# Appendix 3.28.3: Option Evaluation Paper for Natural Environment Workstream

## Natural Hazard Mapping

## Executive Summary

### Issues

1. Life, property, infrastructure, natural resources and the Auckland region economy are at risk from natural hazards such as floods, coastal inundation, storm surge, land instability, cyclones, volcanic eruptions, tsunamis and earthquakes.

2. Identifying natural hazards is an important part of managing their effects on life, property, infrastructure, the environment and the economy. Currently, spatial information on natural hazards across the Auckland region is varied, inconsistent and often does not provide sufficient detail at the house lot scale.

### Strategic Direction (draft Auckland Plan)

3. The draft Auckland Plan sets out 11 strategic directions to achieve the goal of becoming the world's most liveable city. Of the 11 strategic directions set in the plan, strategic direction number 5 is the most relevant to natural hazards:

    *Acknowledge that nature and people are inseparable*

4. Strategic direction 6 is also relevant:

    *Contribute to tackling climate change and increasing energy resilience*

5. Chapter 5 of the draft Auckland Plan focuses on strategic direction number 5. To achieve this direction, targets, priorities, and directives are set. Actions are also outlined and can be seen below in the document. Relevant to natural hazards are:

    Target

    *Increase the proportion of residents who understand their risk from natural hazards and are undertaking measures to mitigate or reduce their risk from 2011 levels (baseline to be determined) to 80% by 2040*

    Priority

    *Build resilience to natural hazards*

    Directives

*5.13 - Take account of environmental constraints as identified on map 5.6 when considering the location and nature of any future development*

*5.14 - Avoid placing communities, infrastructure and lifeline utilities in locations at risk from natural hazards unless the risks are manageable and acceptable*

6. It is also important to note that chapter 6 outlines Auckland's response to climate change. This chapter is important to note as climate change can exacerbate natural hazards, but in itself it is not considered a hazard. This chapter is based more on reducing greenhouse gas emissions and energy efficiency and use.

7. Several overlaps between the natural hazards workstream and other workstreams have been identified through the draft Auckland Plan. This includes overlaps between the built environment workstream (residential, business and growth) as well as the infrastructure workstream.

## Strategic objective

8. To reduce risk to people, development, and infrastructure from natural hazards.

## Assessment of objective

9. The strategic objective outlined above is assessed in this document to see it if is the most appropriate way to achieve the purpose of the Resource Management Act (RMA) 1991. The extent to which it assists Council to carry out its functions in order to achieve the purpose of the RMA is also assessed.

10. As discussed below, the report concludes that the objective does achieve the purpose of the RMA as well as assist Council to carry out its functions.

## Recommended Policy Approach

11. It is recommended that areas subject to natural hazards be identified in order to avoid or mitigate adverse effects on life, property, the environment and the economy.

## Recommended Method

12. It is recommended that option 2 (outlined below) be used. This method would see all natural hazard information kept outside of the Unitary Plan in a detailed and up to date database. Benefits of this approach include:

    - region wide consistency
    - flexibility in the plan

- data can be easily updated, rather than having to update maps through a plan change or variation process
- risks can be communicated to the public at an appropriate scale
- already a wide range of information for use within current hazard and land information databases

## Maori impact statement

Confirm with Jacky.

## Introduction

1. Every year, natural hazards pose significant threat to Auckland communities and cause considerable damage to life, property, infrastructure, natural resources and the economy. These natural hazards include coastal hazards, flooding, land instability and other hazards such as earthquakes and tsunamis.

2. This paper does not provide a complete set of options for all issues related to natural hazards and the Unitary Plan. Rather, this paper is specifically focussed on whether natural hazard maps should be in the Unitary Plan or if all hazard information should be kept in a hazard and land information database. Options for other issues for natural hazards, i.e. rules and overlays/zones, will be presented in separate papers.

3. This issue is considered to be a sensitive issue. This is because of reasons such as the perceived and real effects raised by the public in relation to hazard mapping and property values and uses, Council liability surrounding the provision of information and also the change in direction that Council may want to take in light of the recent Canterbury earthquake sequence. Therefore, a direction is required by Council as to what approach should be taken.

4. The approaches presented in this paper are not significantly different from anything that has been undertaken by a legacy council in Auckland, but it will be a significant change across the region to align and achieve a consistent approach. This is important to achieve as natural hazards do not spatially bound themselves within political boundaries and management needs to be consistent across the region.

5. Under the Resource Management Act 1991 (RMA), Auckland Council has a duty to manage land use and development in order to avoid or mitigate natural hazard effects. Section 35 of the Act also sets out Council's duty to gather information, monitor and keep records including information on natural hazards.

6. Identifying and mapping natural hazards provides Council with the ability to provide the public with information about natural hazards that may affect them in someway. This could help to reduce or mitigate the risk that natural hazards pose to the public as well as reduce Council's liability.

7. Mapping natural hazards is however very contentious in terms of the effects hazard maps can have on property values and the use of land. This is especially so if natural hazard maps are used in a statutory way, such as within the Unitary Plan. Other options for providing information on natural hazards include using other methods such as council wide databases to LIMs and PIRs as well as for education and advocacy purposes.

8. Effective mapping of natural hazards is also very dependent on the quality and extent of the data. Significant issues currently exist in relation to the spatial information Auckland Council holds on natural hazards. This includes the varying quality and extent of the data and also the inconsistent scales and methodologies used in the mapping.

9. If used in a regulatory way, hazard maps within the Unitary Plan would have to be at the house lot scale to ensure the data is defendable under litigation. If not used in a regulatory manner, the function of natural hazard maps in the Unitary Plan comes under question in terms of if it is most appropriate here.

10. Mapping natural hazards also presents Council with implementation and operational issues including the reduced ability to update maps if they are included within a statutory plan. Questions also exist around the extent to which the maps should be used to control the use and development of land.

## Issues

11. Life, property, infrastructure, natural resources and the Auckland region economy are at risk from natural hazards such as floods, coastal inundation, storm surge, land instability, cyclones, volcanic eruptions, tsunamis and earthquakes.

12. Identifying natural hazards is an important part of managing their effects on life, property, infrastructure, the environment and the economy. Currently, spatial information on natural hazards across the Auckland region is varied, inconsistent and often does not provide sufficient detail at the house lot scale.

## Strategic Direction (from draft Auckland plan)

13. The draft Auckland Plan is the strategy to make Auckland the world's most liveable city. The draft Auckland Plan sets out a bold programme of transformational shifts to secure the region's future as a globally competitive city by 2040.

14. The draft Auckland Plan sets out a series of outcomes, principles, transformational shifts and strategic directions in a bid to achieve its vision of becoming the world's most liveable city. The following discusses those relevant to natural hazards only.

15. Of the outcomes listed by the draft Auckland Plan, none are specific to natural hazards. However, outcome 1 "A fair, safe and healthy Auckland" and outcome 4 "A well connected and accessible Auckland" could be stretched to relate to some of the fundamentals of communities resilient against natural hazards.

16. None of the principles outlined in the draft Auckland Plan are considered to be relevant to natural hazards.

17. "Strongly commit to environmental action and green growth" is the only transformational shift that could be considered relevant to natural hazards. This shift includes taking a different approach to development, decreasing greenhouse gases,

and protecting and restoring the natural environment. Under these issues, natural hazards are important to take into consideration.

18. The draft Auckland Plan sets out 11 strategic directions that are underpinned by a series of targets, priorities, directives and actions.

19. Strategic direction 5 “Acknowledge that nature and people are inseparable” is the most relevant to natural hazards. Strategic direction 6 “Contribute to tackling climate change and increasing energy resilience” is also related to natural hazards. These will be discussed separately below.

**Chapter 5 – Auckland’s Environment**

20. In this chapter, the strategic direction “Acknowledge that nature and people are inseparable” has one target that is specifically related to natural hazards. This target is:

> *Increase the proportion of residents who understand their risk from natural hazards and are undertaking measures to mitigate or reduce their risk from 2011 levels (baseline to be determined) to 80% by 2040*

21. This target is broad in that it can be addressed in many ways by Auckland Council. This includes preparing communities through civil defence measures as well as communicating natural hazard risks to property owners through the consent process.

22. Priority 4 under the above target is:

> *Build resilience to natural hazards*

23. This priority is directly related to the target as resilience to natural hazards will be built through increasing understanding natural hazards and undertaking measures to mitigate or reduce risk.

24. Directives 5.13 and 5.14 also come under priority 4:

> 5.13 – *Take account of environmental constraints as identified on map 5.6 when considering the location and nature of any future development*
>
> 5.14 – *Avoid placing communities, infrastructure and lifeline utilities in locations at risk from natural hazards unless the risks are manageable and acceptable*

25. These directives are key processes that Council needs to utilise to build resilient communities that understand the risks of natural hazards. These directives will require significant research by Council to sufficiently identify environmental constraints at an appropriate scale in order to avoid or mitigate risks.

26. The following actions, including details of delivery lead, key stakeholders and timing, are listed in the draft Auckland Plan and will be important in achieving the strategic direction through the Unitary Plan.

| Actions | Delivery Lead | Key Stakeholders | Timing |
|---|---|---|---|
| Account for environmental constraints, as identified on map 5.5, when considering the location and nature of future growth and development. | Auckland Council | Central Government | 2011- 2013 for Unitary Plan development - ongoing |
| Improve community awareness and preparedness to natural hazard risk. | Auckland Council | Central Government | Ongoing |
| Evaluate natural hazards based on the risk they pose to communities and develop strategies and regulatory mechanisms to avoid or mitigate their effects. | Auckland Council | Central Government | 2011- 2013 for Unitary Plan development - ongoing |
| Develop and put in place programmes to protect and restore natural defence systems where possible (e.g. dunes), that reduce the risk from natural hazards. | Auckland Council | DOC, community | 2015 - ongoing |
| Ensure that the effects of climate change are taken into account when managing natural hazard risk. | Auckland Council | Central Government | Ongoing |

27. This mix of targets, priorities, directives, and actions sets the scene for issues surrounding natural hazards and how their effects are to be managed.

28. Underpinning each of the above is the concept of risk. A strategic policy framework in the technical document supporting chapter 5 outlines a framework based on risk assessment, risk management and risk communication; all of which are fundamental in building resilience and achieving the strategic direction.

29. It is obvious from the draft Auckland Plan that Auckland Council is heading towards a framework of risk management and building resilient communities.

**Chapter 6 – Auckland's Response to Climate Change**

30. Climate change is not a natural hazard in itself but it can exacerbate other hazards such as coastal inundation and flooding.

31. This chapter does not specifically mention natural hazards, but it is important to recognise the overlap between this chapter and natural hazards in general.

32. The adaptation and mitigation directives outlined in this chapter are mainly related to reducing greenhouse gas emissions and energy use. These processes will have a great impact on reducing natural hazard risk in Auckland.

**Overlaps with other workstreams**

33. Several overlaps have been identified across workstreams. This includes the:

**Built Environment Workstream** – Auckland's Housing (chapter 9)

- This chapter contains priorities that overlap with the natural hazard workstream. Priority 1 – "Increase housing supply to meet demand" overlaps significantly with natural hazard issues as new land for development or redevelopment needs to take into consideration natural hazards, as specified in directives 5.13 and 5.14 above.
- This is especially relevant to growth areas as well as general resource consent procedures which require natural hazards to be avoided or mitigated.

**Infrastructure Workstream** – Auckland's Physical and Social Infrastructure (chapter 10)

- Strategic Direction 10 - "Plan, deliver and maintain quality infrastructure to make Auckland liveable and resilient" significantly overlaps with natural hazard issues. Recent events such as the Maui gas leak and the Canterbury earthquake sequence have shown how natural hazards can impact communities, showing that resilience needs to be built into communities to reduce vulnerabilities.
- Priority 1 "Water, wastewater and Stormwater – Optimise, integrate and align land use with water service provision and planning" and Priority 2 "Energy and telecommunications – Protect, optimise, align and provide for energy and telecommunications infrastructure" signal the intentions of Auckland Council to take natural hazards into consideration when dealing with infrastructure.

## RMA implications

34. This section of the report assesses the RMA implications of giving effect to the strategic directions in the draft Auckland Plan.

35. There are no fundamental conflicts between the RMA's purpose and the strategic directions related to natural hazards as set out in the draft Auckland Plan.

36. It must however be noted that changes to the RMA are in pipeline in response to the Canterbury earthquake sentence. There has also been word of an NPS on natural hazards being developed in the next few years. These factors could significantly change the ways in which natural hazard risks are managed in Auckland and New Zealand.

**Resource Management Act, 1991**

37. The purpose of the RMA is to promote the sustainable management of natural and physical resources by managing their use, development, and protection. Avoiding, remedying, or mitigating adverse effects of activities on the environment includes considering natural hazards and how in order to avoid or mitigate their effects.

38. As included in section 1 of the Act, natural hazards means:

> *any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment*

39. The draft Auckland Plan also promotes the sustainable management of natural and physical resources as well as avoiding or mitigating the risks of natural hazards to life, property, infrastructure and the environment.

**Building Act, 2004**

40. The purpose of the Building Act 2004 (BA) is to improve control of, and encourage better practices in, building design and construction. In relation to natural hazards, this is to ensure that "…buildings are designed, constructed, and able to be used in ways that promote sustainable development".

41. This includes ensuring that development considers the environmental considerations of the area and avoiding or mitigating the effects of natural hazards.

42. This aligns with the direction set in the draft Auckland Plan to take environmental considerations in account for future development as well as avoiding risks from natural hazards unless they are manageable and acceptable.

**Civil Defence Emergency Management Act, 2002**

43. The purpose of the Civil Defence Emergency Act 2002 (CDEMA) is to promote the sustainable management of hazards. This is largely related to the functions of Civil Defence in terms of planning for events and response and recovery.

44. This aligns with the draft Auckland Plan as the natural hazards target is to increase the proportion of residents who understand their risk and are mitigating or reducing their risk.

## Strategic Objective

45. To reduce risk to people, development, the environment, and infrastructure from natural hazards.

## Assessment of Objective

**The extent to which the objectives are the most appropriate way to achieve the purpose of the Resource Management Act**

46. This section of the report assesses the extent to which the proposed objectives are the most appropriate way to achieve the purpose of the RMA, as set out in sections 5, 6, 7 and 8.

47. The purpose of the RMA 1991 is to promote the sustainable management of natural and physical resources. Sustainable management, in section 5(2), means managing the use, development and protection of natural and physical resources.

48. The objective achieves the purpose of the Act as it is about protecting natural and physical resources to enable communities to provide for their social, economic, and cultural well-being and for their health and safety. Managing land use activities such as use, development and protection is key in being able to avoid or mitigate the effects of natural hazards.

49. The objective does have particular relevance to section 7, other matters, as the objective seeks to maintain and protect natural and physical resources through reducing risk from natural hazards. This will have benefits to amenity values, social and cultural wellbeing and the characteristics of natural and physical resources. The effects of climate change, section 7(i) is also inherent within the objective.

**The extent to which the objectives assist council to carry out its functions in order to achieve the purpose of the Resource Management Act**

50. This section of the report assesses the extent to which the proposed objective assists the council to carry out its functions (under sections 30, 31, 59, 61(1), 63, 66(1), 72, 74(1)) in order to achieve the purpose of the Resource Management Act 1991. Auckland Council is a unitary authority, and has the functions of both a regional council and a territorial authority, which includes developing and administering a fully combined Resource Management Act document.

| **Strategic objective:**<br><br>To reduce risk to people, development, the environment, and infrastructure from natural hazards. | |
|---|---|
| **Section 30**<br><br>**(Functions of regional councils)** | Under section 30 of the RMA, regional councils have specific functions for the purpose of giving effect to the RMA. This includes the control of land for the purpose of avoiding or mitigating natural hazards.<br><br>The objective assists Council to carry out its functions under section 30 to achieve the purpose of the RMA as natural hazard risk is reduced to ensure physical and natural resources, as well as social well-being, is sustainably managed. |
| **Section 31**<br><br>**(Functions of territorial authorities)** | Under section 31 of the RMA, territorial authorities have specific functions for the purpose of giving effect to the RMA. This includes the control of any actual or potential effects of the use, development, or protection of land, including for the purpose of avoiding or mitigating natural hazards.<br><br>The objective assists Council to carry out its function under section 31 as controlling the effects of the use, development or protection of land will enable the reduction of the risk natural hazards pose. |
| **Section 35**<br><br>**(Duty to gather information, monitor, and keep records)** | Under section 35 of the Act, all local authorities have a duty to gather information as is necessary to carry out effectively its functions. This includes s.35(5)(j) – records of natural hazard to the extent that the local authority considers appropriate for the effective discharge of its functions.<br><br>The objective assists Council to carry out its function under section 35 as monitoring natural hazards and keeping detailed records enables Council to effectively communicate risk to the |

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| | public. This will enable sustainable management of natural and physical resources as well as ensure the well-being of Auckland communities. |
| **Section 59 and 61(1)**<br><br>**(Regional policy statements)** | Sections 59 and 61 of the Act outline the purpose of regional policy statements and what matters they are to include. From the assessments above, the objective is consistent with the purpose of a regional policy statement. |
| **Section 63 and 66(1)**<br><br>**(Regional council plans)** | Sections 63 and 66 of the Act outline the purpose of regional plans and what matters are to be considered. These sections do not specifically mention natural hazards, but as seen in the Auckland Regional Plan: Coastal, provisions on coastal natural hazards are included. |
| **Section 72 and 74(1)**<br><br>**(Purpose of district plans)** | As previously considered in section 31 above, the objective assists Council to carry out its functions as a territorial authority, for the purpose of giving effect to the Resource Management Act 1991. |

## Recommended Policy Approach

**Identify areas subject to natural hazards in order to avoid or mitigate adverse effects**

51. Under sections 30 and 31 of the Act, one of the functions of Auckland Council is to avoid and mitigate the effects of natural hazards through controlling the use, development and protection of land. Identifying areas that may be affected by natural hazards is crucial in being able to avoid or mitigate the effects.

52. Section 35 of the Act also states that Auckland Council has a duty to gather information, monitor, and keep records relating to natural hazards, to the extent that the Council considers appropriate for the effective discharge of its functions.

53. Identifying areas affected by natural hazards is central in communicating risk to the public, and specifically property owners, to avoid and mitigate their effects as well as achieve the draft Auckland Plan's priority of building resilience.

54. Hazards including flooding, coastal hazards and land instability are already commonly identified by Auckland Council through the consent process and historical records. Other hazards such as earthquakes (fault lines and liquefaction areas) and tsunamis are more dependent on primary research being undertaken by Council.

55. Methods for how identified data can be managed, and communicated, are outlined below.

| Benefits/Advantages | Costs/Disadvantages |
|---|---|
| • Hazard risk can be communicated more effectively if natural hazard areas identified<br>• Mitigate and avoid natural hazard effects<br>• Achieves the functions set out in the RMA<br>• Protect land owners/users from the effects of natural hazards | • Perceptions of cost to landowners in the interim |

## Methods

56. As a primary function, Auckland Council is required to identify areas subject or prone to natural hazards as well as manage this information for public use. Identifying sites subject to natural hazards is primarily a method for communicating hazard risk to the public to ensure the effects of natural hazards can be avoided or mitigated.

57. Communicating natural hazard risk information can be achieved through several methods. This includes mapping areas at risk for use within statutory plans, such as the Unitary Plan, or by maintaining a detailed hazard and land information database that can be used during the consent process or public enquiries i.e. LIMs.

### Option 1 - Status Quo - Include all hazard maps used currently in the Unitary Plan

58. This option involves including hazard maps in the Unitary Plan. This would include all maps that are currently used within the legacy district and regional plans.

59. As the approach across the legacy councils varied greatly, this means that some areas in the region will have a lot more mapping than others. For example, coastal hazard maps for areas such as the Kaipara harbour, the west coast and upper reaches of tidal inlets have not been mapped before and will not be able to be mapped in time for the notification of the Unitary Plan.

60. As several councils did not map natural hazards in their plans, current hazard and land information databases would need to be kept.

61. This method will allow for more hazard maps to be included within the Unitary Plan at a later date when information is available. These will have to be included by way of a plan change or variation.

| Benefits/Advantages | Costs/Disadvantages |
|---|---|
| • Little cost to incorporate into Unitary Plan | • Inconsistent mapping coverage across the region<br>• Different databases in use and different types of information stored in databases<br>• Inconsistent methodologies used which would provide a poor basis for implementing any land use controls<br>• Inconsistent and patchy mapping could be misleading and mean that non-mapped areas are perceived to be safe<br>• Will require an upgrade of hazard and land databases in the future<br>• Maps included in plan are hard to change/update - a lot of the maps are likely to be out of date<br>• Need to undergo plan change when new information is to be included or updated |

**Option 2 - No natural hazard maps in Unitary Plan**

62. This option would mean that no natural hazard maps would be included in the Unitary Plan.

63. Areas affected by, or prone to, natural hazards would still continue to be identified by Council. This would occur through primary research undertaken by Council and also through the consent process i.e. requiring a geotechnical report for subdivisions.

64. All natural hazard information would be kept within Council's internal set of hazard and information databases. These databases are a remnant of the legacy councils and will remain until a centralised single database can be implemented.

65. This method was commonly used by the legacy councils. Subsequently a wide range of information from these databases is now available to Auckland Council to implement a consistent approach to manage the effects of natural hazards.

| Benefits/Advantages | Costs/Disadvantages |
|---|---|
| • Unitary Plan would be streamlined – no inconsistent or "patchy" mapping within plan<br>• Little cost involved to Council in implementing this approach<br>• Wide range of information already available to be used<br>• Easier to update and include new | • Different databases in use<br>• Different types of information stored in databases<br>• Reduce scope for public participation under RMA<br>• Will require an upgrade of hazard and land databases in the future<br>• Need legal opinion on Council liability |

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|---|---|
| hazard information if kept internally. If in a statutory document such as the Unitary Plan. No plan change process required<br>• Wide range of information can be provided to public on hazards through database<br>• Unlikely to receive legal challenges<br>• Be less regulatory, have more flexibility within plan<br>• Costs fall primarily on landowner for land use activities within a hazard risk area<br>• Plan provisions do not need to have associated maps to be effective | |

**Option 3 - Include hazard maps in the Unitary Plan if they meet specific criteria**

66. The scale at which hazard maps are included in the Unitary Plan will greatly affect their effectiveness. Often, hazard maps need to be at the house lot scale to ensure their usefulness as well as to defer legal challenge. Many hazard maps are currently at a scale too coarse to be included in the Unitary Plan, especially maps provided by the legacy ARC.

67. Hazard maps could be used in the Unitary Plan if they meet a select set of criteria. These criteria would be based on the spatial extent of maps, methodology used, quality of the data and how up to date the data is.

68. Maps not included in the Unitary Plan would be kept in existing databases until more research to update maps could be done.

69. This method will allow for more hazard maps to be included within the Unitary Plan at a later date when information is available. These will have to be included by way of a plan change or variation.

| **Benefits/Advantages** | **Costs/Disadvantages** |
|---|---|
| • Would inform where more mapping research needs to be done<br>• Little work would be needed to implement this option over the next year, but would result in large amounts of work (and cost) in the future to include new maps<br>• Increased public awareness<br>• Provide information to all parties who view plan on research high risk localities i.e. Orewa, east coast cliffs, city centre | • Using criteria would mean that few maps would be included – little purpose in including so few<br>• Mapping only certain areas may mislead the public into thinking non-mapped areas are not at risk<br>• Mapping certain areas only, i.e. coastal areas, might result in more challenges due to increased property values<br>• Would not be a streamlined or consistent approach |

| | |
|---|---|
| • Would begin implementation of NZCPS requirements | • May be difficult to introduce consistent land use controls. Also, plan provisions do not need to have associated maps to be effective<br>• Relies on the consent process<br>• Maps included in plan are hard to change/update<br>• Need to undergo plan change when new information is to be included or updated<br>• Likely to be the most expensive option over time due to cost of plan changes, challenges and research requirements<br>• Mapping hazard still requires background and other information to be kept in a database somewhere<br>• Costs doubled if maps and databases used<br>• Maps can be misleading and not provide all the information required to make an assessment |

## Recommended Methods

70. Option 2 is the recommended method to implement the recommended policy approach.

71. It is recommended that no natural hazard maps are included in the Unitary Plan. This is because:

- The Unitary Plan will be streamlined in its approach to managing the effects of natural hazards rather than implementing patchy, out-of-date data that is varied in spatial extent and methodologies
- There is little cost to Council to implement this method. This option is also not likely to result in challenges from the public but risks can still be communicated through information that is stored outside the plan
- A wide range of information is already available in hazard and land information databases across the region as this was the most common method used by the legacy councils
- Hazard information that is stored outside the Unitary Plan can still be used effectively to ensure natural hazard effects are avoided and mitigated. Storing this information outside the plan will also mean that the information is easier to update as no plan change process is required
- This method is also less regulatory and will allow for more flexibility within the plan

- The risks of all natural hazards to the Auckland region will be able to be consistently communicated