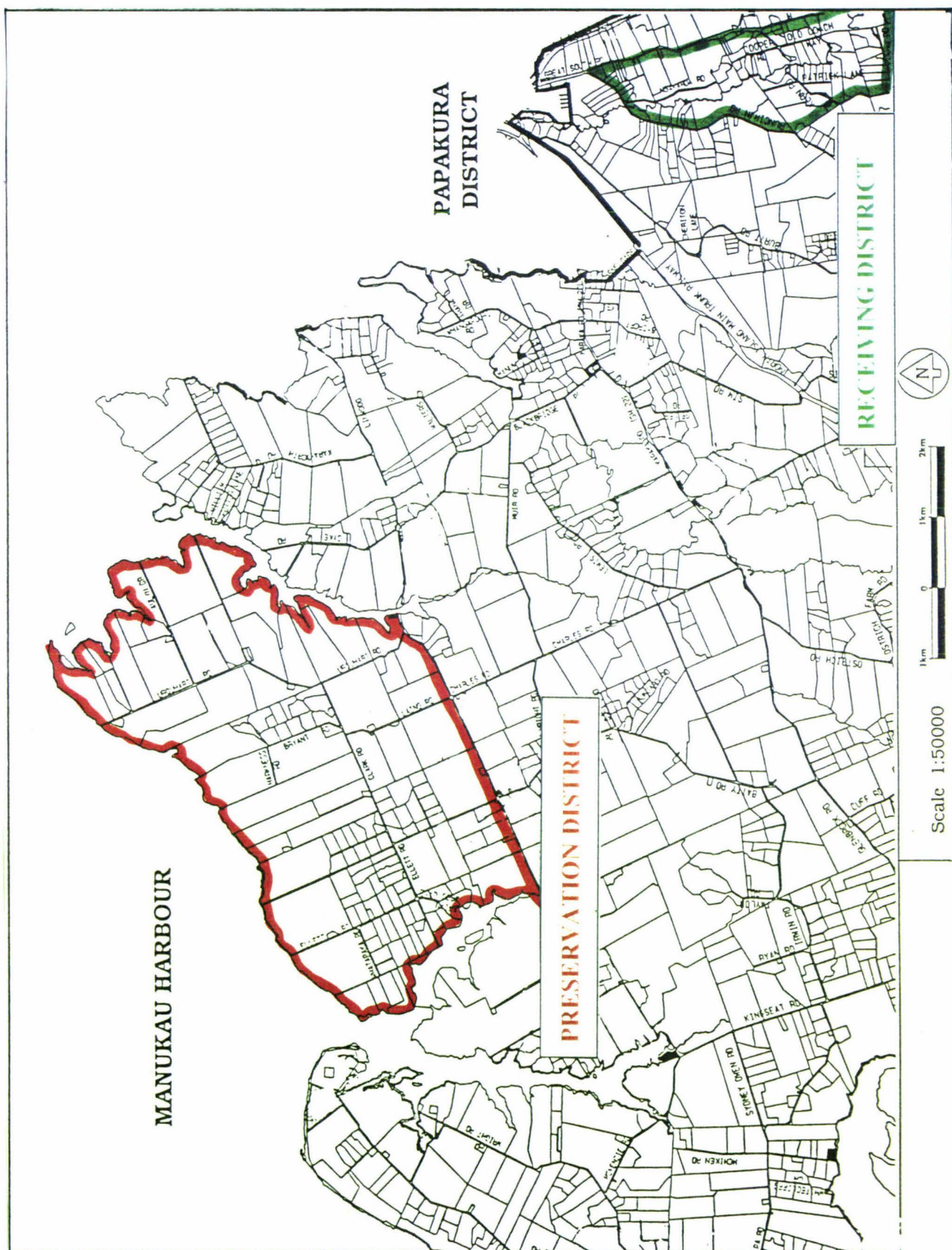
#### Case Study Evaluation

The comparison suggests that the most notable constraint associated with the implementation of TTRs is high uncertainty, resulting in a medium potential for success, and low simplicity. These compare favourably with the alternative methods. Environmental standards encounter serious problems with political and legal acceptability, and opportunity costs; while education incurs a very low potential for likely success and significant administration costs. FDC instead chose the *status quo option*,

implying their willingness to accept the costs and environmental outcomes resulting from the fragmentation of multiple title properties.

The assessment of alternatives to the TTR scheme (re section 32 of the RMA) was not executed thoroughly by the FDC. The problem of rural subdivision is a major issue in Franklin District and one element of this problem is the sale of previously subdivided titles. The TTR concept was proposed to eliminate this problem, and contribute to the policy objectives. However, the Franklin planners failed to analyse the TTR proposal and produce sufficiently convincing evidence to warrant its inclusion in the notified District Plan. For example, the benefits of protecting the titles were not quantified to justify the administration and development costs.

This information suggests that the institutional capacity of FDC to rigorously adhere to the planning process advocated by the RMA is currently doubtful. The Council's planning department does not have adequate funding, nor adequate numbers of skilled personnel, to explore less conventional methods of achieving planning objectives. If the resources had been available, it is probable the research would have been conducted and the outcome may have been different. This may reflect on New Zealand's local government structure and the inconsistent size and resource base of territorial authorities.



**Figure 5.2: Location of Franklin's Proposed Preservation and Receiving Districts**  
 Source: Proposed Franklin District Plan, 1994, 2.

## **RODNEY DISTRICT'S TRANSFERABLE RIGHTS SCHEME**

### **Characteristics of Rodney District**

Rodney District is an area diverse in physical and social characteristics. It is flanked by Tasman Sea and Pacific Ocean coastlines. Rodney District is unique to the Auckland region in that the area is substantially rural. Although 62 percent of the population are urban, they are distributed throughout the region in the many towns and rural settlements. "Rodney contains only six percent [67 584] of Auckland's [1996] people, yet it contains 42 % (2,475 kms<sup>2</sup>) of the region's land area and a significant portion of the region's coastline, pastoral land and plantation forest" (RDC, 1995, 3).

Rodney District is located to the north of North Shore City and Waitakere City Councils, which lie adjacent to Auckland City and are distinctly urban in nature. Auckland's population growth is projected to continue, and trends indicate that Rodney District is likely to experience parallel growth. The 1996 census information has revealed a population increase of 20% since 1991 (NZPA, 1996). The Rodney District Development Strategy (1993) forecasted the population to increase between 60 and 100 percent between 1991 and 2011, from 56 232 to approximately 100 000 people.

### **Rodney District's Planning Problem**

One of Rodney's finest attributes is its rural character. This, in conjunction with its proximity to Auckland, makes Rodney a desirable location for those wanting a country lifestyle while remaining close to an urban centre. The market has responded to the demand for lifestyle properties through continued fragmentation of rural land. The dramatic growth being experienced in Rodney is placing significant pressure on both natural and infrastructural resources.

The subdivision of rural land and the subsequent change in land use is not, in itself, the planning problem. As in Franklin District, the market for lifestyle properties in Rodney has no consideration for the costs it imposes on the community. These costs are

expressed as a loss in visual amenity and rural character, a reduction in land use diversity and increased adverse impacts on the natural environment. The planners of RDC have interpreted these costs as market failure. The market is claimed to be inadvertently creating an environment where certain landscapes and rural amenities, valued by the community, cannot be sustained (Hartley, pers. comm., 1995). The cost to present society and future generations is envisaged to be considerably more than the benefit accruing to the market players.

### **Rodney's Transferable Title Right Scheme**

RDC have implemented a Transferable Title Right scheme to achieve specific planning objectives. The TTR scheme aims at limiting “the potential adverse effects of sporadic countryside living in the Production, Special Character and Conservation Activity Areas” (RDC, 1995 16). This is achieved by facilitating the transfer of development potential from identified preservation areas, to areas more conducive to greater population density. Like the Franklin proposal, Rodney has used legal title rights as the basis for exchange.

Property owners residing in the designated preservation activity areas are given the freedom to amalgamate two or more titles, providing that each additional title does not exceed twenty hectares. RDC considers developments on titles larger than twenty hectares to have a minimal effect on rural amenities. In exchange for amalgamation, property owners in preservation areas may sell the title rights to developers operating within the receiving activity areas, for an agreed sum (or use the rights themselves in this area).

Rodney's TTR scheme is an economic instrument that is dependent upon certain regulatory controls to enhance its effectiveness and encourage its use. The subdivision controls for the Preservation Activity Areas are very prescriptive in terms of the environmental impacts of development. For example, specifications are set for soil type, topography and productive potential when creating rural residential sections in the Production Activity Area (RDC, 1995, 170). These planning restrictions encourage the

landowner to use the TTR mechanism to maximise (the title's) economic potential. The regulations provide an incentive for property owners in the preservation district to supply the market with title rights. However, the stimulation of demand for titles in the receiving district is a prerequisite for a successful market place.

Demand for title rights is generated by offering developers the incentive of an increased development density, and therefore profit potential. This is achieved by reducing the minimum average site size of a proposed subdivision with the purchase of transferred title rights. The increased density (and therefore the number of title rights able to be subdivided) depends on the size of the parent lot. For example, the maximum number of transferred title rights that can be used in any subdivision is seven, given that the parent lot size is larger than 21 hectares (RDC, 1995, 84). The table that dictates the purchase requirements of title rights and the subdivision size is located in the Appendix.

#### *Characteristics of the Receiving Districts*

The *Countryside Living 2* Activity Areas (receiving districts) are characterised by their close proximity to existing settlements. Intensive development in the receiving districts does not produce significant adverse impacts on the physical environment and rural character to the same degree as development in preservation activity areas. Adverse impacts typical in situations of increased population density include superfluous stormwater run-off, soil instability, accelerated erosion and loss of natural habitats. Rodney District's TTR scheme aims to "consolidate these effects to less sensitive landscapes and avoid irreversible damage elsewhere" (Hartley, pers. comm., 1995). A receiving district's proximity to existing settlements centralises the investment in infrastructure, including roading development and reticulated water supply. Aside from the environmental and economic advantages of locating the Countryside Living Areas adjacent to settlements, RDC cite two major social benefits. The first advantage is to provide an area "which retains a non-urban character but which is convenient to urban type services such as schools, convenience shopping, community centres and employment" (RDC, 1995, 75). Secondly, the potential for friction between 'lifestylers'

and full-time farmers regarding the impact on amenity levels of some farming operations will be minimised (Hartley, pers. comm., 1995).

The locations of Countryside living 2 (town) Activity Areas exist around the settlements of (Figure 5.4):

- Wellsford
- Matakana
- Warkworth
- Algies Bay
- Kaukapakapa
- Helensville
- Kumeu/Huapai
- Coatesville

#### *Characteristics of the Preservation Districts*

There are several designated preservation districts in RDC's TTR proposal, with several corresponding protection objectives. The individual preservation activity areas have been classified into subsets depending on the nature of their preservation. The subsets include:

- Special Character Activity Areas (SCAAs),
- Production Activity Area (PAA), and
- Conservation Activity Areas (CAAs).

The designation of a SCAA is dependant on there being a natural, cultural or heritage feature that is deemed worthy of protection and special recognition. These include dune lakes, unique and sensitive beach areas, sensitive areas surrounding water-ways, islands and areas of remote character. Each of the ten SCAAs have individual planning objectives, policies and rules.

The PAA encompasses the majority of the rural land in Rodney District. Soil and topographical variations dictate productive land uses, which include intensive pastoral

farming, horticultural activities, and forestry. The large area means that there are differing pressures for land use changes within the PAA. However, RDC's general objective for the PAA "is to ensure the long term protection and enhancement of the soil, water, and wildlife ... in a manner which provides for all forms of farming production" (RDC, 1995, 40). Subdivisions for rural residential purposes can only proceed in the PAA if the site is deemed suitable, and existing titles can be transferred.

CAAs are divided into three categories: bush, nature, and inland water, although only the first two are relevant to TTRs. Bush CAAs are significant areas of native bush which embody wildlife, landscape and intrinsic values. Subdivision is encouraged where the actual bush sites are given legal protection. In exchange, additional titles are created on the property or transferred to the receiving area. Nature CAAs are pristine natural landscapes and ecosystems, valued for their biological, ecological, cultural and scientific characteristics. RDC's main objective in this activity area is to retain the natural character and eliminate conflicting land uses, including development and earthworks.

### *Market Structure*

The success of Rodney's TTR concept is heavily dependant on the local market. Other than creating the market, the Council has no further intention of intervening in any transaction. The foundation for TTRs have been regulated by the Council and it is envisaged that real estate agents will broker deals between the parties.

### **Alternatives to the Transferable Title Right Scheme**

Transferring title rights is one of the chosen methods implemented by RDC "to protect or reduce development and subdivision in the general rural areas and concentrate development in urban aligned areas" (Hartley, pers. comm., 1995). As part of a section 32 analysis (RMA), RDC considered a number of alternative methods to achieve the same objective. These alternatives to TTRs include: the purchase of land, retaining the status quo and strict regulation.

### *Purchasing of Land by Rodney District Council*

The RDC may choose to purchase land deemed worthy of protection. In contrast to the TTR scheme, there would be no uncertainty in eliminating the market failure if excess titles were purchased. However, this option was not seriously considered due to the economic and political constraints placed on local authorities. It was perceived to be an extremely inefficient use of public funds when assessing the costs and benefits of a proposed policy. The second question that arises under this option is; “what would the council do with the titles; they are not useful for reserves” (Hartley, pers. comm., 1995).

### *Direct Intervention through Regulation*

Direct intervention and control of rural subdivisions and development is another alternative to TTRs, and was considered by RDC. The implementation of such policy would simply prevent any individual developing property the Council considers to be worthy of protection. However, this alternative was rejected on the grounds that “the idea of not allowing people to build on a title, and not allowing them to transfer it either is draconian” (Hartley, pers. comm., 1995). The concept of a social contract between the Council and the community is also broken with the implementation of this alternative; everybody expects to be able to develop a dwelling on a certified subdivision.

### *Do Nothing*

Retaining the status quo is an option required to be considered as part of a section 32 analysis. The result of not implementing the TTR scheme as it currently stands is the construction of an estimated several hundred houses in rural areas on smaller sites. The Council regards this effect as adverse, “although not critically so” (Hartley, pers. comm., 1995). However, the ability to eliminate at least half of the excess titles with the right mechanism is considered to be worthwhile if public expenditure is not excessive.

## Equity Issues

The RDC scheme exposes several issues pertaining to equity considerations raised in the literature review. These issues include the relative locations of the receiving and preservation districts, using developers to bear the cost of preserving public goods, and the idea that all property owners in the preservation district should have the capacity to transfer development rights.

The suggestion put forward by Barrese (1983), that the preservation and receiving districts need to be adjacent one another for reasons of equity, is dogmatic in the context of the RDC proposal. The preservation of rural character is for the benefit of the entire Rodney community, and arguably, for the whole Auckland region. It is for this reason that cost of higher densities in the receiving districts do not over-shadow the benefits of the scheme.

Some critics of the TDR concept interpret the developer as being the party that bears the cost of providing public benefit. However, under this scheme, the developer only reacts to the financial incentive proposed by RDC for greater development densities. Developers will not consider purchasing development rights if there is little chance of an acceptable profit margin. This point is related to Barrese's (1983) argument above, where the only cost is placed on those living in the higher densities.

The use of TTRs as opposed to TDRs in Rodney District is based on legal simplicity and a reaction to the RMA. Property titles are existing legal parcels of land that can easily be transferred to another party. It was considered inappropriate to prevent the purchasers from developing dwellings on each title. Therefore, eliminating or transferring the titles would effectively solve the planning problem and prevent fragmentation. Conversely, giving all rural land landowners in the receiving districts the capacity to transfer rights goes beyond what is necessary to achieve the RDC's planning objective.

### **The Transferable Title Right Proposal and the Planning Process**

RDC has recognised the costs to the community resulting from the fragmenting rural landscape. The Council has imposed strict environmental standards regarding the subdivision of rural land for residential lifestyle purposes, but cannot prevent the sale of previously subdivided titles.

Rodney District's landscape is vastly different to that of Franklin District, thereby creating different issues of sustainable management and rationale behind land preservation policies. In the Rodney District the soil, typically, does not have the exceptional qualities associated with market gardening. However, the open space and rural character are resources recognised as valuable by the community. There are also physical limitations for the rural land to endure development.

### **Comparative Analysis of Transferable Title Rights and other Planning Methods**

To comparatively analyse TTRs, tighter environmental standards and the purchase of title rights by Council, the three alternatives are cross tabulated with criteria derived from the literature review. The cross tabulation quantifies characteristics of each process, where subjective weightings are allocated to each criterion (Figure 5.3). As well as providing a summary of the strengths and weaknesses of each process, patterns and trends that emerge from this evaluation are crucial to reaching substantive conclusions on this case study.

*Note that the evaluation criterion is the same as Franklin's comparative analysis.*

EVALUATION CRITERIA	TTR Market Mechanism	Tighter Environmental Standards	Purchase of Land By RDC
<b>Performance</b>			
Potential for success	MEDIUM	HIGH	LOW
Uncertainty	HIGH	LOW	LOW
<b>Efficiency</b>			
Development costs	MEDIUM	MEDIUM	LOW
Administration costs	MEDIUM	MEDIUM	HIGH
Enforcement costs	LOW	HIGH	HIGH
Compliance costs	LOW	HIGH	MEDIUM
User acceptability	MEDIUM	LOW	HIGH
Simplicity	LOW	HIGH	HIGH
<b>Institutional Constraints</b>			
Political acceptability	MEDIUM	LOW	LOW
<b>Legal Constraints</b>			
Property law complications	LOW	HIGH	LOW
Planning hearings	LOW	HIGH	LOW
<b>Indirect effects</b>			
Benefits of Concentrated Development	HIGH	NIL	NIL

#### KEY

Red	>	Negative weighting
Green	>	Positive weighting
Black	>	Neutral weighting

**Figure 5.3: Comparative Analysis of TTRs and other Planning Methods**

#### Case Study Evaluation

RDC planners cannot quantify the benefits derived from protecting the landscape's rural character. However, it was assumed that the benefits would be greater than the costs incurred to develop and work the TTR scheme. The alternative methods to meet the planning objectives were inferior to that of TTRs, as illustrated in the comparative analysis. The cost to the Council of purchasing the land, as opposed to transferring titles, is excessive and politically infeasible. The second alternative, of defining more

rigorous environmental standards, is less acceptable to the landowners but has complete certainty in achieving desired environmental outcomes.



## MANAWATU-WANGANUI'S TRANSFERABLE RIGHTS SCHEME

### Physical Characteristics of the Oroua Catchment

Oroua River's headwaters are located high in the Ruahine Ranges. The River emerges from the Ranges and flows alongside steep hill-country before crossing the Manawatu Plains and entering the Manawatu River, near Rangiotu (Figure 5.7). Oroua's total catchment area totals 900 square kilometres, with only ten percent of this being located in the Ruahine State Forest Park (MWRC, 1995, 9). However, this small area is critical to the Oroua river system, as it accounts for eighty percent of the River's water supply during summer.

The Oroua River provides a habitat for brown trout and other native fauna and invertebrates, with certain sections of the River more suitable than others. Factors such as riparian vegetation, agricultural run-off and the composition of the river bed all influence the River's ability to sustain life. However, it is the flow and temperature which have the biggest impact on river life (MWRC, 1995, 11).

### Oroua Catchment and Human Activity

The Oroua River is a diverse resource providing water for the development of both urban and rural environments. Feilding is the largest settlement in the Oroua River Catchment, and its population (approximately 12,000) is dependent on the River as a source of water supply for general consumption (Figure 5.7). The Manawatu District Council abstracts water for Feilding's reticulated supply, and can extract up to 9,000 cubic metres per day. Feilding's industrial sector is also dependent on the River's water supply, for the purposes of cleaning and cooling. Manawatu Beef Packers is the most significant industrial abstracter of the Oroua River, with a permit allowing the use of up to 11,074 cubic metres per day. However, a significant proportion of this intake is discharged back into the river system several hundred metres down stream in the form of clean cooling water.

The rural sector uses the Oroua River Catchment as a source of water for a diverse range of horticultural and agricultural activities. The majority of Oroua's Catchment is used for dairy farming and scattered horticultural activities comprising cereal crops (corn, maize and wheat) and vegetables (carrots and potatoes). All of these activities place different demands on the Oroua River. Many of the 100 dairy farmers in Oroua's Catchment use small amounts of water to sustain their livestock, as well as for general farm purposes. However, some of these dairy farmers have invested substantial amounts of capital on irrigation equipment, and use significantly more water as a consequence. The crop and vegetable farmers also use large volumes of water for the purposes of irrigation (Figure 5.7). It is the intensive use of the Oroua River that has been a primary contributor to the economic and production potential of the land in its surrounding district.

### **Planning Pressures**

A significant proportion of the environmental degradation being experienced in the Oroua River catchment is caused by low water volumes, prevalent during dry summer periods. This low flow, and associated adverse effects, are compounded by the abstraction of surface water for various human activities. Prior to the implementation of the *Oroua Catchment Water Allocation and River Flows Regional Plan* (MWRC, 1995), abstractions of surface water from the Oroua River were not managed in a manner that minimised disruption to the river system. Management problems included the MWRC's inability to regulate the time of abstraction by each permit holder, and failure to establish a minimum flow at which the permit holders must cease their abstraction. This resulted in a situation where all of the permit holders could abstract their full quotas of surface water simultaneously, when the river was already experiencing critically low flows.

The Oroua River system is a limited resource and as such, not all demands can be fulfilled simultaneously if water quality is to be maintained. It is therefore the method of water allocation that determines the efficiency of its use. Direct competition between the alternative abstracters has been avoided, in the past, in favour of 'first come, first served'

regulatory permits. The benefit of one use was assumed to have a value equal to that of another.

### **Planning Response**

Water management is the responsibility of regional councils, as outlined in section 30 of the RMA. Regional councils also have the ability to implement (voluntarily) Regional Plans to assist in the sustainable management of any particular aspect of the region. Section 65(3) of the RMA promotes the implementation of Regional Plans where:

- (a) Any significant conflict between the use, development, or protection of natural and physical resources or the avoidance or mitigation of such conflict:
- (f) The restoration or enhancement of any natural and physical resources in a deteriorated state or the avoidance or mitigation of any such deterioration.

The Manawatu-Wanganui Regional Council has responded to concerns expressed about the adverse environmental effects induced by low flows in the Oroua River catchment, by developing the Regional Plan for Oroua Catchment. The Plan aims to mitigate adverse effects by controlling the abstraction of surface water through a Transferable Water Right scheme. This scheme outlines provisions to maintain a minimum flow of water in the Oroua River. The Plan also makes provision for TWRs in the smaller Kiwitea Catchment (Figure 5.7).

The MWRC established the TWR mechanism in conjunction with a minimum flow regime to alleviate many of the planning pressures on the Oroua River system. Transferable water permits are used to enhance the efficiency of how water is used by each irrigation permit holder. They are used within a broader regulatory framework, that identifies environmental bottom lines in the form of minimum flows and distinguishes each type of user category.

### **Minimum Flow**

The provision of a minimum flow policy to both the Oroua River and Kiwitea Stream is critical in maintaining their capacity to sustain life. The minimum flow is a quantifiable

limit that indicates when the resource is being pushed beyond the point of safeguarding the life supporting capacity of the River. A minimum flow was not included in the initial draft of the Oroua Regional Plan (1994). Submissions were made in favour of its inclusion by the Department of Conservation (DoC), Ministry of Agriculture and Fisheries (MAF) and the Ministry for the Environment (MfE). Subsequently, minimum flows were introduced as an integral component of the Plan.

Arriving at an appropriate quantifiable bottom line is difficult (Fenemor, 1993). The MWRC was obliged to consider both the cultural and ecological aspects of resources in an attempt to find an equilibrium level. "This balancing act needed to be compatible with Part Two of the RMA; in that the minimum river levels should provide for the social and economic well-being of Oroua's inhabitants while protecting the environment" (Forsythe, pers. comm., 1996). MWRC considered what would be a reasonable return period for the farmers, as "they [the farmers] needed security that their abstractions were not going to be suspended every year" (Forsythe, pers. comm., 1996). Another factor influencing MWRC's assessment of a minimum flow was anecdotal evidence suggesting that fish die when river levels decreased below 700 litres per second (MWRC, 1995, 11).

MfE and MAF made submissions on the necessity of providing minimum flow levels, but did not advocate what that limit should be. Both MfE and MAF emphasised that providing a minimum flow would eliminate any uncertainty about the resource. The uncertainty relates to the River's ability to sustain water extraction for human use without incurring significant adverse effects. DoC however, submitted information regarding the resource and advocated a minimum flow substantially higher than the one adopted by the MWRC. This was due to DoC being an advocate for conservation, and not for development. MWRC finally settled for a minimum flow of 1000 litres per second.

### **User Categories**

The Oroua Regional Plan has categorised the consumers of the Oroua's water resource and has used these categories to determine their appropriate right to water during

periods of low flow. MWRC have assessed the benefit accruing to users and have developed an hierarchical user order, relative to the adverse effects created by the volume of water consumed.

Rural consumers who abstract only small quantities of water from the Oroua River (defined as less than 15 cubic metres per day) have free access to the resource. They are deemed to have little impact on the river flow and therefore the benefit associated with their use is assumed to exceed any environmental cost of extraction. The extraction of water by the Manawatu District Council (MDC) for the supply of Feilding's reticulated water and sewage requirements has two restrictions, dependent on the Oroua River flow and month of the year. MDC have a permit to abstract up to 9,000 cubic metres per day, with no restriction on the rate of withdrawal, during periods of normal flow (that being greater than 1,950 litres per second). The first restriction of water intake occurs when certain low river levels are breached for each of the summer months (November to April). In such circumstances the MDC cannot abstract any more than 7,000 cubic metres per day, and at a rate of less than 100 litres per second. The second phase of restrictions are implemented when the Oroua River flow decreases below 1,100 litres per second. No changes are made to the volume of water which can be abstracted, although its rate of abstraction must not exceed 85 litres per second.

Irrigation of rural land involves large quantities of water. During periods of low flow, the environmental costs to the Oroua River system are deemed to be greater than the economic benefits to land holders. The irrigators, as a category of water users, are unique in that there are several large extractors all utilising the Oroua River for the same purpose, yet deriving different economic benefits. MWRC have used this characteristic to develop a competitive allocation mechanism (for irrigators), in the form of TWRs.

### **The Transferable Water Right Scheme**

The MWRC had initially overlooked the concept of TWRs in the draft proposal of the Oroua Regional Plan. However, submissions made by both MfE and MAF highlighted the benefits of introducing a TWR scheme to the Oroua Catchment. MAF focussed on

the productive potential of the water resource and the ability for one user to purchase rights from another that he or she may not be using. MfE advocated a more holistic approach, encouraging the most efficient use of a limited resource. These submissions influenced the MWRC to develop a TWR mechanism, in accordance with section 136 of the RMA, for the purpose of allocating water to rural irrigators. There were a number of contentious issues to overcome before the TWR scheme was operational. These included: the method of initial allocation, volume controls during periods of low flow, the granting of further permits by MWRC, and conditions of transfer.

### *Allocation of Water Permits*

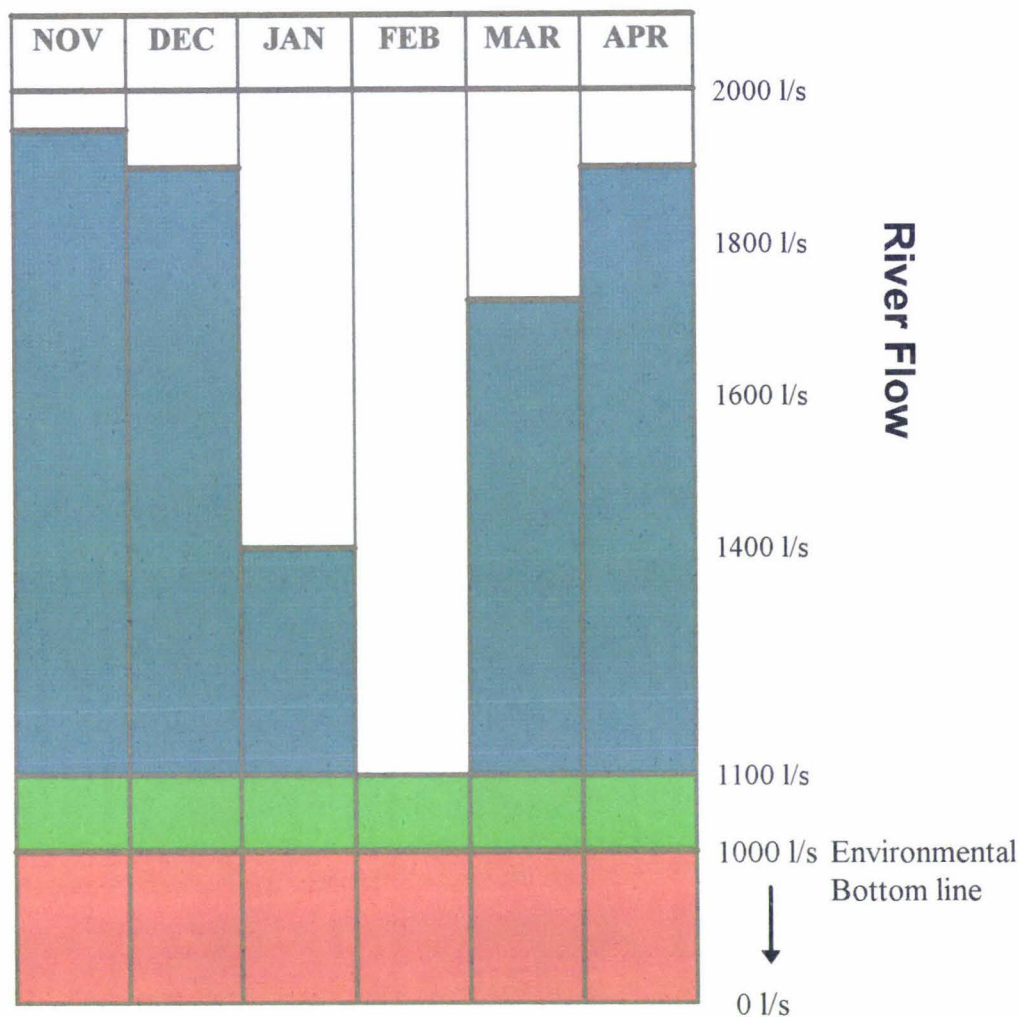
There are two methods of allocating property rights to commodities such as water. They include 'grandfathering' and auction. The auctioning system of allocation is self-explanatory, in that the rights are issued to the highest bidders. The grandfathering or hereditary technique of allocation simply involves the granting of transferable permits to existing abstracters. MWRC did not consider using the auction option to distribute the transferable water permits. "Offering the permits only to the highest bidders would create serious equity problems" (Forsythe, pers. comm., 1996). Under the auctioning system farmers would lose the irrigation premiums attached to the land (pre-emptive rights) already paid for. Investment which builds on existing irrigation infrastructure is also ignored through the auction process.

The property rights to water for irrigation from the Oroua River were grandfathered to existing permit holders (those who held current permits as at 21st April 1994). The *existing permits* are here on referred to as *Transferable Permits*, given their transferable characteristic.

### *Abstraction Conditions*

The Transferable Permit holders have access to water resources during periods of low flow, whereas regular permit holders do not. Regular permits are those granted by the

MWRC after the 21st April 1994. The access to Oroua's water supply by irrigators is illustrated in the diagram below.



#### KEY

- Water abstraction for irrigation is prohibited, regardless of permit type
- Limited Abstractions to 50 l/s, by Transferable Permit holders Only
- Limited Abstractions to 120 l/s, by Transferable Permit holders Only
- No Restrictions to rate of Abstraction, and access to all Permit Holders

**Figure 5.5: Abstraction Rates for the Oroua River During Summer Months.**  
**Source: Adapted from the Oroua Plan (1995).**

Figure 5.5 illustrates the relationship between river flows and the restrictions enforced upon irrigators by the MWRC. Each month has an individual river flow which is defined as low; at these points only those irrigators with transferable permits can abstract water from the Oroua River. No abstractions are permitted to any irrigator once the Oroua River's flow decreases beyond the minimum flow of 1000 litres per second.

These restrictions give the transferable permits their value, in that more economic benefit can be drawn from owning Transferable Permits as opposed to Regular Permits.

### *Transferring Water Permits*

Transferable permits have the capacity to be relocated to other irrigators in the Oroua catchment. They are detached from the land and become personal property rights of the irrigator, that can be exchanged like chattels, subject to several conditions. The conditions of transfer are outlined in Rule 10 of the Oroua Regional Plan (Appendix).

The transfer of irrigation permit replaces the need for a formal resource consent to be lodged with the MWRC. The assessment of effects normally required has already been considered by MWRC prior to the implementation of the Plan. However, the Council must have knowledge of the transfer before it is effective. Written notice is required by the MWRC, in accordance with Rule 10.3 of the Regional Plan. Rule 10.1 stipulates that permits in the Oroua catchment may be transferred to other irrigators in the same catchment.

The Regional Council facilitates the transfer of water permits, between irrigators, by providing the regulatory and legal means to do so. However, MWRC have made a decision not to become involved with the intricacies of any transfer, thus allowing the market to work freely. "Council has no business in knowing the actual monetary exchange or economic value of any permit, as long as the rules are adhered too" (Forsythe, pers. comm., 1996).

### **The Transferable Water Right Proposal and the Planning Process**

MWRC have developed the Oroua TWR policy to achieve specific planning objectives. The Plan's purpose is to provide a more equitable and efficient management structure to allocate the Oroua River resource, while providing for the natural life supporting capacity of the River. The policy objectives are perfectly consistent with the intentions of the RMA and the definition of sustainable management.

The Council had two management options available to them to implement the Plan. The first option was to maintain the policy of the first come, first served water rights. This was the most traditional method of allocation, and the Council became almost dogmatic in its belief of fixed permits as the only answer. It was not until the first phase of submissions that the Council became aware of the potential to implement the second option: transferable water rights. The Council was flexible in adopting the more contemporary approach to water management, and had access to professionals with knowledge of economic instruments to assist them with their policy development. The costs, benefits and uncertainties of TWRs were all included in their internal assessment. As illustrated in Figure 5.6, this comparative analysis favoured the use of TWRs in the Oroua River.

### **Comparative Analysis of Transferable Water Rights and other Planning Methods**

To comparatively analyse TWRs and first come, first served, the two alternatives are cross tabulated with criteria derived from the literature review. The cross tabulation quantifies characteristics of each process, where subjective weighting's are allocated to each criterion (Figure 5.6). As well as providing a clear and concise indication of the strengths and weaknesses of each process, patterns and trends that emerge from this evaluation are crucial to reaching substantive conclusions on this case study.

#### *Evaluation Criterion*

- *Performance* - The success of each method in achieving policy objectives, and uncertainty associated with their use. Specifically with TWRs, there is the potential to increase economic productivity without any further abstraction of water.
- *Efficiency* - The costs of administration, monitoring, enforcement, and compliance associated with each method. And the ease of access in using the methods.
- *Institutional constraints* - The impact of the local government context and planning priorities on the success of each method.

- *Legal constraints* - The probability of property law complications, and the likelihood of Planning Tribunal hearings.
- *Indirect Effects* - Effects that are unrelated to the functioning and intent of the methods, yet impact on the environment as a result of implementing the methods. In this case, the impact on other users (such as recreational) are assessed.

EVALUATION CRITERIA	TWR Market Mechanism	Fixed Quantified Permits
<b>Performance</b>		
Potential for success	HIGH	AVERAGE
Environmental certainty	HIGH	AVERAGE
Productive improvement potential	HIGH	LOW
<b>Efficiency</b>		
Development costs	HIGH	MEDIUM
Administration costs	MEDIUM	MEDIUM
Enforcement costs	MEDIUM	MEDIUM
Compliance costs	LOW	MEDIUM
User acceptability	HIGH	MEDIUM
Simplicity	MEDIUM	HIGH
<b>Institutional Constraints</b>		
Political acceptability	HIGH	MEDIUM
Opportunity cost	LOW	HIGH
<b>Legal Constraints</b>		
Property law complications	LOW	LOW
Planning hearings	LOW	LOW
<b>Indirect effects</b>		
acceptability of other resource users	HIGH	MEDIUM

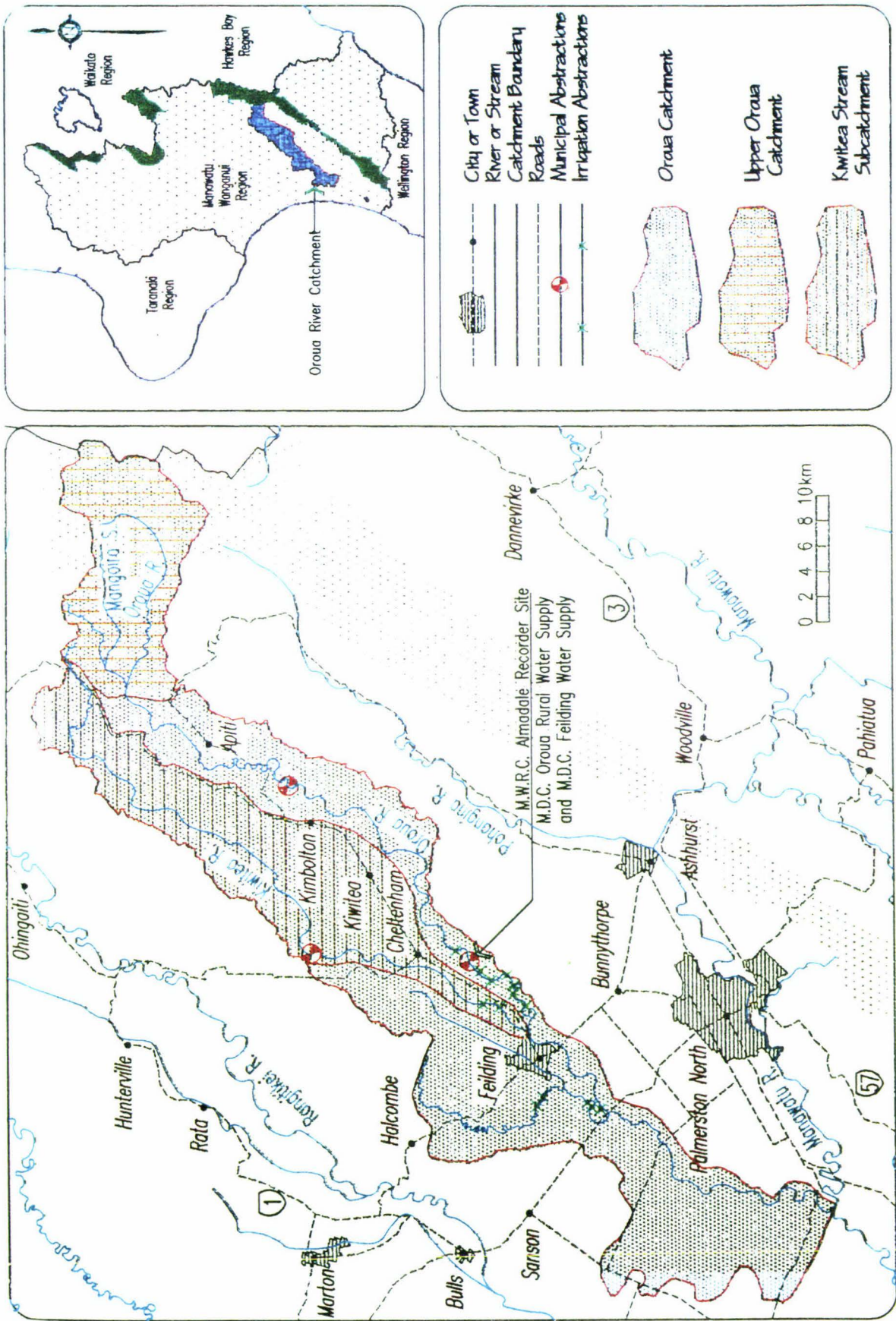
#### KEY

Red	>	Negative weighting
Green	>	Positive weighting
Black	>	Neutral weighting

**Figure 5.6: Comparative Analysis of TWRs and other Planning Methods**

## **Case Study Evaluation**

The evaluation procedure demonstrates that TWRs is the most appropriate tool to meet the planning objectives set in the Oroua Regional Plan. The TWR management structure ensures that water abstractions are efficient, flexible and equitable, despite there being no water right transactions to date. These goals have been achieved by operating the water allocation within environmental bottom-lines in the form of minimum flows.



**Figure 5.7: Oroua River Catchment and Location of Rural Abstractors, Source: Oroua Catchment Water Allocation and River Flows Regional Plan, Manawatu/Wanganui Regional Council, 1995, 10**

## CASE STUDY CONCLUSIONS

The three case studies provide insight into how transferable planning mechanisms can be implemented in New Zealand's RMA environment. The following conclusions have been drawn from information gathered regarding both rural based TTRs and TWRs.

### Implementing Transferable Title Rights In New Zealand

The investigation of TTRs on the rural-urban fringe of New Zealand suggests that it is not necessary to implement transferable rights in the same format as the United States (ie., TDRs). This is due to the differing legal, constitutional and statutory environments of the two nations. These differences manifest themselves through property rights; in the United States, property owners have development rights, whereas New Zealand property owners only have the *privilege* to develop and subdivide, in accordance with council ordinances.

Territorial authorities are able to control the subdivision of land through provisions in the RMA. This includes compliance with section 11 (restrictions on subdivision of land), section 139 (certificate of compliance), and Part X (requirements for subdivision provisions). The RMA defines subdivision of land as "the division of an allotment by (a) an application to the land registrar for the issue of a separate certificate of title for any part of the allotment" (section 218). According to this definition, the owners of several existing titles in one land-holding have the same rights, to sell their titles, as those who have been given subdivision consent by a council. However, the RMA's provisions give councils the capacity to prevent new title owners from developing each title, including the construction of dwellings. For example, a title's development potential may be restricted if it adversely affects: landscapes of outstanding natural features (section 6(b)), the preservation of natural character of the coastal environment (section 6 (a)), the maintenance and enhancement of amenity values (section 7(c)), the maintenance and enhancement of the quality of the environment (section 7(f)). Given these provisions, the council must prove the potential for adverse effects resulting from the development, or

the landowner can challenge the provisions or demand compensation under section 85 of the Act.

Under the premise that all development rights are at the discretion of the council, there is no need to provide alternative mechanisms to transfer them. However, where development of titles do not create significant adverse effects, and political pressures demand a less restrictive approach, removing a title's development potential may not be appropriate. In these circumstances TTRs provide a viable solution.

TTRs are a method of facilitating the amalgamation of individual titles in exchange for development of a higher density elsewhere in the district. Such TTR schemes are not conducive to the control of all development-related externalities. There is a prerequisite set of conditions and circumstances that must be fulfilled before any TTR programme is seriously considered. These conditions include legal property arrangements, characteristics of the receiving district, and the resource at risk from development. The preservation district must be identified on the grounds of a need to accommodate resources or characteristics that are of high community value. Within the preservation district there must be real development pressure on resources and a public will to protect them. Rodney and Franklin District Councils have addressed the reality of externalities by considering the costs to society of retaining the status quo (or the *do nothing* option). In both case studies, the planners suggested that continued fragmentation of the countryside creates serious adverse effects on the landscape's rural character. It also impacts on the diversity of land use and economic processes within the district. However, fragmentation per se does not create adverse effects, it is the *consequences* of fragmentation that can be problematic. Under such circumstances, the adverse effects can only be avoided by amalgamating titles, or preventing subdivision in the first place. TTRs are a viable option if fragmentation ensues multiple title ownership.

The most important feature determining the success of a TTR programme appears to be the demand for higher density development. Without this demand there is, by definition, no market for title rights. Local authorities have the capacity to influence developers' demand for title rights. Rodney District Council selected its receiving district to be

located around existing urban growth nodes, on the assumption that the growth will stimulate demand for transferable titles. However, as the Franklin case highlighted, it is important that growth of these settlements is not dependent upon the success of an untried economic instrument. For a free TTR market to operate effectively, the receiving district must attract both higher demand for development and higher title prices. This point is illustrated in figure 5.8, remembering that price is a function of demand and supply.

		<i>Preservation District Demand</i>	
		High	Low
<i>Receiving District Demand</i>	High	X	✓
	Low	X	X

**Figure 5.8: The Probable Impact of Demand Differentials on TTR Schemes**

The diagram highlights a major logistical problem associated with voluntary TTR schemes, such as those proposed by Rodney and Franklin District Councils. For example, if title holders can secure higher values from selling the land rather than transferring titles, then this will be the most likely outcome. It is imperative that an economic incentive exists in the form of a positive differential to facilitate a TTR transaction. However, it is difficult to visualise how a council can redirect development while maintaining a positive price differential in favour of the receiving locations without restricting the development on the titles in the preservation district. This is the most significant element of uncertainty associated with TTR proposals. For example, lifestyle seekers may pay more to reside in a location away from the development of receiving districts. This urgency to purchase 'remote' titles would increase the rate of fragmentation. This is represented by the bottom-left sector in Figure 5.8, and is a likely scenario of a voluntary TTR scheme.

The American experience suggests that the mandatory acquisition of development rights, for any development in a receiving area, is the best stimulant for demand (Wood, pers. comm., 1996). In the New Zealand context this policy option may create further equity problems and financial burdens on those already residing in these areas. For instance, development premiums already attached to land in the receiving area with subdivision potential are lost. Under a mandatory system, these landowners would have to endure further economic costs for the purchase of development rights. Those residing in the receiving districts may also have to endure social costs resulting from increased density and development.

Analysis of the Franklin and Rodney District Council proposals, highlighted that institutional constraints impinge on the implementation of alternative methods to achieve policy directives. Smaller councils, with inadequate funding and a shortage of specialised planners, are not as capable of investigating alternative options as those with larger resource bases. Often these smaller councils are forced to adopt a more dogmatic and prescriptive planning approach.

### **Implementing Transferable Water Rights in New Zealand**

The concept of TWRs has been debated by academics and planning practitioners for many years, both internationally and in New Zealand. However, it was not until the RMA expressly provided for the use of TWRs that government bodies began to reassess how some water resources were allocated. The provisions for TWRs in the Act removes many of the complications and uncertainty associated with many economic instruments, such as TTRs. This thesis indicates that the success of TWRs remains relatively unknown; although economic theory and opinions of practitioners suggest they have the potential to produce more equitable and efficient allocations. The Oroua Plan does not yet provide evidence of increased efficiency. However, it does provide an excellent example of the conditions required, the planning considerations of implementing a TWR mechanism, and the practicality of doing so.

Transferring water rights is an economic instrument that can assist in the allocation of water resources. However, it is not suitable for all allocation problems and inefficiencies concerning the supply and consumption of water. Akin to the TTR concept, there are certain identified conditions and prerequisites that will contribute to the success of any TWR programme. These conditions include the physical characteristics of the water body and the type of human activities and pressures imposed on the resource. The relationship between the two factors, natural resource and human demands, should be compatible with fundamental market principles. The demand for water must exceed supply if an economic value is to be attributed to a right for water extraction.

TWRs can be more flexible than the regulatory alternatives. The mechanism can be tailored to meet the requirements of many micro-climates or environments, and seasonal fluctuations. For example, they can be easily manipulated to allocate water resources during dry periods where demands cannot be met, while free access remains to all consumers when restrictions do not apply.

The first and most critical process to undertake prior to implementing a TWR plan is an intensive investigation into the water resource itself. It is imperative to quantify the environmental characteristics of the water system. This procedure can be demanding on financial and human resources and must be incorporated into any cost and benefit assessment. The results enable the administrators to construct an ecological framework that can facilitate the allocation of water resources, while avoiding significant adverse environmental effects. Various river flows or lake levels can be identified to correlate with specific restrictions and policy objectives. However, there are two essential levels and flows that have to be quantified. First, an absolute bottom line must be established; this represents the resource's maximum capacity to endure human extraction without significant adverse effect. Secondly, an initial restriction point is required to distinguish between the point of supply surplus and supply deficit (where the extraction of water is governed by the ownership of transferable permits).

Another issue pertinent to the application of TWRs in New Zealand is the quality of water right and how they are distributed. A TWR scheme can only achieve positive

allocation results if the property right is non-attenuated (Randall, 1987). The owner of a water right must be secure in the knowledge that she or he has got exclusive access to that quantity of water. In New Zealand this right is at the discretion of regional councils through resource consents.

Theory suggests there are two options as to how resource administrators allocate the initial water rights to users. Given that each right has the potential to command an economic value, this can be a complex and emotive issue. The first option, to auction the permits, facilitates an efficient solution through competitive bidding. However, this procedure is limited in its capacity to work at local government level in New Zealand, as illustrated in the Omaha project in Auckland (Fenemor, 1993, 5). Councils are by definition non-profit organisation, which can only obtain revenue from services and actual administration costs, in accordance with section 36 of the RMA. An auctioning system would have to be completely transparent to its users and the wider community. The most equitable alternative in the New Zealand context is grandfathering water rights to existing users.

Like other New Zealand TWR proposals, the Oroua Plan is limited to the allocation of agricultural and horticultural irrigation resources. Irrigation supply is ideally suited to the application of transferable property rights. This is illustrated by agricultural and horticultural irrigators using large volumes of water for one process, that can produce differing economic benefits to each individual. Therefore, the individual able to extract the most economic benefit from the water right will be able to outbid his or her competitors. And the revenue generated from the sale of water rights will compensate that person for not having the benefit of that resource. However, in a small rural community such as Oroua, the market for water rights could be affected by social interactions and relationships. This was illustrated by the reluctance of water right holders to aid the productive capacity of one particularly successful landowner.

The focus on irrigation is an outcome of regional councils wanting to simplify the water market and avoid unnecessary political complications. Theory suggests that all uses of water can be included in a TWR scheme, as demonstrated by some United States

schemes. Under such regimes each user group has to negotiate with the other parties to ascertain who gets the most economic benefit from the resource. For example, the use of water for human consumption would yield higher marginal benefits than irrigation, therefore the transfer of rights would benefit society. However, there is a risk that an industry could monopolise the resource through this open market. Conversely, most New Zealand streams and rivers can adequately supply high valued users such as industry and human consumption, thus leaving the lower valued users to compete for the remaining supply of water. It is important that councils do not isolate irrigators as the only viable target group for TWRs. A suitable extension to the concept in New Zealand could involve electricity generators purchasing water rights from other users to secure water, while avoiding political conflict.

## CONCLUSION

This chapter has addressed objective four (in Chapter One), by providing answers and comment on the research questions related to the practical experience of using transferable rights in New Zealand. Each case study was unique in that certain physical, economic and social characteristics are specific to each area. Therefore, the transferable right concept had to be adapted for individual planning objectives. The empirical research focused on this adaptation process and indicated how schemes in New Zealand operate.

Examining New Zealand-based transferable right case studies facilitated the comparison to international literature and practical examples. The many findings derived from this comparative process are essential to informing the research aim. The following chapter concludes the thesis investigation by reflecting on the research aim, and methodology and key findings.

## CHAPTER SIX

### CONCLUSION

This chapter summarises the major findings of the thesis, and the potential for future research into transferable planning mechanisms. The chapter concludes with a reflection on the extent to which the thesis succeeded in meeting the research aim and objectives.

#### SUMMARY OF CONCLUSIONS

Transferable planning mechanisms have the potential to achieve more efficient environmental outcomes, compared to direct intervention, under certain market and physical conditions. This thesis has identified some of these prerequisite conditions, for both transferable development rights and transferable water rights, in the New Zealand context.

To work effectively under the Resource Management Act, TDRs should take the form of TTRs and use legal title rights as the transferable development right. Local councils may have to manipulate demand in the receiving areas, by providing additional services, to create a positive price differential in favour of the receiving area. Councils can also aid market development by using regulatory restrictions in preservation areas, encouraging property owners to use the TTR market, rather than sell the land. Economic instruments are themselves a departure from traditional prescriptive planning methods that have dominated much of local government New Zealand. Councils need to conduct substantive investigations into alternative planning methods, reporting these in Section 32 analyses, to ensure desired environmental outcomes are achieved using the best and most efficient means. This implies that district councils require a wider base of specialised knowledge, personnel and funding, to maximise the prospect of implementing methods (such as TTRs) successfully. Inadequacies during this investigation phase reflect New Zealand's fragmented local government structure rather than the competence of actual councils or their staff.

TWRs are less complicated to implement than TTRs, and have the potential to provide efficient allocation regimes for water resources, especially for high volume, low value uses such as irrigation. There is scope to expand TWRs beyond agricultural irrigation although this would involve rigorous consultation and may prove too costly in research. Prior to implementation of any TWR scheme, the water resource must be comprehensively investigated to establish appropriate physical parameters or bottom-lines.

### **FUTURE RESEARCH POTENTIAL**

There is significant scope for future research into the application of transferable planning mechanisms in New Zealand. Issues influencing the creation of a market are substantial and are spread through several disciplines, including planning and economics. Integrative research that traverses disciplinary boundaries would be useful in providing a more comprehensive understanding of transferable planning mechanisms. For example, the schools of institutional, welfare and environmental economics make substantial contributions in assessing the viability of intervening in the development process to implement transferable planning mechanisms. Part of this research could cover the ability to accurately quantify the benefits and costs of protecting community assets.

Given the infancy of the RMA, and the limited use of TTRs and TWRs in New Zealand, future research would provide the greater information required to fully inform contemporary planning practice. As the thesis findings suggest, collaboration in this area would be of particular value to smaller local authorities who are not sufficiently resourced to undertake or commission exploratory research themselves.

TWRs demand further investigation regarding their theoretical and practical potential to achieve efficient water allocations. This could include an assessment of the economic benefits derived from the implementation of TWRs. TTRs should also be monitored to ascertain how the market mechanism works in practice. Ratios of preserved land should be recorded and compared against other TDR models, nationally and internationally.

Comparisons with Australia may be particularly helpful given the similar constitutional and common law arrangements there. As the commercial property market re-establishes development pressure on heritage sites, further consideration needs to be given to the implementation of urban TDRs under the RMA. Aside from TTRs and TWRs, the potential for other transferable planning mechanisms to be used in New Zealand should be researched. These may include transferable discharge or pollution permits and transferable mining rights.

## **RESEARCH METHODOLOGY**

This thesis adopted an exploratory approach to investigate transferable planning mechanisms. However, it was constrained by the limited progress, New Zealand planners have, made in this area. A literature review provided a conceptual overview of economic instruments, TDRs and TWRs, and New Zealand's resource management regime. Given the exploratory nature of this research, and the absence of New Zealand-based research, it has been necessary to rely on literature covering the American experience.

The case studies were used as a means of linking the literature review with planning practice in New Zealand. These cases provided a link between the theoretical propositions of economic instruments, and the use of TDRs and TWRs in New Zealand. The information employed in the analysis of each case study was almost entirely qualitative. The use of structured interviews with key players in each case was the principal means of gathering information.

## **KEY CONCLUSIONS**

This research has produced several insights into the use of transferable planning mechanisms in New Zealand. It appears that several conditions should be satisfied before a market for transferable planning mechanisms can be successfully created. These conditions are crucial in reducing market uncertainty and have been illustrated in markets for both land development rights and water allocation rights.

The thesis research suggests that transferable development rights in New Zealand's rural environment should not replicate the original American concept. For institutional and legal reasons, the American concept exceeds what is necessary in New Zealand. Whereas, Americans have development rights, New Zealanders only have the privilege to develop. Section 85 of the RMA states that land can only be considered 'taken, or injuriously affected' if local plans render an interest in land incapable of reasonable use. Section 85 goes on to define reasonable use as activities which do not impose significant adverse effects on the environment or individuals. However, the American experience relating to developing successful markets for transferable rights is helpful in guiding New Zealand schemes.

The subdivision of valued landscapes can be prevented through sections 6 (a) and (b), pertaining to matters of national importance, section 11 (the restrictions of subdivision) and Part X of the Act. However, preventing the development of individual titles can become a political issue, regarding the severity of development restrictions. Taking this into consideration, the ideal rural-based TDR format for New Zealand conditions are TTRs, which use legal titles as transferable rights.

TTRs require the same market conditions as TDRs to ensure success. These conditions include a positive demand differential between the receiving and preservation districts, and the amalgamation of preservation titles. The positive differential will secure an economic incentive for each party to negotiate title transfers. This effect may be achieved by manipulating demand in the receiving districts. This positive demand differential will be difficult to achieve given that preservation districts, by definition, will be attractive to some people. However, the council can encourage demand for titles by providing additional infrastructure and social services in receiving areas. The amalgamation of titles in the preservation district will ensure that all development potential associated with transferred titles is removed.

Markets for transferable water rights require that the water resource is limited in supply and has potentially unsustainable demands for abstraction. The transferable permit must

give an exclusive right to its owner. These two characteristics combine to determine the economic value of the water right. The most critical aspect in establishing a TWR scheme (pursuant to section 136 RMA), is the assessment of the water resource's physical capacity to endure abstraction, and quantification of the ecological bottom line.

Water, in a productive sense, is a private economic resource and can be allocated as such. The most efficient approach to rationing limited economic resources is to define property rights, facilitate transfer, allowing the market to dictate economic value. However, in advocating a market-based solution to water-resource allocation, processes must be installed to protect the resource for those operating outside of the market, such as recreational users.

Not all transferable mechanisms are necessarily appropriate as a means of achieving planning objectives, even if market conditions support their application. There could be debate as to whether market *inadequacies* are actually market *failures* contravening good resource management practice. This is particularly relevant to rural subdivision and the implementation of TTRs. For example, internalising the cost of protecting public interests in the development process could be fundamentally wrong. Therefore, the cost of preserving public interests could be borne by the wider community rather than the individual landowner or resource users, through the local authority purchasing the development rights in the preservation district.

The analysis of New Zealand case studies has highlighted the possibility that institutional constraints inhibit the development and use of economic instruments at a local government level. Smaller, often rural, authorities operate on tighter budgets and have limited expertise to adequately evaluate a range of planning methods. In contrast, larger councils may face the same planning problems, but have more specialised staff to investigate the options. Like private enterprise, councils are subject to economies of scale.

## REFLECTIONS ON THE RESEARCH AIM

The thesis examined the generic instrument of 'transferable planning mechanisms', and investigated both TDRs and TWRs. While these notions appear analogous, they are only superficially related. The two concepts are theoretically similar, yet raise very different issues in practice. As a result, it is inappropriate to draw conclusions about one type of right based on empirical evidence from the other. Accordingly, the thesis has reached two distinct sets of conclusions pertaining to TTRs and TWRs. This may have distracted from the continuity of the thesis, but has nevertheless provided insight into the operation of transferable planning mechanisms in New Zealand.

Environmental administrators and planners have yet to realise the full potential of economic instruments in achieving the purpose of the RMA. Transferable planning mechanisms can provide significant advantages in the allocation of resources under certain operating conditions, unattainable by direct regulation. Most of these advantages centre around the efficiency of resource allocation. Defining a property right and developing a market around it ensures that those participating in the market are accountable for the resource's management.

Planning practitioners in New Zealand have been slow to utilise provisions in the RMA sanctioning the use of market mechanisms. In situations where the appropriate market conditions are apparent, such market-based planning tools are capable of achieving sustainable objectives in a manner that limits public expenditure. It is the responsibility of planners to understand market-based tools and use them in appropriate circumstances.

[P]roperty rights questions emerge in most cases where externalities exist and the land [resource] use planners' main task is to devise a composite allocation of property rights (use rights) and fiscal measures to deal with perceived problems (McDonald, 1989, 329).

**APPENDIX**

<b>Rule 22.8: Pertaining To Franklin's Transferable Title Right Scheme.....</b>	<b>109</b>
<b>Rules Pertaining To Rodney's Transferable Title Rights Scheme.....</b>	<b>111</b>
<b>Rule 10: Pertaining to the Transfer of Water Rights.....</b>	<b>115</b>

**RULE 22.8: PERTAINING TO FRANKLIN'S TRANSFERABLE TITLE RIGHTS SCHEME**

**SOURCE: PROPOSED FRANKLIN DISTRICT PLAN, PART 22, PAGES 16-17.**

**A: Performance Standards**

*A1: Performance Standards For Donor Area*

- 1 The "title right/s" eligible for transfer must be nominated on a plan which shows all the existing titles and any lots approved prior to notification of this plan which have not proceeded to the issue of titles.
- 2 Every "title right" eligible for transfer shall be either an existing title which complies as a "rural lot" or a "lot" which has been given consent provided that where both titles and "lots" exist at the notification of this plan, then only the "lots" of the subdivision approval are eligible, provided further that where the property has a subdivision approval which affects only part of the property then those titles that are not affected by that subdivision approval are also eligible.
- 3 The "title right" eligible for transfer must comply with the following:
  - be located in the areas identified on map X (the donor area) [figure 5.2]
  - be transferred to the areas identified on map y (the recipient area) [figure 5.2]
  - be less than 8 hectares in area; and must not be a title that has resulted from the application of this rule.
- 4 For every title created in the recipient area pursuant to this rule there shall be a corresponding reduction in the number of titles or "lots" within the donor property. In the donor area the titles or "lots" are required to be amalgamated or rescinded in such a way that new titles could not be issued in terms of the Resource Management Act 1991.

*A2: Performance Standards For Recipient Area*

- 1 Compliance with rule 22.1.5 [general performance standards]
- 2 For every title eligible for transfer from the donor area one title can be created in the recipient area.

- 3 Power and telephone shall be provided underground to each lot except where the appropriate authority advises in writing that this is not practical.

**B Assessment Criteria**

**B1 Donor Area**

- 1 The assessment criteria set out in Rule 22.1.6 [general assessment criteria]
- 2 The extent to which the property is left with a title structure that is more suitable for sustainable productive farming purposes than was previously the case.

**B2 Recipient Area**

- 1 The assessment criteria set out in Rule 22.1.6
- 2 The size and shape of lots and the intensity of the subdivision pattern within the site and the locality. In this regard lot sizes shall generally be a minimum area of 8,000 square metres (net), but sizes may be reduced to a minimum area of 4,000 square metres where for every lot within the subdivision less than 8,000 square metres there is a lot of at least 2 hectares.
- 3 The extent to which the property has features which are worthy of protection. Where the native bush, other biological importance of landscape features exist within the subdivision, the Council may require that such features are physically and legally protected in perpetuity. To this effect an instrument such as a Memorandum of Encumbrance shall be registered on the title/s. This to be done by the Council's solicitors at the applicants expense.
- 4 The extent to which the subdivision, or likely subsequent development, may compromise any archaeological site or other significant heritage feature.

## **RULES PERTAINING TO RODNEY'S TRANSFERABLE TITLE RIGHTS SCHEME**

**SOURCE: RODNEY DISTRICT PLAN : PROPOSED PLAN CHANGE NUMBER 55, PAGES 84-86.**

### **11.1.5 Minimum site areas and numbers of sites**

The minimum areas for new sites, and the numbers of sites permitted, are given in the table below [overleaf] which is to be interpreted as follows:

- (i) The parent site is the site in existence on 12 October 1995
- (ii) The minimum average site size applies to all country side living sites on the plan of subdivision. No site may be smaller than 1 hectare and for every site on the plan smaller than the average size specified, there shall be another site larger than the average size.
- (iii) The column listing the maximum number of sites permitted relates to a subdivision where no Transferable Title Rights have been acquired.
- (iv) Where Transferable Title Rights have been acquired, the number of sites on the plan of subdivision may be increased by the number shown in the columns in the right hand side of the [following] table, but in no case may any site for countryside living have an area of less than 1 hectare.
- (v) The maximum number of Transferable Title Rights that may be used to increase the number of sites in a subdivision of a parent site larger than 21 hectares is 7.

## Standards for the Use of Transferable Title Rights

Parent Lot Size (ha)	<i>Without TTRs</i>		Additional Sites Entitlement when Transferable Title Rights (TTRs) Acquired						
	Minimum Average Site Size	Maximum No. Sites Permitted	1TTR	2TTR	3TTR	4TTR	5TTR	6TTR	7TTR
1	1.5	1							
2	1.5	1							
3	1.5	2	1						
4	1.5	2	2						
5	1.5	3	2						
6	1.75	3	2						
7	1.75	4	2	3					
8	1.75	4	2	4					
9	1.75	5	2	4					
10	2	5	2	4	5				
11	2	5	2	4	5				
12	2	6	2	4	6				
13	2	6	2	4	6	7			
14	2.25	6	2	4	6	8			
15	2.25	6	2	4	6	8	9		
16	2.25	7	2	4	6	8	10		
17	2.25	7	2	4	6	8	10		
18	2.5	7	2	4	6	8	10	11	
19	2.5	7	2	4	6	8	10	11	
20	2.5	8	2	4	6	8	10	12	
21	2.5	8	2	4	6	8	10	12	13
22	2.75	8	2	4	6	8	10	12	14
23	2.75	8	2	4	6	8	10	12	14
24	2.75	8	2	4	6	8	10	12	14
25	2.75	9	2	4	6	8	10	12	14
26	2.75	9	2	4	6	8	10	12	14
27	3	9	2	4	6	8	10	12	14
28	3	9	2	4	6	8	10	12	14
29	3	9	2	4	6	8	10	12	14
30 & Over	3	10	2	4	6	8	10	12	14

### **11.1.6 Titles eligible to be used to gain Transferable Title Rights**

- (i) Every title used to gain an eligible Transferable Title Right shall either be an existing title or a site for which consent has been given, provided that:
  - (a) Where both titles and sites exist at 12 October 1995, then only the sites of the subdivision approval are eligible, and
  - (b) There is no household unit or valid consent to erect a household unit on the title or site.
  - (c) Where the property has a subdivision approval which affects only part of the property then those titles that are not affected by that subdivision approval are also eligible.
- (ii) The title nominated for transfer must be a title to a site that:
  - (a) complies with the general requirements of rule 14.1.
  - (b) Is capable of being developed with a dwelling in accordance with rule 14.1.
  - (c) Is no larger than 20 hectares in area.
  - (d) Is located in a Production, Special Character Nature Conservation Activity Area.

### **11.1.7 Activity areas and Localities in which transferred Title Rights may be utilised**

- (i) The Title Right may be utilised in a subdivision of land in a Countryside Living (Town) Activity Area only.
- (ii) The Title Right may be utilised in one of the two closest areas classified as Countryside Living (Town) Activity Area only, as measured in a straight line on a map.

**11.1.8 Process by which Transferable Title Rights may be utilised**

- (i) The Title(s) eligible for transfer must be nominated on a plan of subdivision which shows all existing titles and any sites approved prior to 12 October 1995 which have not proceeded to the issue of titles.
- (ii) For every title or approved site nominated for transfer there shall be a reduction by one in the number of titles or sites on the plan of subdivision. The reduction shall be achieved by a requirement that the titles or sites are amalgamated or rescinded in such a way that new titles could not be issued in terms of the Resource Management Act 1991.
- (iii) It shall be a condition of approval of the plan of subdivision which is utilising the transferred title that the plan may not be deposited until after the plan of subdivision described at (i) and (ii) above have been deposited.
- (iv) For each eligible transferred title utilised by the subdivider of land in the Countryside Living (Town) Activity Area the plan of subdivision may show one or two additional sites above the maximum number that would normally be allowed (as shown and to the extent shown on the Table above).

**RULE 10: TRANSFERRING WATER PERMITS****SOURCE: OROUA CATCHMENT WATER ALLOCATION AND RIVER FLOWS REGIONAL PLAN**

- 10.1** Where a holder of a water permit abstracts water for the purpose of irrigation, that permit may be transferred in whole or in part to another person for a stated period of time provided:
- 10.1.1** that person also abstracts water for the purpose of irrigation; and
  - 10.1.2** Permits for abstractions from the Oroua River downstream of the Mangoira confluence are transferred to another abstraction point on the main stem of the River downstream of the Mangoira confluence; and
  - 10.1.3** permits for abstraction from the Kiwitea Catchment are transferred to another abstraction point on the Kiwitea Catchment.
- 10.2** Any transfer will only apply during periods of water restriction and shall only be effective for the volume, maximum flow rate, times and duration set out in the notice of transfer and in no case shall exceed the maximum low flow abstractions allowed by the permit.
- 10.3** Written notice of the transfer must be sent to the Council in the form of the Memorandum of Agreement. No transfer is effective until such notice is received by the Council. The notice of transfer may set out a transfer schedule for multiple transfers between two parties within the following 12 month period.

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