



WANGANUI DISTRICT COUNCIL DISTRICT PLAN REVIEW

Phase 2: Residential

Proposed Plan Change 25 Natural Hazards

1 November 2012

T7 Recognition and Reduction of

Hazard Potential

Wanganui District is affected by a number of natural hazards. Parts of the urban area are particularly prone to flooding, while the coast and hill country are affected by land instability and erosion. The District is also dissected by fault lines and is vulnerable to sea level rise and tsunami. The natural hazards occurring within the District have an impact on current and future development. They can cause loss of human life and significant damage to private property, roads and other District assets. They can also cause damage to the natural environment.

In addition to natural events, hazards are associated with hazardous facilities, ie the storage, use and transportation of hazardous substances. These facilities are commonly found in both the rural and urban parts of the District. Hazardous substances, like agricultural sprays, industrial chemicals or fuel, have properties which are, or when in contact with air or water are, potentially flammable or explosive, and toxic. If hazardous facilities are not located appropriately or managed properly, the accidental release of, or loss of control of, hazardous substances can cause short or long term damage to human health and contamination of land, water, air, or damage to ecosystems.

It is recognised that while a hazard may be present, the hazard potential is only realised when there are land use activities, buildings or structures and important natural values in the vicinity of the hazard. It is not possible to eliminate hazards, but it is possible to manage the location, design and operation of land use activities and hazardous facilities to avoid, remedy or mitigate the potential adverse effects of hazards on human life, property and the environment.

The Resource Management Act requires both the Regional and the District Councils to share responsibility for the natural hazards of

flooding, subsidence, and seismic, volcanic and tsunami hazards; and for hazardous substances. The Regional Policy Statement further defines the appropriate management responsibilities of local authorities for natural hazards and hazardous substances

124 Clarification and Coordination of Monitoring Responsibilities

Both the Manawatu-Wanganui Regional Council and the Wanganui District Council have monitoring responsibilities under the Resource Management Act 1991. Considerable overlap could occur in the monitoring of resources in the rural parts of the district, the coast and natural hazard* features.

135 Identification and Recognition of Natural Hazard Potential

The Wanganui District is affected by a number of *natural hazards**. The most significant ones are flooding, storms, tsunami, erosion and earthquakes. Knowledge of the location and characteristics of *natural hazards** and their impacts on surrounding *development** and the *environment** is far from comprehensive.

The known major areas of concern include the following:

- a. The Whanganui River has a history of flooding in the urban area and the middle-reaches. Flooding has also occurred in the Matarawa Catchment, affecting Wanganui East and the upper valleys of that catchment. The Whangaehu River, along the south eastern boundary* of the district, also has a history of flooding.
- b. Erosion is a widespread problem in the hill country. There are frequent wash-outs, landslips and subsidence after periods of heavy rain.
- c. Areas of hillside instability within the urban area of Wanganui, particularly the hillside north of the Bastia Tower (above Turoa Road and below Mount View Road) and the hillside opposite the Whanganui City Bridge, below Hipango Terrace.
- d. The potential for coastal erosion in some coastal areas is severe. At Mowhanau, the cliffs have been subject to significant erosion and at the Coastal Residential Zone north of Castlecliff, the

cliffs are predicted to erode by 18 m before reaching equilibrium.

- e. Areas of river bank erosion are found along both banks of the Whanganui River, causing loss or damage to private property, network utilities* and public assets like roads.
- f. Tsunami is a significant risk to the Wanganui urban area.
- g. Several faults including Nukumaru and Upokongaro have been mapped along the marine terraces between Wanganui and Hawera. Parts of the Wanganui urban area adjacent to the river could be affected by soil liquefaction.
- h. Sand dune inundation in the Castlecliff and South Beach area.
- i. The potential for loss of land due to a sea level rise resulting from global warming.

136 Reduction of Natural Hazard Potential

1. It is important to distinguish between the hazard associated with natural events, and the risk they pose. Hazard is principally defined by the characteristics of the physical event, eg groundshaking associated with earthquakes. The risk is defined by the probability of occurrence combined with the potential effects* of that occurrence.

It is not possible to control the occurrence of natural hazards*, however, it is possible to reduce the hazard potential to protect human life, property and the environment*.

To reduce hazard potential, the following matters need to be addressed:

- a. The location and operation of new land use activities* in areas affected by natural hazards*.
- b. Protection of existing developments* in high risk areas.
- 2. Coordinate actions between the Manawatu-Wanganui Regional Council and Wanganui District Council giving effect* to the provisions of the Regional Policy Statement for Manawatu-Wanganui:

a. Flooding – It is recognised that *development** can exacerbate the risk to life and property from flooding. Responsibility for managing this risk falls on both the Wanganui District Council and Manawatu-Wanganui Regional Council.

b. Accelerated soil erosion and land instability – This is primarily a regional council responsibility but the District Council has jurisdiction when this may affect structures or the safety of people.

Land instability in the Old Town area

The Old Town is an area of inherent land instability, with an underlay of unconsolidated river deposits. The potential for severe ground shaking accompanying earthquakes is high, leading to collapse of heritage *buildings** and items, particularly those that are constructed of masonry, with damage to heritage areas.

Variety of Natural Hazards

The Wanganui District is affected by a number of natural hazards*. The most significant ones are flooding, storms, tsunami, erosion and earthquakes. Knowledge of the location and characteristics of natural hazards* and their impacts on surrounding development *and the environment* is far from comprehensive. This along with lack of public awareness hinders the avoidance and mitigation of those hazards.

Inappropriate land in areas at risk of Natural Hazards

Inappropriate land use and occupation of areas at risk from earthquake, flooding, ponding hillside instability can cause unnecessary risks for people and property

O16 Safe Rural and Urban Development Rural and Urban Development That Can Meet an Acceptable Level of Safety

People, communities and the environment are to be protected from unacceptable risks of damage or loss associated with the occurrence of natural hazards and the location, design and

operation of hazardous facilities.

O37 Informed community of Natural Hazard risks

A community informed about the potential risks of natural hazards to people and property in the Wanganui District

O38 Avoiding Natural Hazards

The risks of natural hazards through inappropriate subdivision and development are avoided or mitigated whilst minimising adverse effects on natural, cultural and ecological values.

P69 Community Awareness of Hazards Promote better community knowledge and awareness of risks associated with natural hazards and hazardous facilities

A fundamental requirement of risk management is knowledge about the location and impact of natural hazards and hazardous facilities on people, communities and the environment, and awareness about the degree of risk present.

Traditionally, there is reluctance to identify and recognise hazards as development constraints. This is due to a lack of, or inadequate, knowledge and information, and concern that the identification of hazards can alarm people and reduce the value of properties. However, not recognising the presence of hazards can also lead to increased risks of environmental damage, property damage or loss of life.

Current information about hazards and associated risks is limited and not readily available. Work will be required to extend, update and continuously monitor and review the information available. While it may not be possible to provide definitive or predictive information about hazards and their associated risks, the availability of information should be regarded as a trigger mechanism, or a warning system, for potential land owners and

developers.

This policy represents a long term, indirect approach to risk management. It requires resources to be devoted to information gathering and establishing links with the community. There are existing mechanisms which can be tapped into for implementation, eg civil defence activities, use of Project Information Memoranda and Land Information Memoranda etc.

The use of cleaner and safer production guidelines will complement District Plan conditions and terms.

The guidelines will be voluntary and self-regulating. They will be particularly useful for small industrial or commercial operators or home occupations involving the use of hazardous substances.

The approach is also consistent with the requirements of section 35 of the Resource Management Act 1991.

P68 Promote better understanding of natural hazards affecting the
Old Town and ensure development can meet acceptable
standards of safety to protect the life of people

The Old Town has an underlay of unconsolidated material. There are concerns about the structural stability of heritage *buildings**. There may be other risks associated with *natural hazards**.

Very high costs may be incurred if *buildings** and *structures** are to be strengthened to achieve standards of structural stability which can withstand earthquakes of high magnitudes and associated ground shaking or potential damage from other *natural hazards**.

This *policy** recognises the need for better information to more accurately define the nature and magnitude of the problem. It also targets the main concern, which is the safety of people.

P70 Recognise natural hazards as development constraints and

71

control new developments in identified hazard-prone areas

It is not possible to control the occurrence of *natural hazards**, but it is possible to minimise damage or loss to the *environment**, people and property caused by these events by taking appropriate precautions and preventive measures.

-

A fundamental precaution is ensuring that the location of new activities can meet adequate safety standards. For example, the location of new dwellings within an area of active coastal or river erosion should be avoided. The location and design of dwellings within flood-prone areas need to be carefully managed to ensure that there is adequate protection against flooding.

_

The location and design of new developments* can increase or decrease the hazard potential. For example, clearance of vegetation cover or extensive excavations on inherently unstable slopes can lead to accelerated soil erosion and slumping, causing problems off-site. Such problems should be avoided, remedied or mitigated, eg revegetation of slopes, or the use of engineering solutions, like slope stabilisation work.

_

It is not intended to seek blanket restrictions on new developments*. However, it is considered necessary and appropriate to identify hazard-prone areas and set conditions and terms to ensure that new developments*, including subdivision*, can meet adequate safety standards and are not likely to increase hazard potential both on site* and in the surrounding areas.

P71 Identify the 50 year and 100 year flood lines

In the vicinity of Kowhai Park and extending along Anzac Parade, 100 houses are at risk from 50-year floods. There are concerns that if flooding in the Whanganui River catchment coincides with flooding in the Matarawa catchment, the affected area could be much more extensive and the number of houses affected could be significantly higher.

Further investigations have been initiated to determine more

accurately flood levels at different locations on both sides of the Whanganui River for different flood events.

_

The Building Act 1991 only provides for protection up to a 50-year flood event. Due to the high concentration of population and high cost of public and private investment in the urban area, a precautionary approach is considered necessary and justified.

P72 Ensure the location, design and management of all new hazardous facilities can meet identified safety standards

Facilities or activities involving hazardous substances* may cause adverse environmental* effects when the substances are not adequately controlled and escape into the environment*. Such releases, whether accidental or brought about by poor management practices, may cause environmental* contamination and damage, and endanger human health, and cause damage to or loss of property.

To avoid, remedy and mitigate potential adverse *environmental** effects, these facilities and activities need to be located appropriately and managed correctly. The site design, layout and operational management procedures can greatly affect the risks to people and the *environment** from *hazardous facilities**.

Due to the high risks and seriousness of potential damage to human life and the *environment**, specific controls relating to the location, design and management of *hazardous facilities** are considered necessary and appropriate. Such controls are considered effective in directly influencing the nature and scale of adverse effects and the level of risk presented by *hazardous facilities**.

P112 Promote improved understanding of Natural Hazards

Promote improved understanding of natural hazards as development constraints and better knowledge and awareness of the risks to people and property in the Wanganui district.

P113 Protection from Natural Hazards

Avoid or minimise risk of loss of life or injury or environmental damage due to use or development in hazard prone areas.

P114 Natural Hazard precautionary approach

Adopt a precautionary approach in relation to use or development affected by potential natural hazards, especially where hazards are not well understood or the effects of natural processes are difficult to assess or where the effect of activities on natural hazards are not well understood.

P115 Contaminated soils

Ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make land safe for human use.

P116 Flood hazards

In relation to flood hazards, avoid subdivision and sensitive or inappropriate new development in areas identified as being inundated by a 1 in 200 year (0.5% AEP) flood event unless flood hazard avoidance or mitigation is achieved.

P117 Floodwaters

In designing earthworks or roadworks any adverse effects of diverting floodwaters should be avoided, remedied or mitigated.

P118 Geotechnical report

In assessing resource consents Council will require confirmation, including as appropriate the preparation of a geotechnical report, as to the suitability of the site for use or development and that the effects of the hazard shall be avoided, remedied, mitigated.

P119 Land instability

In relation to areas prone to land instability, avoid sub-division and development where risks to people and property from the effects of the hazard are identified as high on the planning maps, and require appropriate mitigation measures where risk is identified as

moderate.

M189 Develop a database and <u>hazard</u> register of known natural hazards, known contaminated sites, and hazardous facilities in the District in consultation with relevant agencies particularly the Manawatu Wanganui Regional Council and affected land owners

Develop a database and register of known natural hazards, known contaminated sites, and hazardous facilities in the District in consultation with relevant agencies particularly the Manawatu Wanganui Regional Council and affected land owners

- M190 Identify known hazard-prone areas on District Plan Maps.
- M191 Support, initiate and carry out investigations or studies of known or potential hazards in the District to more accurately establish risks and impacts on people, communities and the environment.
- M192 Liaise with land owners in known and potential hazard-prone areas and develop appropriate mitigation measures and approaches to monitor the situation.

Liaise with land owners in known and potential hazard-prone areas and develop appropriate mitigation measures and approaches to monitor the situation.

M193 Publicise and encourage the use of Project Information Memoranda and Land Information Memoranda.

Publicise and encourage the use of Project Information Memoranda and Land Information Memoranda.

M201 Carry out public awareness programmes to promote Raise public knowledge and awareness and increase community preparedness.

Carry out public awareness programmes to promote public knowledge and awareness <u>of natural hazards</u> and increase community preparedness.

M202 Identify hazard-prone areas on District Plan Maps.

Continue to undertake research sufficient to enable identification of significant hazard-prone areas on District Plan Maps.

M203 Identify on District Planning Maps a Hillside Protection Overlay Zone.

Implement a programme of research to detail the extent of hillside stability hazard in priority order and then Identify hazard prone areas on District Planning Maps as Hillside Protection Overlay.

M204 Develop appropriate conditions and terms for resource consents for subdivision and the location, design and nature of activities within the identified areas.

M205 Identify hazard risk on the appropriate certificates of title at the time of building consent through the District Land Registrar.

Identify hazard risk on the appropriate certificates of title at the time of building consent through the District Land Registrar.

M206 Identify where sSite investigations and risk assessments are required

Continue to refine and lidentify the circumstances where site investigations and risk assessments are required to demonstrate that the any proposed development can meet adequate safety standards and is not likely to increase risks off-site, through the Land Information Memoranda process.

M207 Monitor and assess the cumulative effects of development and degree of risk in identified hazard-prone areas.

Monitor and assess the cumulative effects of development and degree of risk in identified hazard-prone areas.

M208 Request hazard information at the time of subdivision.

M209 Identify and manage sand dune inundation in the Castlecliff

Coastal area through the Castlecliff Coastal Reserve

Management Plan.

Identify and manage sand dune inundation in the Castlecliff Coastal area through the Castlecliff Coastal Reserve Management Plan.

- M210 Notify the Manawatu-Wanganui Regional Council as an affected party if there is any application to subdivide in hazard prone areas.
- M214 Identify lines on District Plan Maps which show 50-year and 100-year flood extents where this information is available.
- M215 Develop appropriate conditions and terms for resource consents for subdivision and the location, design and nature of activities within the areas identified by a 50-year flood event.
- M216 Identify the circumstances where site investigations and risk assessments are required to demonstrate that the proposed development can meet adequate safety standards and is not likely to increase risks off-site.
- M217 Monitor and assess the cumulative effects of development and degree of risk in the identified areas.

Z15 Hillside Protection Overlay **Zone**

This section contains the rules that apply to activities in the Hillside Protection Overlay Zone, which covers areas of land instability within the urban area of Wanganui. There are two "Hillside Protection Overlays Zones" in the city. The largest covers a significant part of the hillside north of the Bastia Tower, above Turoa Road and below Mount View Road (refer to Planning Map U16). The second area of Hillside Protection Zone is a smaller area of hillside opposite the Whanganui River City Bridge, below Hipango Terrace (refer to Planning Map U22).

Investigation of the extent of the land within the Wanganui District at risk of land slip has identified a list of areas which are priorities for further study. These areas will be examined in priority order to identify the extent of land with a very high risk of slope instability on which no further development should be permitted and those areas with a moderate to high risk of slope instability where proposals for further development should be accompanied by site specific geotechnical reports and recommendation for appropriate mitigation measures. These hazard prone areas will be incorporated into the Hillside Protection Overlay as investigations are completed.

Within the Hillside Protection Overlay Zones, instability and damage may occur from natural erosion processes or from activities which are incompatible with the soft rock of these escarpments. These erosive processes may lead to slips and consequent loss of property and landscape.

The purpose of the Hillside Protection <u>Overlay</u> Zone is to recognise its hazardous characteristics and ensure that effects from incompatible activities causing or accelerating natural erosion, are avoided.

R184 Permitted Activities

The following are permitted activities in the Hillside Protection Zone Overlay, provided that they also comply with the underlying Residential zone rules:

- a. Reserves and open space.
- b. Sheep farming.

Activities (Rule R23)

- e. b. Soil conservation works, and plantings and removal of pest plant species.
- d. c. Network utilities as provided by General Rule Utilities (Rule R15) which contains some exemptions from the zone rules for network utilities.

Which comply with the-relevant zone rules:

R185	-Noise		
	— Sound emissions shall measured on, or within Residential.		· ·
	7am to 6pm All other times	—50 dBA(L10) —40 dBA(L10)	Lmax: the lower of L95 background sound plus 30 dBA or 70 dBA
	The above noise standa training activities as the		

standards contained in General Rule - Temporary Military Training

These conditions shall be read with and are subject to the provisions of Appendix A4 - Noise. Reason To allow for noise to occur but limited in terms of duration, time of day and decibel level. The standard has been set using the New Zealand Standard for noise. R186 **Light** Any particular artificial lighting system shall not result in increased luminance in excess of 8 lux in the measured ambient level in the vertical plane at the windows of any residential building in the Residential, Rural or Rural Settlement Zones. No light source shall cause glare which may adversely affect the vision of motorists on a road. R187 Vibration No activity shall cause a vibration considered offensive or objectionable. In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall be used apply. R188 Air discharge

Note: There are no District Plan standards for air discharges. Discharges to air are controlled by regional councils. The Wanganui District Council has been authorised by the Manawatu-Wanganui Regional Council to exercise all powers and functions of Enforcement Officers for the purpose of investigating complaints about the discharge of contaminants to air within the boundary of the Wanganui urban area. Persons responsible for causing discharges to air should consult Wanganui District Council or Manawatu-Wanganui Regional Council staff about provisions in the Regional Air Plan for Manawatu-Wanganui. Furthermore, it should be noted that Section 17 of the Resource Management Act imposes a duty on all persons to avoid, remedy or mitigate adverse

effects, including those relating to odour, dust and smoke, regardless of any rules in plans or conditions of resource consents.

R189 Hazardous substances

Any new or expanded hazardous facility is subject to the provisions of Appendix A6 - "Hazardous Facility Screening Procedure".

Reason

To ensure that the community is free of nuisance caused by light spill, glare, odour and vibration.

R256 Geotech report

a. Any proposed activity permitted by the underlying zone shall be supported by a geotechnical report which confirms that the activity will not worsen or accelerate the level of erosion on the site or surrounding area.

R190 Restricted Discretionary Activities

The following are <u>restricted</u> discretionary activities in the Hillside Protection Zone <u>Overlay</u> where the <u>Council shall restrict the exercise of its discretion provided that they comply with RX1 (geotech report):</u>

a. Clearance of vegetation on land except the removal of plant pests. Discretion is restricted to:

Council restricts its discretion to the following matters:

- i.1 whether the clearing of land contributes to soil instability,
- ii.2 whether the clearing of land contributes to the control of noxious weeds,
- iii.3 whether the clearing of land shall ensure fire protection.

Note: The Regional Council should be consulted with regards to

any proposed soil disturbance activities in the Hillside Protection Overlay Zone, as other resource consent requirements may apply.

Refer to Resource Consent Assessment Criteria.

Reason

To avoid accelerated erosion of hillsides.

R191 Unrestricted dDiscretionary activities

The following are discretionary activities in the Hillside Protection Overlay Zone where the exercise of the Council's discretion is unrestricted provided they comply with rule RX1 (geotech report):

- a. Subdivision.
- b. Structures relating to any permitted activities in the underlying zone including retaining or landscape structures..
- c. Network utilities as provided by General Rule Utilities (Rule R15).

Refer to Resource Consent Assessment Criteria

R192 Non-Complying Activities

The following are non-complying activities in the Hillside Protection Overlay Zone and the Area of Marginal Risk Land- Area B. a.Excavation of land.

b. Structures relating to any specified activity in the underlying Residential zone.

c.Any other activity which is not provided for as a permitted or discretionary or prohibited activity.

Refer to Resource Consent Assessment Criteria.

R257 Prohibited activities.

The following are Prohibited activities in the Area of Very High Landslide Risk – Area A:

- a. Excavation* of land.
- b. Structures*

Wanganui District Council District Plan Review

Section 32 Report

Phase Two – Natural Hazards

T7 Recognition and Reduction of

Hazard Potential

Wanganui District is affected by a number of natural hazards. Parts of the urban area are particularly prone to flooding, while the coast and hill country are affected by land instability and erosion. The District is also dissected by fault lines and is vulnerable to sea level rise and tsunami. The natural hazards occurring within the District have an impact on current and future development. They can cause loss of human life and significant damage to private property, roads and other District assets. They can also cause damage to the natural environment.

In addition to natural events, hazards are associated with hazardous facilities, ie the storage, use and transportation of hazardous substances. These facilities are commonly found in both the rural and urban parts of the District. Hazardous substances, like agricultural sprays, industrial chemicals or fuel, have properties which are, or when in contact with air or water are, potentially flammable or explosive, and toxic. If hazardous facilities are not located appropriately or managed properly, the accidental release of, or loss of control of, hazardous substances can cause short or long term damage to human health and contamination of land, water, air, or damage to ecosystems.

It is recognised that while a hazard may be present, the hazard potential is only realised when there are land use activities, buildings or structures and important natural values in the vicinity of the hazard. It is not possible to eliminate hazards, but it is possible to manage the location, design and operation of land use activities and hazardous facilities to avoid, remedy or mitigate the potential adverse effects of hazards on human life, property and the environment.

The Resource Management Act requires both the Regional and the District Councils to share responsibility for the natural hazards of

flooding, subsidence, and seismic, volcanic and tsunami hazards; and for hazardous substances. The Regional Policy Statement further defines the appropriate management responsibilities of local authorities for natural hazards and hazardous substances

124 Clarification and Coordination of Monitoring Responsibilities

Both the Manawatu-Wanganui Regional Council and the Wanganui District Council have monitoring responsibilities under the Resource Management Act 1991. Considerable overlap could occur in the monitoring of resources in the rural parts of the district, the coast and natural hazard* features.

Comment	it duplicates the p Management Ac	f the Regional Council and the
summary of benefits	Avoids duplication	of provisions set out in the RMA
summary of costs No cost implication		S
Effectiveness	The removal of this unnecessary duplic	s issue is efficient as it removes cation
Efficiency	The removal of this duplication	s issue is efficient as it removes
Appropriateness	The removal of this duplication	s issue is appropriate as it removes
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods		The Council must be able to demonstrate that it is managing the risks of natural hazards in accordance with the responsibilities set out in S62(1) of the RMA and in accordance with Chapter 10 of the Regional Council's Proposed One Plan.

135 Identification and Recognition of Natural Hazard Potential

The Wanganui District is affected by a number of *natural hazards**. The most significant ones are flooding, storms, tsunami, erosion and earthquakes. Knowledge of the location and characteristics of

natural hazards* and their impacts on surrounding development *and the environment* is far from comprehensive.

The known major areas of concern include the following:

- a. The Whanganui River has a history of flooding in the urban area and the middle-reaches. Flooding has also occurred in the Matarawa Catchment, affecting Wanganui East and the upper valleys of that catchment. The Whangaehu River, along the south eastern boundary* of the district, also has a history of flooding.
- b. Erosion is a widespread problem in the hill country. There are frequent wash-outs, landslips and subsidence after periods of heavy rain.
- c. Areas of hillside instability within the urban area of Wanganui, particularly the hillside north of the Bastia Tower (above Turoa Road and below Mount View Road) and the hillside opposite the Whanganui City Bridge, below Hipango Terrace.
- d. The potential for coastal erosion in some coastal areas is severe. At Mowhanau, the cliffs have been subject to significant erosion and at the Coastal Residential Zone north of Castlecliff, the cliffs are predicted to erode by 18 m before reaching equilibrium.
- e. Areas of river bank erosion are found along both banks of the Whanganui River, causing loss or damage to private property, network utilities* and public assets like roads.
- f. Tsunami is a significant risk to the Wanganui urban area.
- g. Several faults including Nukumaru and Upokongaro have been mapped along the marine terraces between Wanganui and Hawera. Parts of the Wanganui urban area adjacent to the river could be affected by soil liquefaction.
- h. Sand dune inundation in the Castlecliff and South Beach area.
- i. The potential for loss of land due to a sea level rise resulting from global warming.

136 Reduction of Natural Hazard Potential

1. It is important to distinguish between the hazard associated with natural events, and the risk they pose. Hazard is principally defined by the characteristics of the physical event, eg groundshaking associated with earthquakes. The risk is defined by the probability of occurrence combined with the potential effects* of that occurrence.

It is not possible to control the occurrence of natural hazards*, however, it is possible to reduce the hazard potential to protect human life, property and the environment*.

To reduce hazard potential, the following matters need to be addressed:

- a. The location and operation of new land use activities* in areas affected by natural hazards*.
- b. Protection of existing developments* in high risk areas.
- 2. Coordinate actions between the Manawatu-Wanganui Regional Council and Wanganui District Council giving effect* to the provisions of the Regional Policy Statement for Manawatu-Wanganui:
- a. Flooding It is recognised that development* can exacerbate the risk to life and property from flooding. Responsibility for managing this risk falls on both the Wanganui District Council and Manawatu-Wanganui Regional Council.
- b. Accelerated soil erosion and land instability This is primarily a regional council responsibility but the District Council has jurisdiction when this may affect structures or the safety of people.
- The Old Town is an area of inherent land instability, with an underlay of unconsolidated river deposits. The potential for severe ground shaking accompanying earthquakes is high, leading to collapse of heritage buildings* and items, particularly those that are constructed of masonry, with damage to heritage areas.
- The Wanganui District is affected by a number of natural hazards*. The most significant ones are flooding, storms, tsunami, erosion and earthquakes. Knowledge of the location and characteristics of natural hazards* and their impacts on

surrounding development *and the environment* is far from comprehensive. This along with lack of public awareness hinders the avoidance and mitigation of those hazards.

Inappropriate land use and occupation of areas at risk from earthquake, flooding, ponding hillside instability can cause unnecessary risks for people and property

Comment	Issues I35 and I36 are proposed to be deleted and replaced with I41, I42 and I43 above which together focus on building understanding of levels of risk in the old town, the extent and potential impact of natural hazards and the desirability of steering new development away from areas of high risk. These issues cover the key facets of land use planning for natural hazards in the district. The first issue focuses on the known risks in the main urban area posed by natural hazards to people and property and the damage it can cause. The second issue highlights the need to build knowledge and further understanding of the risks associated with natural hazards in the district The third issue highlights the potential that inappropriate use and development (e.g. large-scale earthworks or large buildings) can potentially worsen the risks or severity of natural hazards, particularly on adjacent properties		
summary of	Clarifies and simplifies natural hazard risk issues.		
benefits	'		
summary of costs No cost implication		IS	
Effectiveness	`	issues clarify key areas of risk and	
	remove erroneous	and unnecessary information	
Efficiency	The proposed dele	The proposed deletion and replacement of these issues	
	is efficient as it is designed to clarify and promote		
	improved understa	nding.	
Appropriateness	The proposed dele	tion and replacement of these issues	
	is appropriate as it seeks to simplify and clarify the		
	provisions.		
Risk of acting or not		It is vital for the Council to	
uncertain or insuffic		demonstrate that it is managing the	
about the subject matter of the		risk of natural hazards in accordance	
policies, rules, or other methods		with the two key pieces of legislation	
		which empower Council to manage	
		and control natural hazards; the RMA and the Building Act 2004.	
		Under the RMA, the use of land and	
		subdivision is required to avoid,	
		remedy or mitigate the effects of	
		natural hazards. The Building Act	
		natarai nazaras. The ballaling Act	

2004 has similar responsibilities when granting building consents on land subject to specified natural hazards, with certain exceptions.

O16 Safe Rural and Urban Development Rural and Urban Development That Can Meet an Acceptable Level of Safety

People, communities and the environment are to be protected from unacceptable risks of damage or loss associated with the occurrence of natural hazards and the location, design and operation of hazardous facilities.

O37 A community informed about the potential risks of natural hazards to people and property in the Wanganui District

	T		
Comment	The proposed objective identifies the need to raise awarenes		
		pacts associated with the presence of natural	
	hazards in the environment.		
summary of benefits	Improved awareness	s and understanding of the risks of natural	
	hazards		
summary of costs	No direct cost implications although the community will be in a		
	position to make bet	ter informed development and investment	
	decisions	·	
Effectiveness	The new objective is	effective as improved understanding will	
	support better informed decision making		
Efficiency	The new objective is efficient as improved understanding will		
	support better informed decision making which recognises		
	inherent levels of risk.		
Appropriateness	The proposed objective is responsive to the understanding that an		
	awareness of risk asso	ociated with natural hazards is a necessary	
		ion to ensure that building design and land	
		eflect the need to avoid or mitigate the potential	
		ards. Consultation feedback from the	
		the need to increase knowledge and	
		nazards as well as raising concerns regarding	
the potential impact on			
Risk of acting or not acting if there is		It is vital for the Council to demonstrate	
uncertain or insufficient information about		that it is managing the risk of natural	
the subject matter of the policies, rules, or		hazards in accordance with the	
other methods		requirements of the RMA and the	
		Regional Council's Proposed One Plan.	

O38 The risks of natural hazards through inappropriate subdivision and development are avoided or mitigated whilst minimising adverse effects on natural, cultural and ecological values.

Comment	This proposed objective directly relates to avoiding and mitigating the risks posed by natural hazards, thereby providing for people's health, safety and well-being. The objective sets clear direction for decision-makers in terms of both avoidance and mitigation. The objective protects subdivision and development from being located where it can be damaged or destroyed by hazards such as flooding. However, by not requiring avoidance in all circumstances, it recognises it is difficult to predict when and where some natural hazards will occur (e.g. earthquakes), where the effects could be extensive. Therefore, it is considered effective and efficient to mitigate the risks in these circumstances. The proposed objective recognises that it will not be possible to eradicate risk entirely and identifies the need to adopt a graduated approach to risk management by either avoiding or mitigating the risks of inappropriate subdivision and development resulting from the presence of natural hazards.		
summary of	Improved awareness and understanding of the risks of		
benefits	natural hazards		
summary of cost	No direct cost implications although the community will be in a position to make better informed investment decisions		
Effectiveness	The proposed objective is amended to better align with the policy direction in the One Plan and is effective as improved understanding will support better informed decision making		
Efficiency	The new objective is efficient as improved understanding will support better informed decision making recognises inherent levels of risk.		
Appropriateness	This proposed objective is considered appropriate in achieving the purpose of the RMA.		
	not acting if there is If is vital for the Council to demonstrate that it is managing the risk of natural hazards in accordance		

P69 Community Awareness of Hazards Promote better community knowledge and awareness of risks associated with natural hazards and hazardous facilities

A fundamental requirement of risk management is knowledge

about the location and impact of natural hazards and hazardous facilities on people, communities and the environment, and awareness about the degree of risk present.

Traditionally, there is reluctance to identify and recognise hazards as development constraints. This is due to a lack of, or inadequate, knowledge and information, and concern that the identification of hazards can alarm people and reduce the value of properties. However, not recognising the presence of hazards can also lead to increased risks of environmental damage, property damage or loss of life.

Current information about hazards and associated risks is limited and not readily available. Work will be required to extend, update and continuously monitor and review the information available. While it may not be possible to provide definitive or predictive information about hazards and their associated risks, the availability of information should be regarded as a trigger mechanism, or a warning system, for potential land owners and developers.

This policy represents a long term, indirect approach to risk management. It requires resources to be devoted to information gathering and establishing links with the community. There are existing mechanisms which can be tapped into for implementation, eg civil defence activities, use of Project Information Memoranda and Land Information Memoranda etc.

The use of cleaner and safer production guidelines will complement District Plan conditions and terms.

The guidelines will be voluntary and self-regulating. They will be particularly useful for small industrial or commercial operators or home occupations involving the use of hazardous substances.

The approach is also consistent with the requirements of section 35 of the Resource Management Act 1991.

Comment	This policy is amended and retained to focus specifically on hazardous facilities. The impact of natural hazards is captured in new proposed policies P112, P113, P114, P115, P116, P117, P118 and P119.
summary of	The retention of this policy with a re-defined focus on
benefits	hazardous facilities allows clear separation from policies addressing natural hazards.
summary of costs	No cost implications. There is some aspects that are being reworded; however, they capture the integrity of the policy.
Effectiveness	The amendment of this policy is efficient as it creates more precise guidance for decision makers.
Efficiency	The amendment of this policy is efficient as it creates more precise guidance for decision makers.
Appropriateness	This policy is appropriate as it creates more precise guidance for decision makers.
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	There will be minimal risk.

P70 Recognise natural hazards as development constraints and control new developments in identified hazard-prone areas

It is not possible to control the occurrence of *natural hazards**, but it is possible to minimise damage or loss to the *environment**, people and property caused by these events by taking appropriate precautions and preventive measures.

-

A fundamental precaution is ensuring that the location of new activities can meet adequate safety standards. For example, the location of new dwellings within an area of active coastal or river erosion should be avoided. The location and design of dwellings within flood-prone areas need to be carefully managed to ensure that there is adequate protection against flooding.

_

The location and design of new developments* can increase or decrease the hazard potential. For example, clearance of

vegetation cover or extensive excavations on inherently unstable slopes can lead to accelerated soil erosion and slumping, causing problems off-site. Such problems should be avoided, remedied or mitigated, eg revegetation of slopes, or the use of engineering solutions, like slope stabilisation work.

-

It is not intended to seek blanket restrictions on new developments*. However, it is considered necessary and appropriate to identify hazard-prone areas and set conditions and terms to ensure that new developments*, including subdivision*, can meet adequate safety standards and are not likely to increase hazard potential both on site* and in the surrounding areas.

Comment	This policy is proposed to be deleted as the impact of natural hazards is captured in new proposed policies P112, P113, P114, P115, P116, P117, P118 and P119. The current regulatory approach relies upon a case-by-case assessment to determine the nature, extent and likelihood of a natural hazard affecting land use and development. This case-by-case is inefficient as it does not provide clarity and certainty for landowners, developers and Council in managing the risks. In addition, this approach may not be effective if the natural hazard risks are not identified during the development process. Therefore, this approach is not appropriate as it does not protect people and property from the adverse effects of natural hazards	
summary of benefits	Replacement policies P112, P113, P114, P115, P116, P117, P118 and P119 reflect the need to promote better understanding of natural hazards as development constraints and the risks to people and property.	
summary of costs	There will be minimal additional costs as the replacement policies capture the integrity of the deleted policies.	
Effectiveness	The removal of this policy is efficient as it creates more precise guidance for decision makers.	
Efficiency	The removal of this policy is efficient as it creates more precise guidance for decision makers.	
Appropriateness	The deletion of this policy is appropriate as the replacement policies create more precise guidance for decision makers.	
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods		There will be minimal risk.

In the vicinity of Kowhai Park and extending along Anzac Parade, 100 houses are at risk from 50-year floods. There are concerns that if flooding in the Whanganui River catchment coincides with flooding in the Matarawa catchment, the affected area could be much more extensive and the number of houses affected could be significantly higher.

_

Further investigations have been initiated to determine more accurately flood levels at different locations on both sides of the Whanganui River for different flood events.

-

The Building Act 1991 only provides for protection up to a 50-year flood event. Due to the high concentration of population and high cost of public and private investment in the urban area, a precautionary approach is considered necessary and justified.

		ted as the impact of natural hazards is	
	captured in new pr	oposed policies P112, P113, P114,	
P115, P116, P		, P118 and P119. The 100 and 200	
	year flood lines ha	ve been identified by the Regional	
	Council and have I	been mapped as part of PC25	
summary of	Replacement policies P112, P113, P114, P115, P116,		
benefits	P117, P118 and P119 reflect the need to promote better		
	understanding of natural hazards as development		
	constraints and the risks to people and property.		
summary of costs	There will be minimal additional costs as the		
	replacement policies capture the integrity of the deleted		
	policy.		
Effectiveness	The removal of this policy is efficient as it creates more		
	precise guidance f	or decision makers.	
Efficiency	The removal of this policy is efficient as it creates more		
	precise guidance for decision makers.		
Appropriateness	The deletion of this policy is appropriate as the		
	replacement policies create more precise guidance for		
	decision makers.		
Risk of acting or not acting if there is		There will be minimal risk.	
uncertain or insufficient information			
about the subject matter of the			
policies, rules, or other methods			

- P112 Promote improved understanding of natural hazards as development constraints and better knowledge and awareness of the risks to people and property in the Wanganui district.
- P113 Avoid or minimise risk of loss of life or injury or environmental damage due to use or development in hazard prone areas.
- P114 Adopt a precautionary approach in relation to use or development affected by potential natural hazards, especially where hazards are not well understood or the effects of natural processes are difficult to assess or where the effect of activities on natural hazards are not well understood.
- P115 Ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make land safe for human use.
- P116 In relation to flood hazards, avoid subdivision and sensitive or inappropriate new development in areas identified as being inundated by a 1 in 200 year (0.5% AEP) flood event unless flood hazard avoidance or mitigation is achieved.

Comment	This policy is designed to address risk to life and property by avoiding inappropriate subdivision or sensitive development in areas subject to inundation in a 1 in 200 year flood event. Discussion with Powerco has recognised that activities or development such as transmission line support structures are not classed as sensitive development and are low risk in terms of this policy.
summary of benefits	This policy is designed to protect life and property by restricting inappropriate subdivision or sensitive development in areas subject to inundation in a 1 in 200 year flood event.
summary of costs	The costs of new development in areas subject to inundation in a 1 in 200 year flood event will include measures to mitigate against the impact of flooding.
Effectiveness	This policy is effective as it creates more precise guidance for decision makers.
Efficiency	This policy is efficient as it creates more precise guidance for decision makers.

Appropriateness	This policy is appropriate as it creates more precise	
	guidance for decis	ion makers.
Risk of acting or not acting if there is		The 1 in 200 year flood risk area has
uncertain or insufficient information		been identified by the Regional
about the subject matter of the		Council and is included in the district
policies, rules, or other methods		plan as part WDC management of
		the risk of natural hazards.

- P117 In designing earthworks or roadworks any adverse effects of diverting floodwaters should be avoided, remedied or mitigated.
- P118 In assessing resource consents Council will require confirmation, including, as appropriate, the preparation of a geotechnical report, as to the suitability of the site for use or development and that the effects of the hazard shall be avoided, remedied, mitigated.
- P119 In relation to areas prone to land instability, avoid sub-division and development where risks to people and property from the effects of the hazard are identified as high on the planning maps, and require appropriate mitigation measures where risk is identified as moderate.

Comment

Overall and in view of current levels of understanding of natural hazards it is considered the current approach of the District Plan is not the most appropriate to achieve the proposed objective of avoiding or mitigating risk. The alternative approach of providing clear information, raising awareness and providing direction is considered more appropriate as it protects areas at risk from the effects of natural hazards by managing activities in these areas. Inevitably much existing development is located in areas subject to natural hazards and it is important to manage any further intensification or redevelopment of these areas. In addition, new areas of development may be subject to natural hazards, and it is important to firstly avoid these areas, or secondly, mitigate the adverse effects from these hazards. Given this conclusion, and the One Plan policy direction, the District Plan policies should identify areas at significant risk from flooding and landslip and control structures and activities within these identified areas. In addition, the policies should recognise the lifelines role of critical infrastructure as outlined in the proposed One Plan. This approach is considered the most appropriate way to achieve the proposed objectives for natural hazards.

Develop a database and register of known natural hazards, known contaminated sites, and hazardous facilities in the District in consultation with relevant agencies particularly the Regional Council and affected land owners

- M190 Identify known hazard-prone areas on District Plan Maps.
- M191 Support, initiate and carry out investigations or studies of known or potential hazards in the District to more accurately establish risks and impacts on people, communities and the environment.
- M192 Liaise with land owners in known and potential hazard-prone areas and develop appropriate mitigation measures and approaches to monitor the situation.

Liaise with land owners in known and potential hazard-prone areas and develop appropriate mitigation measures and approaches to monitor the situation.

M193 Publicise and encourage the use of Project Information Memoranda and Land Information Memoranda.

Publicise and encourage the use of Project Information Memoranda and Land Information Memoranda.

M201 Carry out public awareness programmes to promote Raise public knowledge and awareness and increase community preparedness.

Carry out public awareness programmes to promote public knowledge and awareness of natural hazards and increase community preparedness.

M202 Identify hazard-prone areas on District Plan Maps.

Continue to undertake research sufficient to enable identification of

significant hazard-prone areas on District Plan Maps.

M203 Identify on District Planning Maps a Hillside Protection Overlay Zone.

Implement a programme of research to detail the extent of hillside stability hazard in priority order and then Identify hazard prone areas on District Planning Maps as Hillside Protection Overlay.

M204 Develop appropriate conditions and terms for resource consents for subdivision and the location, design and nature of activities within the identified areas.

M205 Identify hazard risk on the appropriate certificates of title at the time of building consent through the District Land Registrar.

Identify hazard risk on the appropriate certificates of title at the time of building consent through the District Land Registrar.

M206 Identify where sSite investigations and risk assessments are required

Continue to refine and lidentify the circumstances where site investigations and risk assessments are required to demonstrate that the any proposed development can meet adequate safety standards and is not likely to increase risks off-site, through the Land Information Memoranda process.

M207 Monitor and assess the cumulative effects of development and degree of risk in identified hazard-prone areas.

Monitor and assess the cumulative effects of development and degree of risk in identified hazard-prone areas.

M208 Request hazard information at the time of subdivision.

M209 Identify and manage sand dune inundation in the Castlecliff Coastal area through the Castlecliff Coastal Reserve Management Plan.

Identify and manage <u>areas of</u> sand dune inundation in the Castlecliff Coastal area through the Castlecliff Coastal Reserve

Management Plan.

- M210 Notify the Manawatu-Wanganui Regional Council as an affected party if there is any application to subdivide in hazard prone areas.
- M214 Identify lines on District Plan Maps which show 50-year and 100-year flood extents where this information is available.
- M215 Develop appropriate conditions and terms for resource consents for subdivision and the location, design and nature of activities within the areas identified by a 50-year flood event.
- M216 Identify the circumstances where site investigations and risk assessments are required to demonstrate that the proposed development can meet adequate safety standards and is not likely to increase risks off-site.
- M217 Monitor and assess the cumulative effects of development and degree of risk in the identified areas.

Z15 Hillside Protection Overlay **Zone**

This section contains the rules that apply to activities in the Hillside Protection Overlay Zone, which covers areas of land instability within the urban area of Wanganui. There are two "Hillside Protection Overlays Zones" in the city. The largest covers a significant part of the hillside north of the Bastia Tower, above Turoa Road and below Mount View Road (refer to Planning Map U16). The second area of Hillside Protection Zone is a smaller area of hillside opposite the Whanganui River City Bridge, below Hipango Terrace-(refer to Planning Map U22).

Investigation of the extent of the land within the Wanganui District at risk of land slip has identified a list of areas which are priorities for further study. These areas will be examined in priority order to identify the extent of land with a very high risk of slope instability on which no further development should be permitted and those areas with a moderate to high risk of slope instability where proposals for further development should be accompanied by site specific geotechnical reports and recommendation for appropriate mitigation measures. These hazard prone areas will be incorporated into the Hillside Protection Overlay as investigations are completed.

Within the Hillside Protection Overlay Zones, instability and damage may occur from natural erosion processes or from activities which are incompatible with the soft rock of these escarpments. These erosive processes may lead to slips and consequent loss of property and landscape.

The purpose of the Hillside Protection <u>Overlay</u> Zone is to recognise its hazardous characteristics and ensure that effects from incompatible activities causing or accelerating natural erosion, are avoided.

R184 Permitted Activities

The following are permitted activities in the Hillside Protection Zone Overlay, provided that they also comply with the underlying Residential zone rules:

- a. Reserves and open space.
- b. Sheep farming.

Activities (Rule R23)

- e. b. Soil conservation works, and plantings and removal of pest plant species.
- d. c. Network utilities as provided by General Rule Utilities (Rule R15) which contains some exemptions from the zone rules for network utilities.

Which comply with the-relevant zone rules:

R185	-Noise		
		shall not exceed the fo ithin, the boundary of a	J
	7am to 6pm	50 dBA(L10)	
	All other times	40 dBA(L10)	Lmax: the lower
			of L95
			background
			sound plus 30
			dBA or 70 dBA
	The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in General Rule – Temporary Military Training		
	staridards contairied	in Ocheral Raic Tempe	rary wintary rraining

These conditions shall be read with and are subject to the provisions of Appendix A4 – Noise.

Reason

To allow for noise to occur but limited in terms of duration, time of day and decibel level. The standard has been set using the New Zealand Standard for noise.

R186 Light

Any particular artificial lighting system shall not result in increased luminance in excess of 8 lux in the measured ambient level in the vertical plane at the windows of any residential building in the Residential, Rural or Rural Settlement Zones. No light source shall cause glare which may adversely affect the vision of motorists on a road.

R187 Vibration

No activity shall cause a vibration considered offensive or objectionable.

In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall be used apply.

R188 Air discharge

Note: There are no District Plan standards for air discharges. Discharges to air are controlled by regional councils. The Wanganui District Council has been authorised by the Manawatu-Wanganui Regional Council to exercise all powers and functions of Enforcement Officers for the purpose of investigating complaints about the discharge of contaminants to air within the boundary of the Wanganui urban area. Persons responsible for causing discharges to air should consult Wanganui District Council or Manawatu-Wanganui Regional Council staff about provisions in the Regional Air Plan for Manawatu-Wanganui. Furthermore, it should be noted that Section 17 of the Resource Management Act imposes a duty on all persons to avoid, remedy or mitigate adverse effects, including those relating to odour, dust and smoke,

regardless of any rules in plans or conditions of resource consents.

R189 Hazardous substances

Any new or expanded hazardous facility is subject to the provisions of Appendix A6 - "Hazardous Facility Screening Procedure".

----Reason

To ensure that the community is free of nuisance caused by light spill, glare, odour and vibration.

R256 Geotech report

a. Any proposed activity permitted by the underlying zone shall be supported by a geotechnical report which confirms that the activity will not worsen or accelerate the level of erosion on the site or surrounding area.

R190 Restricted Discretionary Activities

The following are <u>restricted</u> discretionary activities in the Hillside Protection Zone Overlay where the Council shall restrict the exercise of its discretion provided that they comply with R256 (geotech report):

a. Clearance of vegetation on land except the removal of plant pests. Discretion is restricted to:

Council restricts its discretion to the following matters:

- **i.1** whether the clearing of land contributes to soil instability,
- ii.2 whether the clearing of land contributes to the control of noxious weeds.
- iii.3 whether the clearing of land shall ensure fire protection.

Note: The Regional Council should be consulted with regards to any proposed soil disturbance activities in the Hillside

Protection <u>Overlay</u> Zone, as other resource consent requirements may apply.

Refer to Resource Consent Assessment Criteria.

Reason

To avoid accelerated erosion of hillsides.

R191 Unrestricted dDiscretionary activities

The following are discretionary activities in the Hillside Protection Overlay Zone where the exercise of the Council's discretion is unrestricted provided they comply with rule R256 (geotech report):

- a. Subdivision.
- b. Structures relating to any permitted activities in the underlying zone including retaining or landscape structures..
- c. Network utilities as provided by General Rule Utilities (Rule R15).

Refer to Resource Consent Assessment Criteria

R192 Non-Complying Activities

The following are non-complying activities in the Hillside Protection Overlay Zone and the Area of Marginal Risk Land- Area B. a.Excavation of land.

- b. Structures relating to any specified activity in the underlying Residential zone.
- c.Any other activity which is not provided for as a permitted or discretionary or prohibited activity.

Refer to Resource Consent Assessment Criteria.

R257 Prohibited activities.

The following are Prohibited activities in the Area of Very High Landslide Risk – Area A:

a. Excavation* of land.

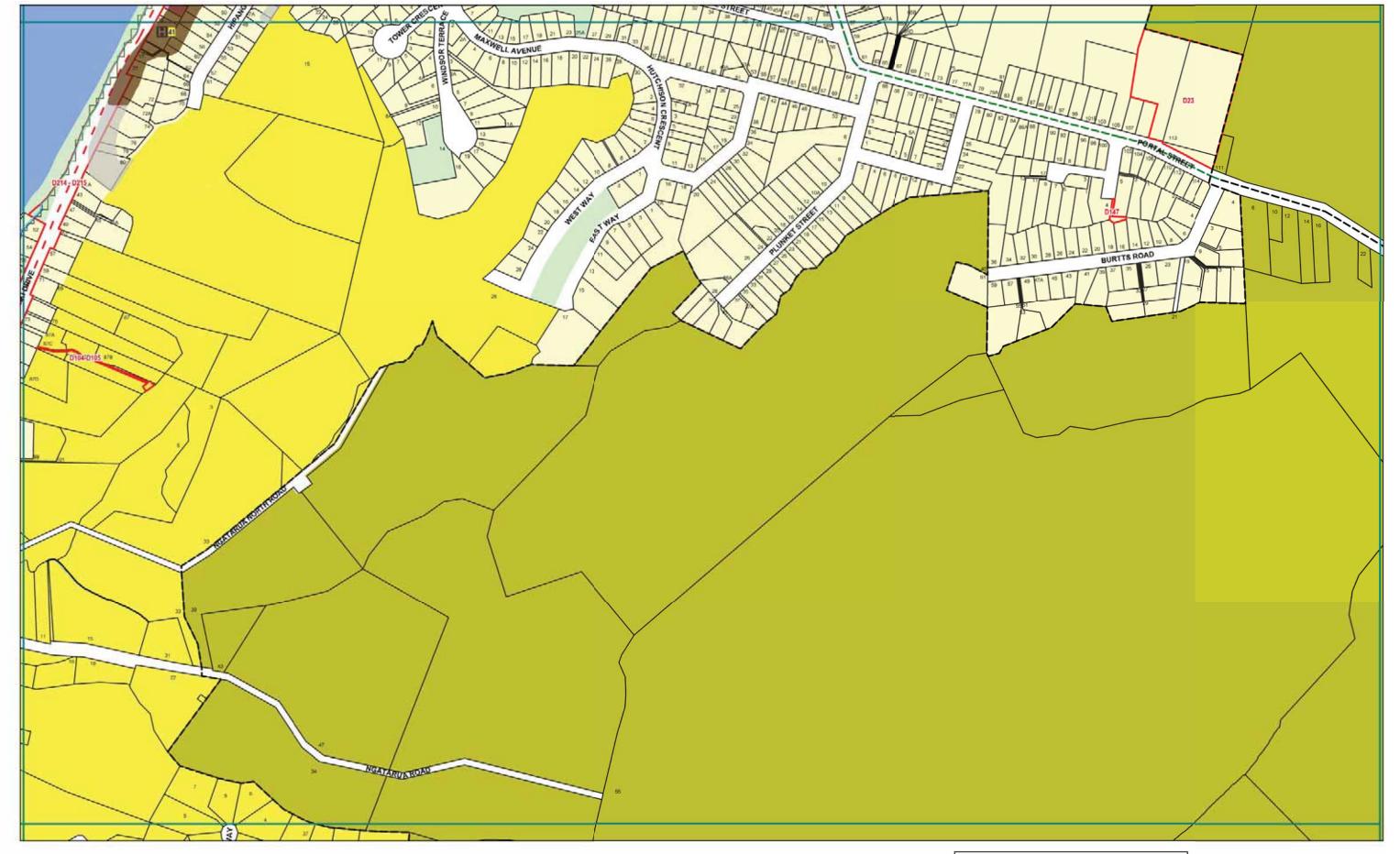
b. Structures*

Comment	Rules applying to activities in areas covered by the Hillside Protection Overlay have been consolidated and amended to reflect the continuing improvement in understanding of levels of risk of hillside instability and ongoing investigation of areas of potential risk identified by M203. These priority study areas are being assessed in accordance with "Practice Note Guidelines for Landslide Risk Management" (Australian Geomechanics Society 2007). Rules 185, 186, 187, 188 and 189 are proposed for deletion as they have limited relevance to the assessment and management of the risk of landslip. Rule 184 is amended to reflect permitted activities within the Hillside Protection Overlay and the underlying zone. Rule 256 proposes a requirement to submit a geotechnical report to demonstrate that activities permitted by the underlying zone can be undertaken without worsening or accelerating erosion on the site or its surroundings. Rules 190, 191, 192 and 257 are proposed in order to regulate development in accordance with requirements identified in areas of very high risk of slope instability (Area A) and areas of moderate to high (marginal) risk of slope instability (Area B).
summary of benefits	The identification of areas of potential landslip risk and their systematic examination is an essential part of demonstrating that Wanganui Council is effectively managing the risk from natural hazards. Potential risk to life and property will be reduced and better informed decisions about development and investment will be enabled.
summary of costs	Improved information on the geographical location of and levels of risk from hillside instability will have significant potential cost implications in relation to land and property values.
Effectiveness	The identification of areas of landslip risk will be effective in enabling better informed development and investment

	decisions with consequently reduced levels of risk to life and property.
Efficiency	The proposed rules are efficient as they create more precise guidance for developers and decision makers.
Appropriateness	The proposed rules are appropriate as they create more precise guidance for decision makers.
Risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods	The detailed assessment and evaluation of areas at risk from hillside instability is a necessary activity for the Council as part of its obligation to demonstrate that it is effectively managing the risks from natural hazards. Failure to manage these risks will expose parts of the community to unnecessary levels of risk to life and property.

Appendix

Proposed amendments to Planning Maps

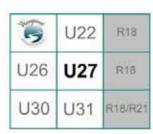


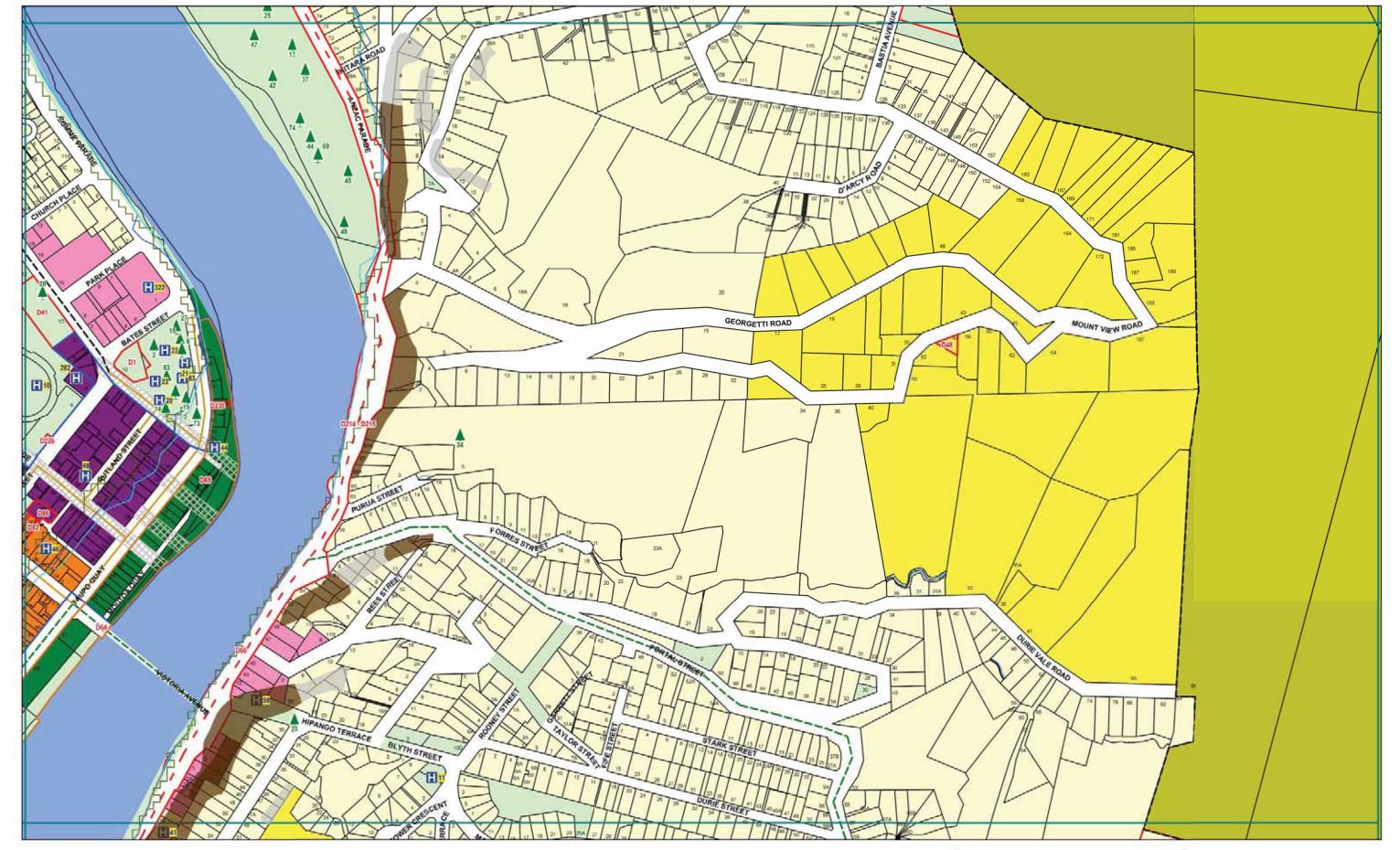
Wanganui District Planning Maps Scale 1:5,000 (Note:This scale is retained only if printed as A3)

© 2012 Copyright Wanganui District Council. Cadastral Information is derived from Land Information NZ Core Records System (CRS) CROWN COPY RIGHT RESERVED.

Area of warginal risk land - Area B

Urban 27





Wanganui District Planning Maps Scale 1:5,000 (Note:This scale is retained only if printed as A3)

© 2012 Copyright Wanganui District Council. Cadastral Information is derived from Land Information NZ Core Records System (CRS) CROWN COPY RIGHT RESERVED.

Area of warginal risk land - Area B

Urban 22

