AMENDMENT 399 - Delete current Chapter 14H Natural Hazards.

AMENDMENT 400 - Add new Chapter 14H Natural Hazards

14H Natural Hazards

AMENDMENT 401 - Add opening paragraphs of introduction for Chapter 14H Natural Hazards

Introduction

Lower Hutt is an area comprising a wide variety of physical features including the coast, rivers and streams, steep hills, low lying valleys, an escarpment and a fault. This makes the city susceptible to a wide range of natural hazards, which can result in damage to property and buildings and lead to a loss of human life. Because of this, it is important to identify areas susceptible to natural hazards and to avoid or manage subdivision, use and development, relative to the natural hazard risk posed, to reduce the potential for damage to property, infrastructure and the potential for loss of human life.

The District Plan focuses on the following natural hazards as they are the hazards that present the greatest risk to people, property and infrastructure and their potential effects can be addressed through appropriate land use planning measures:

The Wellington Fault passes through the western side of Lower Hutt’s valley floor and has the potential to generate permanent ground deformation in the event of an earthquake. There are also soft soils with a high liquefaction potential.

Flooding and coastal inundation from sea level rise are influenced by climate change. It is predicted that climate change will result in more intense rainfall events, storm events will become more common and the sea level will rise. The flooding and coastal inundation hazard maps incorporate current climate change predictions.

Slope stability is addressed through the earthworks rules within the District Plan. When a development does not comply with the earthworks rules, site stability is one of the matters that will be considered as part of the resource consent process.

Natural hazards such as severe winds, wildfires, and ground shaking from earthquakes are primarily managed by other statutory instruments or processes including the Building Act 2004, Civil Defence Emergency Management Act 2002 and the Local Government Act 1974 and 2002.

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| **Natural Hazard Overlay** | **Respective Hazard Ranking** |
| Wellington Fault Rupture (within 20m of known fault) | High |
| Stream Corridor (1:100 year inundation event + 1m sea level rise) |
| Overland Flowpath (1:100 year inundation event + 1m sea level rise) | Medium |
| Inundation Area (1:100 year inundation extent + 1m sea level rise) | Low |

AMENDMENT 402 - Add Coastal Hazards section of introduction for Chapter 14H Natural Hazards

Coastal Hazards

Hutt City’s coastal environment is susceptible to a wide range of coastal hazards, some of which are mapped as Coastal Hazard Overlays. These include:

Tsunami; and

Coastal inundation including sea level rise.

Given the continued uncertainty associated with the rate of sea level rise, the different sea level rise scenarios as outlined in the Ministry for the Environment ‘Preparing for Coastal Change’ (2017) guidance have been used to form the basis of the mapping of these hazards.

The hazard ranking of coastal hazards is set out below:

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| **Coastal Hazard Overlay** | **Respective Hazard Ranking** |
| Tsunami – 1:100 year scenario inundation extent | High |
| Existing Coastal Inundation Extent with a 1:100 year storm |
| Tsunami – 1:500 year scenario inundation extent | Medium |
| Coastal Inundation Extent – (1.5m Relative Sea Level Rise and 1:100 year storm tide and wave setup) |
| Tsunami 1:1000 year scenario inundation extent | Low |

AMENDMENT 403 - Add Risk section of introduction for Chapter 14H Natural Hazards

Risk

Risk is a product of both the likelihood of and the consequences from a natural hazard. A risk-based approach to natural hazards balances allowing people and communities to use their property and undertake activities, while also ensuring that lives or significant assets are not harmed or lost as a result of a natural hazard event. When addressing the consequences from natural hazards, priority has been given in this plan as follows to:

* The protection of people from loss of life and injury;
* Reducing damage to buildings from natural hazard events; and
* The protection of essential infrastructure to ensure the health, safety and resilience of communities;

While in most instances development is unable to change the likelihood of a natural hazard event, incorporating mitigation measures or avoiding any further development in certain hazard areas can reduce the consequences from natural hazards, thereby over time reducing the associated risks. Potential mitigation measures that can be incorporated into developments to reduce the consequences of natural hazards include:

* Building design and location (for example minimum floor levels or the ability for buildings to be relocated);
* Raising floor or ground levels to avoid inundation;
* The creation of flood water detention areas to protect areas from flooding;
* The creation, retention or enhancement of natural systems and features;
* The use of suitable materials in infrastructure and building construction;
* The type of activities within buildings and structures, or the type of development;
* The use of green infrastructure options (for example sacrificial fill); and
* Securing Overland Flowpaths to allow for controlled stormwater flows when primary network capacity is exceeded.

AMENDMENT 404 - Add Overlays section of introduction for Chapter 14H Natural Hazards

Overlays

Natural Hazard Overlays – Means the mapped extent within the District Plan of the following Natural Hazards:

* Fault Rupture Hazards
* Flood Hazards based on a 1% Annual Exceedance Probability Flood including effects of climate change, including:
  + Stream corridor
  + Overland Flow
  + Inundation Areas

Coastal Hazard Overlays – Means the mapped extent within the District Plan of the following Coastal Hazards

* Tsunami Hazards, including the effects of climate change:
  + Low Tsunami Hazard (1:1000 year tsunami event including 1m sea level rise)
  + Medium Tsunami Hazard (1:500 year tsunami event including 1m sea level rise)
  + High Tsunami Hazard (1:100 year tsunami event including 1m sea level rise)
* Coastal Inundation Hazard, including the effects of climate change and Vertical Land Movement
  + Medium Coastal inundation Hazard (1.5m Relative Sea Level Rise, 1% Annual Exceedance Probability storm tide and wave setup (the average raised elevation of sea level at the shore caused by breaking waves)

AMENDMENT 405 - Add Qualifying Matters section of introduction for Chapter 14H Natural Hazards

Qualifying Matters

Policies 14H 1.3 – 1.13 and Rules 14H 2.2 – 1.10 address Natural Hazards as Qualifying Matters in accordance with Section 77I Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 and Policy 4 of the National Policy Statement on Urban Development 2020. As such, these Policies and the associated rules are only applicable to the following areas:

* Medium Density Residential Activity Area
* High Density Residential Activity Area
* Suburban Mixed Use Activity Area
* Central Commercial Activity Area
* Petone Commercial Activity Area

AMENDMENT 406 - Add new section 14H 1 Issue, Objective and Policies

14H 1 Issue, Objective and Policies

AMENDMENT 407 - Add new section 14H 1.1 Local Area Issue

14H 1.1 Local Area Issue

AMENDMENT 408 - Add new section 14H 1.1.1 Risk associated with Natural Hazards

14H 1.1.1 Risk associated with Natural Hazards

AMENDMENT 409 - Add new Issue to section 14H 1.1.1

Issue

There is a risk of harm to people and damage to their property from natural hazards associated with natural and coastal hazards. ~~The risk to people and their property should be avoided or mitigated.~~ People’s actions including mitigation measures and ongoing development in areas at risk from natural hazards can cause, or increase, the risk and consequences from natural hazards.

AMENDMENT 410 - Add new Objective 14H 1.1

Objective 14H 1.1 Risk from Natural Hazards

To avoid or reduce the risk to people, property, and infrastructure from natural hazards and coastal hazards.

AMENDMENT 411 - Add new Policy 14H 1.1

Policy 14H 1.1 Levels of Risk

Subdivision, use and development reduce or do not increase the risk to people, property and infrastructure by:

1. Limiting the scale of subdivision, use and development on sites within the medium and high Natural Hazard Overlays and the medium and high hazard areas of the Coastal Hazard Overlays; and
2. Requiring mitigation for subdivision, use and development that addresses the impacts from natural hazards to people, property and infrastructure in the low hazard, medium hazard and high hazard areas within the Natural Hazard and Coastal Hazard Overlays.

AMENDMENT 412 - Add new Policy 14H 1.2

Policy 14H 1.2 Structures and Buildings within the Wellington Fault Overlay

~~Manage~~Limit Structures and Buildings, within the Wellington Fault Overlay ~~by ensuring that~~unless:

1. The activity is located more than 20m from the Wellington Faultline, or
2. The activity, excluding additions to existing building, has an operational or functional need to locate within the Wellington Fault Overlay and locating outside of these Overlays is not a practicable option; and
3. The activity incorporates mitigation measures that ensure the risk from fault rupture to people and property is reduced or not increased; or
4. For additions to existing buildings, the change in risk from fault rupture to people and property is reduced or not increased.

AMENDMENT 413 - Add new Policy 14H 1.3

Policy 14H 1.3 Additions to Buildings in an identified Inundation Area of the Flood Hazard Overlay

Provide for additions to buildings that are within the identified Inundation Area, where:

1. The impact from the 1% Annual Exceedance Probability flood event is low due to either the:

* incorporation of mitigation measures;
* size of the addition in relation to the existing building; or
* type of activities undertaken within the addition; and

1. The risk to people and property is reduced or not increased from the 1% Annual Exceedance Probability Flood.

AMENDMENT 414 - Add new Policy 14H 1.4

Policy 14H 1.4 Additions to Buildings within the Overland Flowpaths and Stream Corridors of the Flood Hazard Overlays

Only allow additions to buildings that are within the Overland Flowpaths and Stream Corridors, where it can be demonstrated that:

1. The risk from the 1% Annual Exceedance Probability flood event is low due to either the:

* proposed mitigation measures;
* size of the addition; or
* nature of the activities undertaken within the addition; and

1. The risk to people and property is reduced or not increased from the 1% Annual Exceedance Probability Flood; and
2. Overland Flowpaths and Stream Corridors are unimpeded, and unobstructed to allow for the conveyancing of flood waters.

AMENDMENT 415 - Add new Policy 14H 1.5

Policy 14H 1.5 New residential units, commercial activities or retail activities within the identified Inundation Areas of the Flood Hazard Overlays

Provide for new residential units, commercial activities or retail activities that are within the Inundation Area, provided that mitigation measures are incorporated to ensure the risk to people and property both on the site and on adjacent properties is not increased or is reduced.

AMENDMENT 416 - Add new Policy 14H 1.6

Policy 14H 1.6 New residential units, commercial activities or retail activities within the Overland Flowpaths of the Flood Hazard Overlays

Manage New residential units, commercial activities or retail activities that are within the Overland Flowpaths or any subdivision where the building platform is within the Overland Flowpaths by:

1. Incorporating mitigation measures that reduce or avoid an increase in risk to people and property from the 1% Annual Exceedance Probability Flood;
2. Ensuring that people can safely evacuate from properties during a 1% Annual Exceedance Probability Flood; and
3. Overland Flowpaths are unimpeded, and unobstructed to allow for the conveyancing of flood waters and is not diverted onto adjacent properties.

AMENDMENT 417 - Add new Policy 14H 1.7

Policy 14H 1.7 New residential units, commercial activities or retail activities within the Stream Corridors of the Flood Hazard Overlays

Avoid New residential units, commercial activities or retail activities that are within the Stream Corridors or any subdivision where the building platform where the building platform is within the Stream Corridors unless it can be demonstrated that:

1. The activity, has an operational and functional need to locate within the Stream Corridor and locating outside of the Stream Corridor is not a practicable option;
2. Mitigation measures are incorporated that reduce or avoid an increase in risk to people and property from the 1% Annual Exceedance Probability Flood;
3. People can safely evacuate the property during a 1% Annual Exceedance Probability Flood; and
4. The conveyancing of flood waters through the Stream Corridor is still able to occur unimpeded and is not diverted onto adjacent properties.

AMENDMENT 418 - Add new Policy 14H 1.8

Policy 14H 1.8 Additions to buildings within the Medium Coastal Hazard Area and High Coastal Hazard Area

Enable additions to buildings within the Medium Coastal Hazard Area and High Coastal Hazard Area, where

1. They enable the continued use of the existing building; and
2. The risk from the coastal hazard is low due to either:

* proposed mitigation measures; or
* the size and the activity of the addition.

AMENDMENT 419 - Add new Policy 14H 1.9

Policy 14H 1.9 New residential units within the Low Coastal Hazard Areas

Provide for new residential units, commercial activities or retail activities, where the building platform is or will be within the Low Coastal Hazard Area, where it can be demonstrated that:

1. The activity, building, or subdivision incorporates measures that reduce or do not increase the risk to people and property from a tsunami;
2. There is the ability to access safe evacuation routes for occupants of the building in case of a tsunami.

AMENDMENT 420 - Add new Policy 14H 1.10

Policy 14H 1.10 New residential units in the Medium Coastal Hazard Area

Manage new residential units, commercial activities or retail activities within the Medium Coastal Hazard Area or any subdivision where the building platform will be within the Medium Coastal Hazard Area by ensuring:

1. The activity, building, or subdivision incorporates measures that reduce or do not increase the risk to people and property from the coastal hazard, and
2. There is the ability to access safe evacuation routes for occupants of the building from the coastal hazard.

AMENDMENT 421 - Add new Policy 14H 1.11

Policy 14H 1.11 New residential units in the High Coastal Hazard Area

~~Manage~~ Limit residential units, commercial activities or retail activities within the High Coastal Hazard Areas or any subdivision where the building platform will be within the High Coastal Hazard Area by ensuring:

1. The activity has an operational or functional need to locate within the High Coastal Hazard Area and locating outside of these High Coastal Hazard Area is not a practicable option
2. The activity, building, or subdivision incorporates measures that reduce or do not increase the risk to people, and property from the coastal hazard;
3. There is the ability to access safe evacuation routes for occupants of the building from the coastal hazard; and
4. The activity does not involve the removal or modification of a natural system or feature that provides protection to other properties from the natural hazard.

AMENDMENT 422 - Add new Policy 14H 1.12

Policy 14H 1.12 Subdivision, Use and Development in the Petone Commercial Activity Area and Suburban Mixed Use Activity Area which will not be occupied by members of the public and within the Coastal Hazards Overlays

Enable subdivision, development and use on sites within the Petone Commercial Activity Area and Suburban Mixed Use Activity Area and within any Coastal Hazard Overlay, where they do not involve the construction of new buildings which will be occupied by members of the public, or employees or the creation of vacant allotments.

AMENDMENT 423 - Add new Policy 14H 1.13

Policy 14H 1.13 Subdivision, Use and Development in the Petone Commercial Activity Area and Suburban Mixed Use Activity Area which will be occupied by members of the public and within the Coastal Hazards Overlays

Manage subdivision, development and use on sites within the Petone Commercial Activity Area and Suburban Mixed Use Activity Area and within any Coastal Hazard Overlay, where they involve the construction of new buildings which will be occupied by members of the public, employees or result in the creation of a vacant allotment by ensuring that

1. The activity, building or subdivision incorporates measures that reduce or do not increase the risk to people, and property; and
2. There is the ability to access safe evacuation routes for occupants of the building from the coastal hazard.

AMENDMENT 424 - Add new section 14H 2 Rules

14H 2 Rules

AMENDMENT 425 - Add new Rule 14H 2.1 Structures and buildings within the Wellington Fault Overlay

Rule 14H 2.1 Structures and buildings within the Wellington Fault Overlay

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| 1. Structures and buildings on any site where the whole site or a portion of the site falls within the Wellington Fault Overlay are **permitted** activities where:  a. The proposed structures or buildings are for the following:   * accessory buildings which are not required for habitable or working purposes * utilities including associated uninhabited buildings which are otherwise Permitted Activities |
| 2. Structures and buildings on any site where the whole site or a portion of the site falls within the Wellington Fault Overlay are restricted discretionary activities where:  a. Compliance with 14H 2.1(1) cannot be achieved  **Matters of discretion are restricted to:**  1. Safe Separation Distance of Structures and Buildings from the Wellington Fault:   * For all structures and buildings, an engineering report will be required to confirm that the Wellington Fault is not within 20.0m of any proposed structure or building, or that the necessary engineering precautions have been taken. |

AMENDMENT 426 - Add new Rule 14H 2.2 Additions to residential buildings in the Inundation Area, Overland Flow Path or Stream Corridor Flood Hazard Overlays

Rule 14H 2.2 Additions to residential buildings in the Inundation Area, Overland Flow Path or Stream Corridor Flood Hazard Overlays

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| 1. Additions to residential buildings that are within the Inundation Area, Overland Flow Path or Stream Corridor Flood Hazard Overlays are permitted activities where:  a. When located within an Inundation Area of the Flood Hazard Overlay, the finished floor levels of the additions are located above the 1% Flood Annual Exceedance Probability Level, where the finished floor level is to the bottom of the floor joists or the base of the concrete floor slab; and  b. The additions are not located within the Overland Flow Path Overlay; and  c. The additions are not located within the Stream or River Corridor Overlay. |
| 2. Additions to residential buildings that are within the Inundation Area, Overland Flow Path or Stream Corridor Flood Hazard Overlays are restricted discretionary activities where:  a. Compliance with the requirements of 14H 2.~~4~~2(1)(a) cannot be achieved.  **Matters of discretion are restricted to:**  1. The matters in 14H 1.3. |
| 3. Additions to residential buildings that are in the Inundation Area, Overland Flow Path or Stream Corridor Flood Hazard Overlays are restricted discretionary activities where:  a. Compliance with the requirements of 14H 2.~~4~~2(1)(b) cannot be achieved  **Matters of discretion are restricted to:**  1. The matters in 14H 1.4. |
| 4. Additions to residential buildings that are in the Inundation Area, Overland Flow Path or Stream Corridor Flood Hazard Overlays are non-complying activities where:  a. Compliance with the requirements of 14H 2.2(1)(c) cannot be achieved. |

AMENDMENT 427 - Add new Rule 14H 2.3 New residential units, commercial activities or retail activities in the Inundation Area of the Flood Hazard Overlay

Rule 14H 2.3 New residential units, commercial activities or retail activities in the Inundation Area of the Flood Hazard Overlay

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| 1. New residential units, commercial activities or retail activities that are within the Inundation Area of the Flood Hazard Overlay are permitted activities where:  a. When located within an Inundation Area of the Flood Hazard Overlay, the finished floor levels of the building for the Potentially Hazard Sensitive Activity are located above the 1% Flood Annual Exceedance Probability Level, including an allowance for freeboard, where the finished floor level is to the bottom of the floor joists or the base of the concrete floor slab. |
| 2. New residential units, commercial activities or retail activities that are within the Inundation Area of the Flood Hazard Overlay are restricted discretionary activities where:  Compliance with the requirements of 14H 2.3(1)(a) cannot be achieved.  **Matters of discretion are restricted to:**  1. The impact from the 1% Annual Exceedance Probability flood is low due to either the:   * implementation mitigation measures; * the shallow depth of the flood waters within the building; or * type of activity undertaken within the building; and * The risk to people and property is reduced or not increased. |

AMENDMENT 428 - Add new Rule 14H 2.4 New residential units, commercial activities or retail activities that are within the Overland Flowpaths of the Flood Hazard Overlay

Rule 14H 2.4 New residential units, commercial activities or retail activities that are within the Overland Flowpaths of the Flood Hazard Overlay

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| 1. New residential units, commercial activities or retail activities that are within the Overland Flowpaths of the Flood Hazard Overlay are restricted discretionary activities.  **Matters of discretion are restricted to:**  1. The matters in 14H 1.6. |

AMENDMENT 429 - Add new Rule 14H 2.5 New residential units, commercial activities or retail activities that are within the Stream Corridors of the Flood Hazard Overlay

Rule 14H 2.5 New residential units, commercial activities or retail activities that are within the Stream Corridors of the Flood Hazard Overlay

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| 1. New residential units, commercial activities or retail activities that are within the Stream Corridors of the Flood Hazard Overlay are non-complying activities. |

AMENDMENT 430 - Add new Rule 14H 2.6 Additions to buildings within the Coastal Hazard Overlays

Rule 14H 2.6 Additions to Buildings within the Coastal Hazard Overlays

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| 1. Additions to Buildings within the Coastal Hazard Overlays are a permitted activity where:  a. The additions are to a building in the Low Coastal Hazard Area; or  b. The additions are to buildings for any of the following in either the ~~Low Coastal Hazard Area,~~ Medium Coastal Hazard Area or High Coastal Hazard Area:   * Accessory buildings used for non-habitable purposes * Parks facilities * Structures that are non-habitable and that are not used as places of employment; or   c. The additions are in the Medium Coastal Hazard Area and they do not increase the building footprint by more than 50m2. |
| 2. Additions to Buildings within the Coastal Hazard Overlays are a restricted discretionary activity where:  a. Compliance with the requirements of 14H 2.6(1)(c) cannot be achieved; or  b. The addition is to a building within a High Coastal Hazard Area.  **Matters of discretion are restricted to:**  1. The matters in 14H 1.8. |

AMENDMENT 431 - Add new Rule 14H 2.7 New residential units in the Low Coastal Hazard Area

Rule 14H 2.7 New residential units in the Low Coastal Hazard Area

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| 1. New residential units in the Low Coastal Hazard Area are a permitted activity where:  a. The development involves the construction of residential units, the total number of residential units on a site is no more than three. |
| 2. New residential units in the Low Coastal Hazard Area are a restricted discretionary activity where:  a. Compliance with 14H 2.7(1)(a) cannot be achieved.  **Matters of discretion are restricted to:**  1. The matter in 14H 1.9. |

AMENDMENT 432 - Add new Rule 14H 2.8 New residential units in the Medium Coastal Hazard Area

Rule 14H 2.8 New residential units in the Medium Coastal Hazard Area

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| 1. New residential units in the Medium Coastal Hazard Area are a permitted activity where:  a. The total number of residential units on a site is no more than two |
| 2. New residential units in the Medium Coastal Hazard Area are a restricted discretionary activity where:  a. Compliance with 14H 2.8(1)(a) cannot be achieved.  **Matters of discretion are restricted to:**  1. The matters in 14H 1.10. |

AMENDMENT 433 - Add new Rule 14H 2.9 New residential units in the High Coastal Hazard Area

Rule 14H 2.9 New residential units in the High Coastal Hazard Area

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| 1. New residential units in the High Coastal Hazard Area are a permitted activity where:  a. The total number of residential units on a site is no more than two |
| 2. New residential units in the High Coastal Hazard Area are a non complying activity where:  a. Compliance with 14H 2.9(1)(a) cannot be achieved |

AMENDMENT 434 - Add new Rule 14H 2.10 Commercial activities or retail activities that are within the Petone Commercial Activity Area and Suburban Mixed Use Activity Area and within the Medium or High Coastal Hazard Overlays

Rule 14H 2.10 Commercial activities or retail activities that are within the Petone Commercial Activity Area and Suburban Mixed Use Activity Area and within the Medium or High Coastal Hazard Overlays

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| 1. Commercial activities or retail activities that are within the Petone Commercial Activity Area and the Suburban Mixed Use Activity Area and which are also within the Medium or High Coastal Hazard Overlays are a permitted activity where:  a. The activity does not involve the construction of a building that would be occupied by more than 10 employees of the activity, or any members of the public; or  b. The activity does not involve the conversion of an existing building into a building that would be occupied by more than 10 employees of the activity, or any members of the public. |
| 2. New buildings and commercial activities within the Petone Commercial Activity Area and Suburban Mixed Use Activity Area which are also within the Medium or High Coastal Hazard Overlays are a restricted discretionary activity where:  a. Compliance with 14H 2.10(1) cannot be achieved.  **Matters of discretion are restricted to:**  1. The matters in 14H 1.13. |

AMENDMENT 435 - Add new section 14H 2.11 Other Matters

14H 2.11 Other Matters

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| (a) All Permitted and Restricted Discretionary Activities must comply with other relevant Permitted Activity Conditions. |

AMENDMENT 436 - Add new section 14H 3 Anticipated Environmental Results

14H 3 Anticipated Environmental Results

1. Increased public awareness of natural hazards.
2. Reduced level of vulnerability experienced by people and their property in hazard prone areas, through the safe location and construction of all structures and buildings.