

4A. NATURAL HAZARDS

4A.1 Introduction

Inundation (or flooding) is the natural hazard that poses the greatest risk within the district. The Matura Valley in particular is prone to flooding on a regular basis, with major floods having been experienced in 1896, 1913, 1957, 1978, 1987 and 1999. While the 1978 floods were the largest, those of 1987 and 1999 were not much smaller. The 1978 flood is considered to have a return period in the order of 50-60 years while those since are 20-30 year return period floods.

Stopbanking in Gore and Matura has been constructed largely in response to the various floods, as well as requests from the community to improve the system to safely carry larger volumes of water. These flood protection schemes principally protect the central business district, homes and major industry from a flood of the size experienced in 1978. If the floodbanks were ever breached, or a larger flood was to occur overtopping the stopbanks, then the extent of damage that could occur would be severe.

Flooding can be very costly to individuals and businesses, with damage to or total loss of property. In rural areas stock and crops can also be lost. Flooding is also very costly to the wider community with damage to infrastructure (roads, bridges and essential services). In extreme cases there can also be loss of life.

There is no certainty as to when flooding events will occur. When heavy rainfall covers a wide area, flows progressively move downstream, usually with many hours warning as to when the peak flow will occur in a particular area or town. The district however also experiences localised high intensity rainfall events that can create significant flooding over limited areas very quickly and without warning. Often guttering and stormwater systems cannot cope and damage occurs inside affected buildings as a result of the sheer intensity of the rainfall. Surface flooding also can cause damage in such events.

Environment Southland maintains considerable information on past floods, including photographs and reports. The Gore District Council seeks advice from Environment Southland when considering subdivision, building and land use consents within areas that have been identified as potentially susceptible to inundation. When issuing a building consent in areas susceptible to inundation, the Building Act 2004 requires notices to be placed on the title to record the existence of a hazard and absolve the Council of liability in the event of subsequent damage.

The approach adopted by the Gore District Council is to share information it has, with the inclusion of hazard maps in the district plan, avoidance of development of the most hazard prone areas, separation of set-back distances (for example, minimum floor heights in flood-prone areas, or buffer zones along riverbanks).

Areas potentially subject to inundation are shown on the maps included in this section of the district plan. The mapped areas consist of land that has flooded in the past and land that is considered to be capable of flooding in the future. The mapped areas also include land where the likelihood of flooding has been reduced by flood alleviation works such as

stopbanks, river straightening and willow clearing. Much of the Gore township is a prime example.

Several different information sources have been used to identify the areas potentially subject to inundation, including flood photographs, ground levels, flood levels, soil types, geomorphology, aerial photographs and previous flood related mapping. Within the mapped areas, the likelihood of inundation varies considerably, ranging from virtually nil to frequent. While every effort has been made to map the area as accurately as possible, the mapping should be regarded as indicative rather than absolute because of the inherent uncertainties with the underlying information and potential depth and extent of floods greater than those previously experienced.

4A.2 Issues

The significant resource management issues that arise in relation to natural hazards are:

- (1) The public do not have a high level of awareness of natural hazards.
- (2) Inundation by flood waters can jeopardise public safety and create risks to structures and materials within flood plains.

4A.3 Objectives

- (1) Ensure the public is aware of the likelihood and consequences of natural and man-made hazards within the District.
- (2) Minimise the risk to people and property from inundation.

4A.4 Policies

- (1) Promote public awareness of natural and man-made hazards.
- (2) On sites subject to actual or potential flooding, promote:
 - (a) identification and use of elevated ground for those activities that could be adversely affected by flooding; and
 - (b) elevated floor levels within any buildings.
- (3) Control activities and subdivision where this is necessary to avoid the adverse effects of natural and man-made hazards (refer to section 8 Subdivision of Land).
- (4) Within areas shown as "Subject to Actual or Potential Inundation" on the District Plan Maps the Gore District Council will:
 - (a) with the exception of the urban area of Gore shown as lime green on the District Plan maps, refer all resource, subdivision and building consents to Environment Southland for comment prior to determining whether to approve or issue those consents.
 - (b) in respect of any development in the urban area of Gore shown as lime green on the District Plan maps, encourage:

- (i) the adoption of flood proofing techniques or other measures to avoid the adverse effects of flooding on the activity,
 - (ii) measures to avoid the adverse effects of the activity on other property during a flood.
- (c) in respect of areas of Mataura shown as red, lime green or purple on the District Plan maps, require any buildings accommodating people to be built with their floor levels at least 300 mm above the 1978 flood level.
- (d) in respect of areas of the District subject to actual or potential inundation as shown on the District Plan maps, other than those described in (b) and (c) above, require any buildings accommodating people to be built with their floor levels at least 600 mm above the level of past flooding or for sites for which there is no record of past flooding, 600 mm above ground level.
- (e) where any building consent is issued, the Gore District Council will, pursuant to section 73 of the Building Act 2004, notify the Registrar General of Land of that consent together with a project information memorandum identifying the natural hazard concerned.

4A.5 Methods of implementation

- (1) A rule to protect floodways from inappropriate development.
- (2) Education and public awareness of land owners and occupiers as to measures they can take to avoid the adverse effects of flooding and other natural hazards.
- (3) Use of the provisions of the Building Act 2004 to:
 - (a) determine the suitability of erecting structures on existing sites; and
 - (b) record the presence of hazards on sites where new buildings are erected.
- (4) Consultation with Environment Southland.
- (5) The provision to the public, without charge, of all information held by Council about natural and other hazards.

4A.6 Principal reasons

- (1) To increase public awareness and protect people and property from the adverse effects of natural and man-made hazards.

4A.7 Anticipated environmental results

- (1) Public knowledge of natural and man-made hazards and safety is enhanced.
- (2) Damage to buildings and property from hazard events is reduced over time.

4A.8 Monitoring

- (1) The nature, type and location of natural hazards that may be identified from time to time.

4A.9 Rules

4A.9.1 Natural hazards within defined floodways

Within areas shown as “Mataura River Floodway” on the Planning Maps and not classed as riverbed:

- (1) the erection or alteration of any structure;
- (2) storage of hazardous substances;
- (3) farm quarries and earthworks;
- (4) subdivision;
- (5) forestry and shelter belts;
- (6) storage of floatables;
- (7) permanent fences;

is a restricted discretionary activity.

The matters over which Council shall exercise its discretion are the adverse effects of natural hazards on or by the proposed activity.

Note: Within areas of actual or potential inundation Policy 4A.4(4) applies.

4A.9.2 Information to accompany resource consent applications

In addition to all matters referred to in Section 1.3 in this District Plan, an application for a resource consent under this section shall contain:

- (1) Reasons for the proposed activity and alternative sites that could be used.
- (2) The nature of the proposed activity, any effects it will have on inundation of the land and that inundation of the land will have on the activity.
- (3) A record of consultation undertaken with Environment Southland.
- (4) A description of the measures proposed to be taken to avoid, remedy or mitigate any adverse effects.

Where a subdivision is proposed refer also to section 8.