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STRATEGIC FLOOD HAZARD MANAGEMENT

- A PLANNING PROCESS -

- CASE STUDY HOROWHENUA -

A thesis presented in fulfilment of
the requirements for the degree of
Master of Regional Planning at Massey University

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ABSTRACT

This thesis uses the strategic planning process as a framework to derive a practical planning process for flood hazard management in the Horowhenua.

The broad goal of the study is 'To Provide a Better Planning Process for Mitigating Flood Hazards in the Study Area of the Horowhenua.'

The strategic planning process is used to develop an action plan for one particular organisation, the Manawatu Wanganui Regional Council, to help mitigate flood hazards in the Horowhenua. However, the principles identified in the process are of use to other organisations and for other geographic areas.

A large part of achieving the broad goal of the study was to increase understanding of the flood hazard problem of the Horowhenua area. A large component of this thesis is therefore, the scanning of the environments relevant to the flood hazard problems. These environments include the physical, institutional and behavioural components of the flood hazard problem. From this scanning 'key issues' which help to further understand the problem are identified. These issues are taken into consideration in an action plan for one organisation. The action plan provides a process whereby the issues and the interrelationships between these issues are identified for consideration in flood hazard management. Planners of the organisation can link into the process, as resources become available, with the knowledge that the information they produce and subsequent action taken will link into an overall process.

Although the thesis attempts to identify all the issues that need to be considered in a flood hazard management planning process, it still acknowledges that there will always be problems and uncertainties such as political and financial constraints limiting the process.

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INTRODUCTION

INTRODUCTION

GENERAL

This thesis uses the strategic planning process to derive a pragmatic planning process for the Manawatu Wanganui Regional Council to undertake flood hazard management in the Horowhenua, and thereby mitigate potential hazards.

MOTIVATION

The prime motivation for this thesis is a result of the authors working involvement in flood hazard mitigation in the Horowhenua area. The author felt that attempts to mitigate flood hazards in the Horowhenua were generally ad hoc, with key organisations responsible for flood hazard management working in isolation, and often departments within these organisations working in isolation. This isolated work resulted in only certain aspects of the problem being considered. There seemed to be a need to 'stand back' and assess the full range of issues influencing the problem and develop a process for dealing with the problem.

Other, more general, motivating forces for the thesis include the recent reorganisation of local government in New Zealand and the redrafting of many diverse resource management laws into one Resource Management Bill. These two activities have resulted in a wide spread analysis and debate of the role and responsibility of local government in New Zealand. These two activities have also offered an increased opportunity to reassess and change the way flood hazard mitigation is dealt with by local government in New Zealand.

Review of local government structures and changing central government policy has resulted in an increasing emphasis on local government responsibility for effective hazard mitigation. Central government's financial assistance to regional government for resource management is increasingly emphasising regional adjustment to achieve sustainable solutions for resource management problems. Central government is directing regions to become self sufficient in dealing with resource management problems as soon as practicable, but is prepared to offer financial assistance to achieve this ends where the total

programme of regional adjustment is beyond the region's ability to pay in the medium term. (Deputy Secretary for the Environment letter 5 September 1990 refer Appendix B)

It is therefore increasingly important that regional government direct their limited financial resources into the most effective long term and sustainable methods to achieve flood hazard mitigation. A planning process which regional government could use to consider the wider range of issues relevant to effective flood hazard mitigation is therefore needed to help make better decisions about investment of resources to achieve flood hazard mitigation.

The Horowhenua area was selected for case study due to the rapid increase in intensive rural land use and associated subdivision and development. Increasing development and investment within floodable areas results in an increasing potential hazard. For this reason, it seemed important to assess how flood hazard mitigation should be dealt with in Horowhenua promptly, before the potential hazard expanded.

OBJECTIVES OF THIS THESIS

The broad goal of this thesis is **'to provide a better planning process for mitigating flood hazards in the study area.'**

To achieve this broad goal the thesis takes a number of steps. These steps can be translated into a series of objectives of the thesis or strategic planning process.

1. To assess the various theoretical frameworks of the planning process and their suitability to form the base of this study.
2. To examine a range of planning literature and approaches to flood hazard management to identify useful information for this study.
3. To enable a better understanding of the problem. Not only the physical flood problem, but also the behavioural and institutional aspects of the problem and the interrelationships between these aspects.

4. To provide a pragmatic action plan for the Manawatu Wanganui Regional Council to help mitigate and manage the flood hazard in the Horowhenua. The action plan should include contingency options, where appropriate, and enable planners to link into the process as resources become available.
5. A more personal objective is to provide an opportunity for the author to 'stand back' from the 'sharp edge' of day-to-day plan implementation and think through a process to help improve the existing planning approach.

OUTLINE OF CHAPTERS

Chapter One

Chapter One examines theoretical frameworks of the planning process and identifies the suitability of the strategic planning process as the main basis for this study. Varying approaches to flood hazard mitigation are reviewed so that this thesis can incorporate the benefits and problems of other approaches. General assumptions and limitations of flood hazard planning are identified.

Chapter Two

Chapter Two begins by explaining the process of the study, it explains the information sources used in the study and introduces the study area, the Horowhenua. The chapter then proceeds to examine the institutional, behavioural and physical environments of flood hazard mitigation identifying 'key issues' within these environments that need to be addressed in an 'action plan' for flood hazard mitigation by the Manawatu Wanganui Regional Council.

Chapter Three

Chapter Three presents the action plan for flood hazard mitigation by the Manawatu Wanganui Regional Council. The plan is presented in a series of steps. These steps are then further elaborated on in a breakdown and explanation of each step.

Chapter Four

Chapter Four discusses the thesis, and the use of the strategic planning process in the thesis to achieve the broad goal of **'providing a better planning process for mitigating flood hazards in the study area of the Horowhenua.'**