

Natural Features and Landscapes (NFL)

Amended to comply with National Planning Standards September 2022

Issues

Landforms, the coast, [rivers](#) and [wetlands](#), and vegetation, ranging from natural indigenous areas to cultivated pasture, combine to form a variety of landscapes within Whangarei District. These are further defined by the way [buildings](#), [roads](#) and other [structures](#) are set amongst them. The varied combinations of natural and built elements provide a complexity that further characterises landscapes.

A diverse range of coastal landscapes is one of the strongest aspects of Whangarei District's identity. The expansive view of the Bream Bay shore with its Whangarei Heads backdrop that greets those entering the District over the Brynderwyn Hills, is a particularly striking visual introduction. Similarly, Pukenui Forest and Parihaka combine in creating a defining frame to Whangarei's central business area, while bush clad hill country, volcanic cones, extensive farmed flats, the fluent course of [rivers](#) and streams, and the influence of pockets of [indigenous vegetation](#), create a varied and interesting rural landscape that is often distinctive to Whangarei.

Human activities such as [buildings](#), [earthworks](#) and [vegetation clearance](#) can act to reduce the quality of landscapes. Special attention needs to be given to ensuring [subdivision](#), use and development is sensitive to the particular landscape characteristics of the District, especially in areas where the collective characteristics and qualities are outstanding.

On the coast, the interaction between [land](#) and sea often provides a dynamic and scenic [environment](#), and is also a popular place to live and visit. Pressures related to natural landscapes therefore tend to be more explicit in coastal areas than in rural or urban areas – though inland landscapes also face pressure. Catering for the needs of recreational users, and increasing demands for residential and lifestyle block [subdivisions](#), places considerable strain upon areas of the coast that have significant landscape values.

The Resource Management [Act](#) 1991 (RMA) requires Councils to protect Outstanding Natural Features and Landscapes from inappropriate [subdivision](#), use and development (section 6(b)). The New Zealand Coastal Policy Statement 2010 (NZCPS) reinforces this duty as it applies to the coastal [environment](#) (Coastal Area) It requires that district plans identify where protection of Outstanding Natural Features and landscapes is needed (NZCPS Policy 15). The New Zealand Coastal Policy Statement also expressly requires that adverse [effects](#) of activities on Outstanding Natural Features and Landscapes within the coastal [environment](#) be avoided.

Natural features are significant [land](#) (or [water](#)) features resulting from natural processes. Examples include mountain ranges, volcanic cones, coastal dunes, [lakes](#), [rivers](#) and native forests. These features are an integral part of the District's landscape and on their own can significantly contribute to, or even define, the unique character and quality of an area.

Individual Outstanding Natural Features and Outstanding Natural Landscapes within the Whangarei District were identified and mapped as part of a regional mapping project undertaken in 2012.

Outstanding Natural Features were identified using an inventory of important geological [sites](#) and landforms in the Northland Region prepared by the Geological Society of New Zealand. The inventory identifies the best examples of the region's unique geology and landforms, including those in the Whangarei District, using the knowledge and advice of specialist New Zealand geological, geomorphological and soil science communities.

Outstanding Natural Landscapes were separately identified and mapped using best landscape assessment practice criteria which encompass natural science factors, aesthetic values and experiential values.

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Some areas are identified as being outstanding as both a natural feature and as a natural landscape.

Some Outstanding Natural Landscapes contain ancestral Māori Land, as defined under Te Ture Whenua Act 1993. This [land](#) is ancestral [land](#) and, through Māori culture and traditions, is the central focus of Papakāinga and other development opportunities for the iwi, [hapū](#) and/or whanau concerned. Protection of Outstanding Natural Landscapes containing such [land](#) therefore needs to be carefully balanced against the requirements of Resource Management [Act](#) s6(e), s7(a) and s8.

The objectives, policies and rules for Outstanding Natural Features and Outstanding Natural Landscapes as set out below, apply in addition to the rules for the underlying zones (e.g. Rural Production Zone, Settlement Zone and [Residential Zones](#)).

Objectives	
NFL-O1 – Identification	Identify Outstanding Natural Features and Outstanding Natural Landscapes within the Whangārei District.
NFL-O2 – Protection	Protect the characteristics and qualities of identified Outstanding Natural Features and Outstanding Natural Landscapes from inappropriate subdivision , use and development.
NFL-O3 – Coastal Environment	Provide greater protection for identified Outstanding Natural Features and Outstanding Natural Landscapes within the coastal environment over other features and landscapes.
NFL-O4 – Conservation, Enhancement and Rehabilitation	Promote the conservation, enhancement and rehabilitation of Outstanding Natural Features and Outstanding Natural Landscapes.
NFL-O5 – Existing Land Use and Development	Recognise existing land use and development, including regionally significant infrastructure , form part of the characteristics and qualities of the environment where they are located in or on Outstanding Natural Features and Outstanding Natural Landscapes.
NFL-O6 – Māori Land	Recognise that some Outstanding Natural Landscapes contain undeveloped Māori Land and provide for the special relationship of Māori to this ancestral land .
NFL-O7 – National Grid Electricity Infrastructure	Recognise and provide for new and existing National Grid Electricity Infrastructure that has a functional need or operational need to be located in an Outstanding Natural Landscape or on an Outstanding Natural Feature.
Policies	
NFL-P1 – Identification	To identify the location and extent of the District's Outstanding Natural Features and Outstanding Natural Landscapes, on the District Plan Resource Maps and describe their characteristics and qualities in landscape

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	assessment worksheets (Outstanding Natural Landscapes) and NFL - Appendix 1 Outstanding Natural Features.
NFL-P2 – Protection	To protect Outstanding Natural Features and Outstanding Natural Landscapes from inappropriate subdivision , use and development, with particular regard to their individual characteristics and qualities.
NFL-P3 – Avoid Adverse Effects Within Coastal Environment	Within the Coastal Environment, to avoid adverse effects of subdivision , use and development on the characteristics and qualities of Outstanding Natural Features and Outstanding Natural Landscapes by controlling subdivision and restricting earthworks , mineral extraction , the extent of vegetation clearance , and rural production activities , and the location and design of buildings and structures including in relation to ridgelines, skylines and prominent headlands.
NFL-P4 – Avoid Significant Adverse Effects Outside of Coastal Environment	Outside of the Coastal Environment, to avoid significant adverse effects and avoid, remedy or mitigate other adverse effects (including cumulative adverse effects) of subdivision , use and development on the characteristics and qualities of Outstanding Natural Features and Outstanding Natural Landscapes.
NFL-P5 – Subdivision, Use and Development of an Outstanding Natural Landscape	<p>Subdivision, use and development in or on an Outstanding Natural Landscape shall be located and designed to avoid, adverse effects on characteristics and qualities of the landscape and/or visual effects by:</p> <ol style="list-style-type: none"> 1. Being integrated with identified characteristics and qualities of Outstanding Natural Landscapes; 2. Avoiding sensitive landforms such as ridgelines, headlands and peninsulas; 3. Being responsive to natural contours; 4. Being visually unobtrusive; 5. Maintaining established areas and patterns of indigenous vegetation cover; and 6. Avoiding permanent earthworks scarring.
NFL-P6 – Effects of Subdivision, Use and Development	<p>To assess the scale and significance of effects of subdivision, use and development on the characteristics and qualities of Outstanding Natural Features and Outstanding Natural Landscapes by having particular regard to:</p> <ol style="list-style-type: none"> 1. The extent of the resource area affected; 2. The sensitivity of resource to change, recognising the effects of existing land use; 3. The degree of modification, damage, loss or destruction that will result from the activity; 4. The duration and frequency of adverse effects;

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	<ol style="list-style-type: none"> 5. Whether adverse <u>effects</u> are reversible or irreversible; 6. Whether adverse <u>effects</u> are minor or transitory; 7. The potential for spatial or temporal cumulative adverse <u>effects</u> of the proposed activity on its own or in combination with other authorised activities, including permitted activities; and 8. Any restoration, rehabilitation or enhancement of the specific characteristics and qualities of the particular Outstanding Natural Feature or Outstanding Natural Landscape affected by the activity.
NFL-P7 – Earthworks, Vegetation Clearance and Built Development	<p>The location, scale and form of <u>earthworks</u>, <u>vegetation clearance</u> and built development in or on an Outstanding Natural Feature shall not reduce the overall form, integrity and extent of the feature and shall take into account the vulnerability of the feature to modification.</p>
NFL-P8 – Coastal Hazard Management	<p>With respect to coastal hazard management within the Coastal Environment, avoid the use of hard protection <u>structures</u> such as seawalls and rock armouring along with other visible artificial elements where these would adversely affect the characteristics and qualities of the Outstanding Natural Features and Outstanding Natural Landscapes, except where such <u>structures</u> are the only practical means to protect significant existing development or <u>infrastructure</u>.</p>
NFL-P9 – Building, Structures and Regionally Significant Infrastructure	<p><u>Buildings</u> and <u>structures</u>, excluding <u>land</u> zoned as a <u>Residential Zone</u> or Settlement Zone Residential Sub-Zone, and <u>regionally significant infrastructure</u>, in Outstanding Natural Landscapes shall be located and designed so that they:</p> <ol style="list-style-type: none"> 1. Are inconspicuous when viewed from public <u>land</u>; 2. Avoid locating upon, or intruding above, ridgelines, headlands and peninsulas where this results in adverse visual <u>effects</u> which cannot be remedied or mitigated; 3. Are visually recessive and blend with the surrounding vegetation and natural topography 4. Use recessive colours and materials with low light reflectivity; 5. Minimise artificial light spill.
NFL-P10 – Buildings and Structures on Land Zoned Residential and Settlement Zone Residential Sub-Zone	<p>To provide for <u>buildings</u> and <u>structures</u> on <u>land</u> zoned as a <u>Residential Zone</u> or Settlement Zone Residential Sub-Zone within an identified Outstanding Natural Landscape where any <u>building</u> or <u>structures</u> located and designed to:</p> <ol style="list-style-type: none"> 1. Avoid locating upon, or intruding above, ridgelines, headlands and peninsulas where this results in adverse visual <u>effects</u> which cannot be remedied or mitigated.

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	<ol style="list-style-type: none">2. Blend, as far as practicable, with the surrounding vegetation and natural topography accepting that there may be existing built development that affects or precludes this.3. Use recessive colours and materials with low light reflectivity; and4. Minimise artificial light spill.
NFL-P11 – Regionally Significant Infrastructure and Community Facilities	<p>To provide for adverse effects arising from the establishment and operation of regionally significant infrastructure and community facilities, excluding National Grid Electricity Infrastructure, in or on Outstanding Natural Features or Outstanding Natural Landscapes where:</p> <ol style="list-style-type: none">1. It is demonstrated that there is no practical alternative location;2. Regard has been had to policies NFL-P3 - 5, and taking into account policies NTW-P10 - 15 in the Network Utilities chapter.3. Measures are in place to avoid adverse effects, and adverse effects that cannot be avoided are remedied or mitigated to the extent that they are no more than minor. <p><i>Note:</i></p> <ol style="list-style-type: none">1. <i>For the purposes of this policy: Regionally significant infrastructure means those structures and facilities listed within Appendix 3 Regional Significant Infrastructure of the Regional Policy Statement for Northland; and community facilities include district parks, reserves and network infrastructure including roading.</i>
NFL-P12 – National Grid Electricity Infrastructure	<p>To recognise and provide for the operation, maintenance and upgrading of existing National Grid Electricity Infrastructure in an Outstanding Natural Landscape or on an Outstanding Natural Feature.</p>
NFL-P13 – Major Upgrades and Development of National Grid Electricity Infrastructure	<p>To recognise and provide for major upgrades of existing and the development of new National Grid Electricity Infrastructure in an Outstanding Natural Landscape or on an Outstanding Natural Feature by managing adverse effects:</p> <p>On the qualities and characteristics of Outstanding Natural Landscapes and Outstanding Natural Features.</p> <p>By:</p> <ol style="list-style-type: none">1. Ensuring route, site and method selection demonstrates that, to the extent practicable having regard to the functional, operational and technical needs of the National Grid, in order of preference:<ol style="list-style-type: none">a. Infrastructure will be located:<ol style="list-style-type: none">i. Outside of Outstanding Natural Landscapes and Outstanding Natural Features, or if not then;

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	<ul style="list-style-type: none"> ii. Outside of any part of an Outstanding Natural Landscapes and Outstanding Natural Features within the Coastal Environment. b. <u>Infrastructure</u> will be located in the more compromised parts of the areas in (i); c. Techniques (such as <u>structure</u> selection) will be used to avoid adverse <u>effects</u>; d. Adverse <u>effects</u> that cannot be avoided will be remedied or mitigated. <p>While</p> <ul style="list-style-type: none"> 2. Recognising that: <ul style="list-style-type: none"> a. In some circumstances, adverse <u>effects</u> on the identified qualities and characteristics of Outstanding Natural Landscapes and Outstanding Natural Features will need to be avoided; b. A minor or transitory effect may not be an adverse <u>effect</u>; c. There may be more than minor cumulative <u>effects</u> from minor or transitory <u>effects</u>; and d. Many areas contain ongoing use and development that was present when the area was identified as Outstanding or have subsequently been lawfully established.
NFL-P14 – Large Scale Earthworks	To avoid large scale <u>earthworks</u> , including <u>mineral extraction</u> , in or on Outstanding Natural Features and Outstanding Natural Landscapes and manage adverse <u>effects</u> of other <u>earthworks</u> through permitted activity standards and consent requirements.
NFL-P15 – Adverse Effects of Earthworks	<p>To avoid the adverse <u>effects</u> of <u>earthworks</u>, including accessway and <u>building</u> platform creation, on the characteristics and qualities of the Outstanding Natural Features and Outstanding Natural Landscapes by:</p> <ul style="list-style-type: none"> 1. Careful analysis of existing <u>site</u> conditions; 2. Consideration of alternative options and approaches; and 3. Applying measures to blend areas altered by <u>earthworks</u> with the existing <u>site</u> conditions. <p><i>Note:</i></p> <ul style="list-style-type: none"> 1. <i>Relevant <u>site</u> conditions include <u>site</u> elevation, slope and orientation drainage patterns, together with soil and slope stability.</i>
NFL-P16 – Cut and Fill Batters	To ensure that adverse visual <u>effects</u> of cut and fill batters in Outstanding Natural Landscapes are remedied or mitigated by requiring revegetation where this is consistent with local landscape character and is practicable.

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NFL-P17 – Indigenous Vegetation	To protect areas of indigenous vegetation which contribute to the slope or soil stability of Outstanding Natural Features or the character and visual quality of Outstanding Natural Landscapes.
NFL-P18 – Remediation of Adverse Effects	To encourage the remediation of the adverse effects from past or existing inappropriate land use activities on Outstanding Natural Landscapes.
NFL-P19 – Development Proposals that Enhance and Rehabilitate	To recognise the positive effects of development proposals that provide for the enhancement and rehabilitation of previously compromised localised areas within Outstanding Natural Landscapes.
NFL-P20 – Regulatory Incentives and Non-Regulatory Methods	To promote the active management, enhancement, and voluntary protection of Outstanding Natural Features and Outstanding Natural Landscapes by utilising regulatory incentives and non-regulatory methods including: <ol style="list-style-type: none">1. Provision of guidelines for landowners and professional advisors on appropriate landscape assessment and effects management options within Outstanding Natural Landscapes;2. Provision of a Council contribution toward the cost of professional landscape assessments required under NFL-REQ1;3. Provision, through assessment criteria, for additional allotments to be approved during the subdivision application process if formal protection of all or part of an Outstanding Natural Feature or Outstanding Natural Landscapes is proposed;4. Provision of rates relief for covenanted areas within Outstanding Natural Features and Outstanding Natural Landscapes; and5. In partnership with the Northland Regional Council, assisting with landowner costs of pest control and/or fencing for exclusion of stock from Outstanding Natural Features or Outstanding Natural Landscapes.
NFL-P21 – Existing Subdivision, Use and Development	To recognise that identified Outstanding Natural Features and Outstanding Natural Landscapes may contain existing and/or authorised subdivision , use and development, including infrastructure and rural production activities .
NFL-P22 – Existing Land Use and Development	To provide for the maintenance and minor upgrading of existing authorised land use and development in or on Outstanding Natural Features or Outstanding Natural Landscapes, wherever it is located, where: <ol style="list-style-type: none">1. The adverse effects generated during the period the maintenance or minor upgrading is being undertaken are not significant; and2. The adverse effects of the land use and development after the conclusion of the maintenance or minor upgrading are the same or similar to those that existed before the activity was undertaken.

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NFL-P23 – Papakāinga Development

To recognise that Outstanding Natural Landscapes may contain undeveloped ancestral Māori [land](#) and provide for [tangata whenua](#) needs for Papakāinga development on that [land](#) as far as is consistent with the overall protection of Outstanding Natural Landscapes.

Guidance Note

1. The following shall form the basis for resource consent applications in the NFL:
 - a. The objectives, policies and provisions for Natural Features and Landscapes.
 - b. The objectives, policies and provisions for CE Coastal Environment, for Outstanding Natural Landscapes and Outstanding Natural Features in the Coastal Environment.
 - c. The Strategic Direction objectives and policies.
 - d. The objectives policies and provisions for the underlying Zone in the District Plan.
 - e. The objectives, policies and provisions for Resource Areas in the District Plan.
 - f. The District Wide objectives, policies and provisions in the District Plan
2. The NFL-ONL – Outstanding Natural Landscapes rules of this chapter apply to any [site](#) or portion of a [site](#) mapped as NFL-ONL.
3. The NFL-ONF – Outstanding Natural Features rules of this chapter apply to any [site](#) or portion of a [site](#) mapped as NFL-ONF.

Rules

NFL-R1	Eligibility and Notification Rules
	<ol style="list-style-type: none"> 1. The rules below apply in addition to the rules of the underlying zone. Where the standards are different between the underlying zone and the Outstanding Natural Landscape or Outstanding Natural Feature area, the most restrictive rule shall apply. 2. All land use and subdivision proposals requiring consent shall be subject to the notification tests of the RMA

NFL-REQ1	Landscape Evaluation Requirement
	<ol style="list-style-type: none"> 1. A site or property-specific landscape evaluation shall be submitted with all consent applications for subdivision, use or development within an Outstanding Natural Landscape. The landscape evaluation shall: <ol style="list-style-type: none"> a. Address the requirements of the policies within this section; b. Document how potential adverse effects are to be avoided on the characteristics and qualities of the Outstanding Natural Landscape; c. Clearly identify where the avoidance of adverse effects is not considered practicable and record the nature and scale of those effects; and

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- d. Demonstrate how unavoidable adverse effects will be remedied or mitigated.
- e. Demonstrate any ways in which the proposal may conserve or heighten the characteristics and qualities of the Outstanding Natural Landscape through a comprehensive approach to landscape analysis and project design.

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NFL-ONL – Outstanding Natural Landscapes

Rules

NFL-ONL-R1	Any Activity Not Otherwise Listed in This Chapter	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. Resource consent is not required under any rule of the District Plan. 2. The activity is not prohibited under any rule of the District Plan. 	
NFL-ONL-R2	Minor Building	
	<p>Activity Status: Permitted</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>Minor buildings</i> are exempt from rules NFL-ONL-R3 – R5. 	
NFL-ONL-R3	Construction of Non-Habitable Buildings and Major Structures	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The non-habitable <u>building</u> and <u>major structure</u> is ancillary to rural production or network utility activities provided that: <ol style="list-style-type: none"> a. The maximum <u>building</u> or <u>major structure height</u> is 5.5m above <u>ground level</u>. b. The highest point of the <u>building</u> or <u>major structure</u> is no less than 15m lower in elevation than the most proximate portion of ridgeline closest to the <u>building</u> or <u>major structure</u>. c. The exteriors do not utilise mirror glazing, and are coloured or painted with a colour with a reflectance value no greater than 35% (provided that 2% of each exterior is exempt) and with a roof colour with a reflectance value no greater than 30%. d. Within the Coastal Environment the <u>gross floor area</u> of any new <u>building</u> or <u>buildings</u> does not exceed 50m². 	<p>Activity Status when compliance not achieved for activities outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved for activities within the Coastal Environment: Non-Complying</p>

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	<p>e. Outside the Coastal Environment the <u>gross floor area</u> of any new <u>building</u> or <u>buildings</u> does not exceed 100m².</p>	
<p>NFL-ONL-R4</p>	<p>External Alteration or Extension to an Existing Building and Major Structure, including a Residential Unit</p>	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The <u>alterations</u> or extensions do not exceed 50m² in area. 2. The <u>alterations</u> or extensions do not exceed the <u>height</u> of the existing <u>building</u> and <u>major structure</u>. 3. The highest point of the <u>alteration</u> or extension is no less than 15m lower in elevation than the most proximate portion of ridgeline closest to the <u>building</u> or <u>major structure</u>. 4. The exteriors do not utilise mirror glazing, and are coloured or painted with a colour with a reflectance value no greater than 35% (provided that 2% of each exterior elevation is exempt) and with a roof colour with a reflectance value no greater than 30%. 	<p>Activity Status when compliance not achieved within and outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved for activities within the Coastal Environment: Non-Complying</p>
<p>NFL-ONL-R5</p>	<p>Maintenance and Minor Upgrading of Buildings and Major Structures</p>	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The maintenance and <u>minor upgrading</u> is associated with public parks, reserves, network utilities, or community <u>infrastructure</u>. 	<p>Activity Status when compliance not achieved within and outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved for activities within the Coastal Environment: Non-Complying</p>
<p>NFL-ONL-R6</p>	<p>Installation of Underground Network Utilities</p>	
	<p>Activity Status: Permitted</p> <p>Where:</p>	<p>Activity Status when compliance not achieved within and outside the Coastal Environment: Discretionary</p>

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	<ol style="list-style-type: none"> 1. There is compliance with Earthworks NFL-ONL-R7 and Vegetation Clearance Rule NFL-ONL-R9. 	<p>Activity Status when compliance not achieved for activities within the Coastal Environment: Non-Complying</p>
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NFL-ONL-R7	Earthworks
NFL-ONL-R8	Farm Quarries

	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The excavation and fill volume is less than 150m³ and the area is less than 150m² in any 12 month period within a site; and 2. Earthworks do not exceed a height or depth of 2m over a continuous distance of more than 50m within a site; <p>OR</p> <ol style="list-style-type: none"> 3. The activity is directly associated with: <ol style="list-style-type: none"> a. The repair and maintenance of roads, fences, utility connections, driveways, parking areas, effluent disposal systems, swimming pools, walking or cycling tracks or farm and forestry tracks; or b. Garden amenities, gardening or the planting of any vegetation; or c. The burial of marine mammals; or d. A sand dune restoration project; or e. The provision of walking or cycling tracks less than 3m wide. <p>Notes:</p> <ol style="list-style-type: none"> 1. The height or depth of excavation will be based on an average height from existing ground level over the length of the excavation or fill or over 50m continuous length, whichever is the lesser length. 2. Earthworks necessary to create a defined building platform are only required to comply with NFL-ONL-R10. 	<p>Activity Status when compliance not achieved within and outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved for activities within the Coastal Environment: Non-Complying</p>
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NFL-ONL-R9	Indigenous Vegetation Clearance
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	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The clearance of <u>indigenous vegetation</u> does not exceed 150m² per <u>site</u> within any 12 month period; and 2. Is directly associated with: <ol style="list-style-type: none"> a. Removal or pruning of trees, live or dead, that are a danger to human life or <u>structures</u>. <p>Routine <u>maintenance</u> and <u>repair</u>:</p> <ol style="list-style-type: none"> i. Within 3m of the <u>eaves</u> of existing <u>buildings</u> and <u>structures</u> (including network utilities): <ol style="list-style-type: none"> a) Including the removal of any tree where any part of the trunk is within the 3m distance. b) Excluding damage to the roots or removal of any tree where the trunk is outside the 3m distance. ii. Of tracks, lawns, gardens, fences, drains and other lawfully established activities. c. Understorey clearance permitted in accordance with REG93(1) and (2)(a) of the National Environmental Standard for <u>Plantation Forestry</u> 2017. d. Vegetation removal for customary rights. e. Conservation planting, including planting for ecological restoration purposes. f. <u>Temporary military training activity</u>. <p>Note:</p> <ol style="list-style-type: none"> 1. <u>Indigenous vegetation</u> clearance necessary to create a defined <u>building</u> platform are only required to comply with NFL-ONL-R11. 	<p>Activity Status when compliance not achieved within and outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved for activities within the Coastal Environment: Non-Complying</p>
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NFL-ONL-R10	Earthworks necessary to Create a Defined Building Platform
NFL-ONL-R11	Indigenous Vegetation Clearance necessary to Create a Defined Building Platform
NFL-ONL-R12	Construction of a Residential Unit, or an Extension to a Residential Unit on a Defined Building Platform where the activity does not comply with NFL-ONL-R4.

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	<p>Activity Status: Controlled</p> <p>Where:</p> <ol style="list-style-type: none"> The <u>building</u> platform has been identified through a professional landscape assessment; and approved as part of a <u>subdivision</u> consent. <p>Matters of control:</p> <ol style="list-style-type: none"> The appropriateness of the landscape assessment in relation to the identified characteristics and qualities of the Outstanding Natural Landscape. The visual prominence of the <u>building</u> or <u>major structure</u>, and associated accessway(s), with reference to <u>building</u>, <u>height</u>, materials, and exterior reflectivity. The suitability of the defined platform for the proposed <u>building</u>. <u>Effects</u> of platform <u>access</u> and on-site <u>infrastructure</u> arrangements. Any mitigation measures proposed. 	<p>Activity Status when compliance not achieved outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved within the Coastal Environment: Non-Complying</p>
<p>NFL-ONL-R13</p>	<p>Construction of a Residential Unit</p>	
	<p>Activity Status: Restricted Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> The underlying zoning is a Residential or Settlement Zone Residential Sub Zone; or The entire property title is included within the Outstanding Natural Landscape and does not include an existing dwelling. <p>Matters of discretion:</p> <ol style="list-style-type: none"> The visual dominance of the proposed <u>building</u> and associated accessways(s) and <u>infrastructure</u> with reference to <u>building height</u>, materials and exterior reflectivity. The suitability of the defined platform for the proposed <u>building</u> in terms of mitigating the dominance of the proposed <u>building</u> and associated accessway(s) and <u>infrastructure</u>. Any mitigation measures proposed including landscape treatment and screening. 	<p>Activity Status when compliance not achieved outside the Coastal Environment: Discretionary</p> <p>Activity Status when compliance not achieved within the Coastal Environment: Non-Complying</p>

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NFL-ONL-R14	Papakāinga Development	
	<p>Activity Status: Restricted Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> The activity is outside the Coastal Environment. <p>Matters of discretion:</p> <ol style="list-style-type: none"> The proposed siting of the activity in relation to ridgelines or other important natural landscape elements. The proposed location and design of the Papakāinga development with respect to the concepts of tikanga Māori and kaitiakitanga. The proposed location and design of buildings, structures, vehicle access, manoeuvring and parking spaces. The extent of visible change to the Outstanding Natural Landscape which may result from the proposed activity. The potential for more than minor adverse effects on the Outstanding Natural Landscape. Any remediation or mitigation measures proposed to address adverse visual effects. 	<p>Activity Status for activities within the Coastal Environment: Discretionary</p>
NFL-ONL-R15	The Establishment of New Production Forestry	
	<p>Activity Status: Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> The activity is outside the Coastal Environment. 	<p>Activity Status when compliance not achieved: Non-Complying</p>
NFL-ONL-R16	Mineral Extraction outside of the Coastal Environment	
	<p>Activity Status: Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> The activity is a primary activity or ancillary activity. 	
NFL-ONL-R17	Any Activities Directly Associated with National Grid Infrastructure	

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	<p>Activity Status: Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> The activities are not otherwise permitted.
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NFL-ONL-REQ1	Assessment Criteria
	<ol style="list-style-type: none"> Relevant criteria set out in NFL-ONF-REQ1 Assessment Criteria shall apply to the consideration of all resource consent applications for <u>land</u> use and development activities within Outstanding Natural Landscapes.

NFL-ONL-R18	Subdivision where a Proposed Boundary is within an Outstanding Natural Landscape	
	<p>Activity Status: Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> The Outstanding Natural Landscape is outside of the Coastal Environment. <p>Note:</p> <ol style="list-style-type: none"> A proposed <u>boundary</u> does not include the <u>boundary</u> of the parent <u>allotment</u>. Relevant criteria set out in NFL-ONF-REQ1 Assessment Criteria shall apply to the consideration of all resource consent applications for <u>subdivision</u> activity within Outstanding Natural Landscapes. <u>Subdivision</u> proposals requesting additional <u>allotments</u> in accordance with NFL-P20.3 need to include sufficient supporting information to enable an accurate assessment against NFL-ONF-REQ1 Criterion m (i) and (ii). 	<p>Activity Status when compliance not achieved: Non-Complying</p>

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NFL-ONF – Outstanding Natural Features

Rules

NFL-ONF-R1	Application of Outstanding Natural Features Rules
	<ol style="list-style-type: none"> 1. The rules applying to activities in Outstanding Natural Features outside the Coastal Environment are as specified in Table NFL 1. 2. The rules applying to activities in Outstanding Natural Features within the Coastal Environment are as specified in Table NFL 2.
NFL-ONF-R2	Matters of Discretion for Restricted Discretionary Activities
	<ol style="list-style-type: none"> 1. Discretion will be restricted to the matters below for the activities listed as restricted discretionary in Table NFL 1: <ol style="list-style-type: none"> a. The nature, form and extent of proposed works. b. The degree of existing geological modification. c. The need or purpose of the proposed building or structure. d. Alternative methods and locations for the proposed activity. e. The potential for erosion or other adverse effect on the Outstanding Natural Feature.

Table NFL 1. Activity Table for Outstanding Natural Features outside the Coastal Environment

The following table specifies that activity status of activities in Outstanding Natural Features outside the Coastal Environment.

Activity	Large landforms		Volcanic cones	Smaller, more fragile landforms	Exposures of geological material	Caves
	A1	A	B	D	E	F
Land use and Development						
New buildings and structures incl. network utilities						
<i>up to 5.5m in height above ground level</i>	PER	PER	RDIS	NC	NC	DIS

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Activity	Large landforms		Volcanic cones	Smaller, more fragile landforms	Exposures of geological material	Caves
	A1	A	B	D	E	F
5.5m up to 8m in <u>height</u> above <u>ground level</u> - non-habitable <u>buildings</u> or <u>major structures</u> - Residential dwellings	PER RDIS	RDIS RDIS	DIS DIS	NC NC	NC NC	DIS DIS
Greater than 8m in <u>height</u> above <u>ground level</u>	RDIS	RDIS	DIS	NC	NC	DIS
<u>Artificial crop protection structures</u> complying with RPROZ-R12 and using green or black cloth on external vertical faces.	PER	-	-	-	-	-
<u>Minor upgrading</u> of network utilities and <u>buildings</u> and <u>structures</u> associated with public parks, reserves and community <u>infrastructure</u> .	PER	PER	PER	RDIS	RDIS	RDIS
<u>Buildings</u> or <u>major structures</u> associated with <u>temporary military training activity</u>	PER	PER	PER	RDIS	RDIS	RDIS
Fencing for ONF protection	PER	PER	PER	PER	PER	PER
Other fencing	PER	PER	PER	DIS	DIS	PER
Stock grazing	PER	PER	PER	PER	PER	PER
Forestry harvesting and replanting	PER	PER	PER	PR	PR	PER
New forestry planting	RDIS	PER	DIS	PR	PR	RDIS

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Activity	Large landforms		Volcanic cones	Smaller, more fragile landforms	Exposures of geological material	Caves
	A1	A	B	D	E	F
Earthworks*						
General earthworks not expressly either permitted or requiring resource consent in this table.						
<i>Up to 50m³</i>	PER	PER	RDIS	NC	NC	DIS
<i>50m³ up to 150m³</i>	PER	PER	RDIS	NC	PR	NC
<i>150m³ up to 1000m³</i>	PER	PER	DIS	NC	PR	NC
<i>greater than 500m³</i>	DIS	DIS	DIS	NC	PR	NC
Maintenance and repair of network utilities, roading, tracks, driveways, carparking areas, parks, reserves and community infrastructure	PER	PER	PER	PER	PER	PER
Land preparation	PER	PER	RDIS	PR	PR	DIS
New public walking and cycling tracks	PER	DIS	DIS	NC	PR	DIS
New farm and forestry roading and tracking	PER	DIS	DIS	NC	PR	DIS
Farm and forestry mineral extraction (quarrying)	PR	PR	PR	PR	PR	PR
Other mineral extraction	PR	PR	PR	PR	PR	PR
Indigenous Vegetation Clearance						
<i>up to 500m²</i>	PER	PER	RDIS	-	-	PER
<i>greater than 500m²</i>	DIS	DIS	DIS	-	-	DIS
National Grid						

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Activity	Large landforms		Volcanic cones	Smaller, more fragile landforms	Exposures of geological material	Caves
	A1	A	B	D	E	F
Any activities directly associated with National Grid Electricity Infrastructure that are not otherwise permitted, controlled, restricted discretionary or prohibited in this table.	DIS	DIS	DIS	DIS	DIS	DIS

PER = permitted; **RDIS** = restricted discretionary; **DIS** = discretionary; **NC** = non-complying; **PR** = prohibited; - = not applicable.

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Table NFL 2. Activity Table for Outstanding Natural Features within the Coastal Environment

The following table specifies that activity status of activities in Outstanding Natural Features that are within the Coastal Environment.

Activity	Large landforms A	Dynamic landforms and features C	Smaller, more fragile landforms D	Exposures of geological material E	Caves F
Land use and Development					
New <u>buildings</u> and <u>structures</u> incl. network utilities.	NC	NC	NC	NC	NC
<u>Minor upgrading</u> of network utilities and <u>buildings</u> and <u>structures</u> associated with public parks, reserves and community <u>infrastructure</u> .	RDIS	RDIS	RDIS	RDIS	RDIS
<u>Buildings</u> or <u>major structures</u> associated with <u>temporary military training activity</u>	PER	PER	DIS	DIS	PER
Fencing for ONF protection	PER	PER	PER	PER	PER
Other fencing	PER	RDIS	DIS	DIS	PER
Stock grazing	DIS	DIS	PER	PER	-
Forestry harvesting and replanting	-	NC	-	-	-
New forestry planting	PR	NC	PR	-	-
Earthworks					
General <u>earthworks</u> not expressly either permitted or requiring resource consent in this table.					
<i>up to 150m³</i>	DIS	NC	NC	NC	NC

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Activity	Large landforms A	Dynamic landforms and features C	Smaller, more fragile landforms D	Exposures of geological material E	Caves F
<i>greater than 150m³</i>	NC	NC	NC	PR	NC
Maintenance and repair of network utilities, roading, tracks, driveways, carparking areas, parks, reserves and community infrastructure .	PER	PER	PER	PER	-
Land preparation	PER	NC	PR	PR	-
New public walking and cycling tracks	PER	PER	DIS	NC	-
New farm and forestry roading and tracking	DIS	NC	NC	PR	-
Farm Quarrying	PR	PR	PR	PR	PR
Other mineral extraction	PR	PR	PR	PR	PR
Indigenous Vegetation Clearance					
<i>up to 250m²</i>	DIS	NC	-	-	-
<i>greater than 250m²</i>	NC	NC	-	-	-
National Grid					
Any activities directly associated with National Grid Electricity Infrastructure that are not otherwise permitted, controlled, restricted discretionary or prohibited in this table.	DIS	DIS	DIS	DIS	DIS

PER = permitted; **RDIS** = restricted discretionary; **DIS** = discretionary; **NC** = non-complying; **PR** = prohibited; - = not applicable.

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1. Relevant criteria set out in NFL-ONF-REQ1 Assessment Criteria shall apply to the consideration of all resource consent applications for land use and development activities within Outstanding Natural Features.

NFL-ONF-R4	Any Activity Not Otherwise Listed in This Chapter	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. Resource consent is not required under any rule of the District Plan. 2. The activity is not prohibited under any rule of the District Plan 	
NFL-ONF-R5	New Buildings and Structures	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The maximum reflectance value is 30%. 	<p>Activity Status when compliance not achieved: Discretionary</p>
NFL-ONF-R6	Earthworks	
	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The activity shall result in no more than a 1.5m vertical cut face which is to be subsequently screened by a <u>building</u> or grassed or mass planted. 	<p>Activity Status when compliance not achieved: Discretionary</p>
NFL-ONF-R7	Subdivision where a Proposed Boundary is within an Outstanding Natural Feature	
	<p>Activity Status: Discretionary</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The Outstanding Natural Feature is outside of the Coastal Environment. <p>Notes:</p> <ol style="list-style-type: none"> 1. A proposed <u>boundary</u> does not include the <u>boundary</u> of the parent <u>allotment</u>. 2. Relevant criteria set out in NFL-ONF-REQ1 Assessment Criteria shall apply to the consideration of all resource consent 	<p>Activity Status when compliance not achieved: Non-Complying</p>

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	<p>applications for <u>subdivision</u> activity within Outstanding Natural Features.</p> <p>3. <u>Subdivision</u> proposals requesting additional <u>allotments</u> in accordance with NFL-P20.3 need to include sufficient supporting information to enable an accurate assessment against NFL-ONF-REQ1 Criterion m (i) and (ii).</p>
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NFL-ONF-REQ1	Assessment Criteria
	<p>1. The following criteria shall apply to the consideration of restricted discretionary (where relevant), discretionary and non-complying resource consent applications for <u>subdivision</u>, <u>land</u> use, and development activities within identified Outstanding Natural Features or Outstanding Natural Landscapes. The criteria apply to both Outstanding Natural Features and Outstanding Natural Landscapes unless specified otherwise.</p> <ol style="list-style-type: none"> a. To extent to which the proposal is consistent with and not contrary to the objectives and policies contained in this chapter. b. The extent to which the proposal is consistent with the Council adopted 'Guidelines for Managing Change in Outstanding Natural Landscapes 2016'. c. The elements which make up the distinctive character and qualities of the feature or landscape as recorded in NFL - Appendix 1 Outstanding Natural Features or applicable worksheet from 'Northland Regional Landscape Assessment Worksheets (for Whangarei District) February 2014' (Outstanding Natural Landscapes). d. The specific characteristics of the application <u>site</u>, including its location, size, shape and topography. e. The siting of the activity in relation to ridgelines or other important natural landscape elements. f. The design of any <u>building</u>, <u>structure</u>, utility or any development. g. The location and design of vehicle <u>access</u>, manoeuvring and parking spaces. h. The extent of visible change to the Outstanding Natural Landscape which may result from an activity. i. The potential for more than minor adverse <u>effects</u> on the Outstanding Natural Landscape. j. The extent to which adverse visual <u>effects</u> may be mitigated through locally appropriate vegetative screening or other means.

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- k. The extent to which an application proposes revegetation and/or enhancement of the Outstanding Natural Landscape, and the measures to secure the long-term sustainability of the revegetation and/or enhancement.
- l. Provisions for the permanent legal protection of the Outstanding Natural Feature or Outstanding Natural Landscape.
- m. For subdivision activity where permanent legal protection or enhancement is proposed:
 - i. The number of additional allotments that may be appropriate given the value and areal extent of the area(s) that are proposed to be protected; and
 - ii. The potential adverse environmental effect of the increase in residential intensity, including any allotments, in relation to the benefits of achieving permanent legal protection of an Outstanding Natural Feature or Outstanding Natural Landscape.
- n. For works associated with the provision or maintenance of network utilities and community infrastructure:
 - i. The extent to which the proposed works will protect the Outstanding Natural feature or outstanding Natural Landscape from damage.
 - ii. The extent to which modification of an Outstanding Natural Feature or Outstanding Natural Landscape is necessary to provide for the proposed infrastructure and to which the proposed structure had a functional or operational need to be in the location proposed.
 - iii. Whether the proposed works are necessary to improve the resilience and security of the relevant infrastructure.
2. Where excavation and/or filling is proposed within an Outstanding Natural Feature or Outstanding Natural Landscape, the following specific criteria will also be considered:
 - a. The location, scale and alignment of excavation and/or filling in relation to any existing indigenous vegetation, site features, and underlying landform including ridgelines; and
 - b. The nature of any avoidance, remediation or mitigation measures proposed, including consideration of alternatives, the profile of cut and fill batters, the likely long term stability of the works proposed, and provisions for revegetation.
 - c. The extent to which the proposed earthworks will cause any significant loss of geological value of the Outstanding Natural Feature, taking into account the extent to which a feature has already been modified and whether further modification will cumulatively result in a significant loss of geological value.

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	<p>3. For the extension or <u>alteration</u> of exiting lawfully established hard coastal protection <u>structures</u> and for new hard coastal protection <u>structures</u> within an Outstanding Natural Feature or Outstanding Natural Landscape</p> <p>a. Any relevant coastal hazard management strategy, plan or assessment relating to the area where hard protection <u>structures</u> are proposed, including the ability to relocate <u>buildings, structures, infrastructure</u> or <u>land</u> uses which the <u>structure</u> is designed to protect; and</p> <p>b. The ability to use retain or enhance natural defences in place of hard protection <u>structures</u>.</p>
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Information Source

The source of information for identifying and mapping Outstanding Natural Features within the Whangarei District is the “Kenny, J.A. Hayward, B. W. (1996). Inventory and maps of Important Geological Sites and Landforms in the Northland Region”. “Geological Society of New Zealand Miscellaneous Publication No. 83, 51 pp.” This inventory identifies the best examples of Northland’s unique geology and landforms compiled using the combined knowledge and advice of a large sector of the specialist geological, geomorphological, speleological and soil science communities of New Zealand.

Significance and Vulnerability

The inventory provides a ranking of significance and vulnerability for each identified [site](#). The significance ranking provides three levels:

- A International
- B National
- C Regional

A vulnerability classification (1 - 4) is also assigned to each feature, depending on its perceived susceptibility to human activities:

- 1 Highly vulnerable to complete destruction or major modification by humans;
- 2 Moderately vulnerable to modification by humans;
- 3 Unlikely to be damaged by humans; and
- 4 Could be improved by human activity.

The intent is to manage Outstanding Natural Features on the basis of their significance and values and the risk of those values being compromised.

In order to assist management and decision-making, Outstanding Natural Features have also been categorised by type to provide an indication of the values that make them significant and potential risks to these values. The categories are described below.

Categories of Outstanding Natural Features

A. Large landforms

These are landforms that are large and robust. The values of such features typically relate to the underlying geology which tells of the history of their formation and the resulting outstanding large-scale landforms, rather than or in addition to their visual amenity or landscape type factors. They can typically withstand moderate scale [earthworks](#) or constructions without significant impact. However, major multi-story developments, intense urban and industrial [subdivisions](#) or large scale [earthworks](#) can significantly detract from the integrity of these landforms and their geological features.

For the purpose of Table NFL 1, the subcategory A1 Large Landform Outstanding Natural Features relates only to the Whatitiri shield Volcano. This Outstanding Natural Feature is much larger and gentler sloping than others in the category and is therefore less vulnerable to rural production-related [land](#) disturbance or construction activity.

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B. Volcanic cones

These features derive their values from their distinctive conical form and prominence in the wider landscape setting. These scoria cones and tuff cones are sufficiently robust to withstand small-scale, localised [earthworks](#) or constructions without significant impact. However, [structures](#) in prominent positions, significant permanent [earthworks](#) such as farm [roads](#) across steep slopes, and rectangular exotic forest plantings can detract from or compromise these natural features, particularly where they protrude significantly into the skyline, alter the cone form or disguise the underlying landform.

C. Dynamic landforms and features

The values of these landforms or features relate to the ongoing natural physical processes that have constructed them and in many instances are necessary to maintain the landforms. Because of this, these dynamic landforms or features are not only susceptible to direct damage, but to more distant actions that may impact the continuation of the natural processes (e.g. sand supply; dune stabilisation; groundwater levels; soil erosion in cave catchments). Permanent [earthworks](#), [building](#) construction, vegetation plantings, extraction of nearby groundwater or other actions could adversely affect the functioning and appearance of these features.

D. Smaller more fragile landforms

The values of these often spectacular, localised landforms relate to their visual and aesthetic appeal and/or scientific interest. These are small landforms or other features that could be damaged or destroyed by relatively small scale [earthworks](#) or construction. Most [earthworks](#), [buildings](#), constructions or plantings would adversely impact on the visual and aesthetic appeal or scientific value of these fragile features.

E. Exposures of geological material

These natural exposures of rock have values that relate to the geological features that can be seen within the rocks and the information they contain about the history of their formation, the geological origins of the region in general or the fossil history of the biota of New Zealand. Most of these exposures are sufficiently large and robust that small extents of [earthworks](#) or rock sampling will have no significant impact. Large-scale [earthworks](#), construction of [buildings](#), vegetation plantings or constructions of walls or erosion barriers could adversely impact the visual, educational or scientific values of these exposures.

F. Caves

Caves, such as lava and sea caves and their entrances, may, depending upon their depth underground, be susceptible to damage from significant [earthworks](#) constructions above them, or from changes in their catchments that may fill them with eroded soil.

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Identified Outstanding Natural Features by Category

A Large Landforms

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
Bream Head eroded stratovolcano	A	Best exposed section through the cone facies and underlying subvolcanic intrusions in the Taurikura volcanic centre around Whangarei Heads. Includes the rocky pinnacles of Bream Head ridge.	Virtually continuous exposure. Cone facies rubbly breccia and andesite flows in the E and subvolcanic andesite, dacite and rhyolite intrusions into the underlying Northland Allochthon in the W, just beneath the volcanic outcrop which forms the rocky peaks of Bream Head.	Coastal section and foreshore rocks, 5km length of coastline from Busby Point E to Bream Head and also the slopes up to the Bream Head ridge and rocky pinnacles.	C	3	
Hikurangi dacite dome	A	Large, prominent volcanic dome that dominates the landscape adjacent to SH1 N of Whangarei.	200m high, slightly eroded volcanic dacite dome, recently dated as < 2 million years old.	1.5km W of Hikurangi township.	C	2	
Lake Ora lava-flow-dammed lake	A	Excellent example of a small lake formed when a valley was dammed by a lava flow from Hurupaki volcano.	Small 2ha lake backed by a forested watershed growing on eroded greywacke basement.	At end of Lake Ora Road, 2km SW of Kamo.	C	3	
Parakiore rhyolite dome, Whangarei	A	Prominent volcanic landform, one of two young volcanic domes in Whangarei area.	200m high, slightly eroded dacite dome with two peaks, recently dated as less than 2 million years old.	1km W of SH1, 4km NW of Kamo.	C	3	
Whatitiri shield volcano	A	Only example of a large (4.4 cubic km), almost concentric shield volcano with gentle slopes in Northland. Best example in New Zealand of a small shield volcano.	A large concentric shield volcano with very gentle slopes and a diameter of 5-6km; not breached. Reaches a maximum height of 351m (ASL) and stands 154m above the surrounding landscape. Completely covered by farming and forested areas. Several houses and farm roads, but no quarries. The Titoki lava flows originate from this centre.	3.5km WNW of Maungatapere Mountain, approximately 5km WSW of Maungatapere township.	B	2	

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			They follow a valley to the N and then to the SW.				
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B Volcanic Cones

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
Glenbervie (Maruata) volcanic cones	B	A well preserved young volcanic centre with two scoria cones.	There are two cones approximately 650m apart. The older farm covered cone lies to the W, Q06/319143, of the main cone Maruata, Q06/327147. Maruata shows two eruption points with the youngest, largest crater being breached to the S. The centre is approximately 2-3km in diameter and its height is 200m ASL, rising 80m above the surrounding area. Maruata cone has a distinct volcanic form and is bush covered. On the N side a small forestry settlement has been established.	This centre lies between Maruata Road and Puketotara Road, approximately 5km NE of Kamo.	C	2	
Hurupaki scoria cone	B	One of three scientifically interesting scoria cones. A quarry exposes an eruption sequence showing that magma variation occurred during eruption. The best such exposure in a young Whangarei centre.	A steep sided, partly bush covered cone, 1-2km in diameter, breached to the SE, that stands 350m ASL and is extensively quarried on the W side. This is the E most cone of a group of three centres: (E to W) Hurupaki, Rawhitiroa and Ngararatunua.	This centre lies between Three Mile Bush Road and Dip Road, approximately 1.5km W of Kamo township.	C	1	
Maungakaram ea scoria cone	B	A well-preserved scoria cone with a distinct from that has not been quarried. The southernmost Quaternary Volcanic centre in Northland.	A steep sided, forested scoria cone standing approximately 150m above the surrounding plateau. Mostly covered with native bush, however some pines have	Lies between O' Carrol Road and Crawford Road, approximately 1km W of Maungakaram ea township.	C	1	

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			been planted. A large flow to the SE (4-5km) ends in an 8m rock face, approximately 200m before Omana Road. A disused quarry site in the flow is now used as a rubbish tip. There is a small flow to NW of cone.				
Maungatapere volcanic cone	B	An almost perfect, steep sided volcanic cone, not farmed or quarried. Largest and best preserved in Whangarei field.	A steep sided cone, approximately 1-1.5km diameter, with scrub and native bush cover and a farm on the flank. Small crater on top. Around 3.5km ESE of the Whatitiri centre, the peak is 359m (ASL) but the cone stands 185m above the surrounding plateau.	E of the intersection of Snooks Road and SH14, approximately 3km SSW of Maungatapere township.	B	2	
Maunu volcanic cone	B	A relatively well preserved cone near Whangarei, which has been modified a little by farming, minor quarrying and roading.	A 1-2km diameter cone, which stands 395m ASL and is breached to the W. The cone is very steep sided, particularly in the S. A TVNZ relay is located on the summit. Access to the summit is via Millington Road. There is a small quarry on the toe of the breached material which has been worked for private and for farm use. The W side is farmed but E and S slopes are covered with bush and pines. The cone rises 150m above the surrounding plateau, while flows extend approximately 6km E from the centre, almost to Whangarei City.	Just SW of Pukenui State Forest and NE of the intersection of Kara Road and SH14, approximately 2.5km NE of Maungatapere township.	C	1	
Ngararatunua volcanic cone	B	Distinct scoria cone breached to S.	The centre is a horseshoe-shaped scoria cone, breached to the S with small flows to the S and NE. It is a composite cone; an early cone to the N and a second higher	This centre lies between Three Mile Bush Road, Church Road and Rotomate Road, approximately 3.5km W of Kamo.	C	1	

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			cone to the S, which buried most of the first one before being reached. It is farmed on the W side and the E side is bush covered. The height of the cone is 325m ASL and it rises 125m above the lava field. The composite cone is approximately 1.2km in diameter. It is the western most cone of a group of three centres: (E to W) Hurupaki, Rawhitiroa and Ngararatunua.				
Onoke scoria cone, Kamo	B	Visually prominent, bush-clad peak of scoria cone is valuable part of Kamo's landscape and one of the volcanoes of the Whangarei basalt field. Overgrown remains of railway ballast quarry and its associated earthworks is best example of this kind of industrial site in a scoria cone in New Zealand.	200m high peak of remaining scoria cone rises 80m above Kamo. Disused quarry had access from railway line in NE and is overgrown with scrub and forest. Remains of a steam boiler still within the workings.	1km W of Kamo centre with access into the reserve off Dip Road.	C	2	
Parihaka dacite dome, Whangarei	B	High eroded dome which dominates the eastern side of Whangarei City.	Early Miocene intrusive dome of dacite that has had the softer surrounding rocks eroded away leaving it's as a high and prominent dome-shaped hill above the E side of Whangarei City.	E side of Whangarei City.	C	3	
Pukepoto basalt cone	B	A young centre with a breached multi-vented cone, which shows good volcanic landform.	A steep sided bush and farm covered cone. Remnants of the first eruption form a boulder covered hill on the W flank of the younger Pukepoto cone. Pukepoto cone, covers the vent of the original hill, is steep sided and breached by rafting of lava to the S. The Waitangi stream flanking the lava field to the S has exposed basalt at locality QO6/368145. The cone stands 60m	Adjacent to and N of Ngunguru Road, 7.5km ENE of Kamo township.	C	1	

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			above the surrounding lava field Two periods of cone building resulted in three separate flows.				
Rawhitiroa scoria cone	B	One of three scientifically interesting scoria cones.	A low multi-vented cone with crater lake forms a small grass-covered knoll less than 150m high, on which a few houses stand, approximately 400m E of Hurupaki scoria cone.	This centre lies between Three Mile Bush Road, Dip Road and Rotomate Road, approximately 3km W of Kamo township.	C	1	

C Dynamic Landforms and Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
Ngunguru Sandspit	C	An excellent example of an unmodified sand barrier beach and dune field developed between a tidal estuary and a broad open bay. Significant example of a rapidly disappearing coastal feature.	Partially vegetated undeveloped barrier spit approximately 2.5km long and 300-600m wide. Dunes and spit relatively undisturbed.	Ngunguru sand spit, Ngunguru, 28km NE of Whangarei.	C	2	

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D Smaller More Fragile Landforms

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
Abbey Caves and karst, Whangarei	D & F	One of the best preserved and most easily accessible areas of karst landforms and small caves in Northland.	About 4ha of vegetated karst with entrances to several caves on one partly underground stream, containing speleothems. Hundreds of limestone boulders with fluting and some castellated. Several 5m limestone pinnacles in middle of bushed reserve. Several sink holes.	300m E of Abbey Caves Road, half way between Whareora Road and Old Parua Bay Road; 2km E of Parihaka and 3km E of Whangarei.	C	2	
Hen Island pinnacles	D	Spectacular rock pinnacles on the main ridge of Hen Island seen for many km in all directions.	Pinnacles of volcanic breccia eroded from a 20 million year old stratovolcano. Includes one large rock balancing on a narrow pedestal.	W end of crest of Hen Island, including Balancing Rock.	C	3	
Hewlett Point karst, Whangarei Harbour	D	Small area of well-exposed coastal karst developed in autochthonous Whangarei limestone.	100 x 50m block of Whangarei Limestone with fluting, flagginess and small solution cracks.	NW tip of Hewlett Point.	C	2	
Kaiikanui basalt proto-karst, Helena Bay	D	One of the two best and most easily seen examples in the Helena Bay area of fluted surfaces (proto-karst) formed on basalt.	Cap of Horeke Basalt on greywacke. Numerous large scattered basalt boulders, some developing internationally-rare solution-weathered surfaces.	Tops of hills, both sides of Kaiikanui Road, southern road to Helena Bay.	B	2	
Kamo limestone pinnacles	D	Most spectacular and best preserved limestone karst pinnacles in Northland. Some of deepest and sharpest fluting on a limestone in NZ.	Three or four vertical sided, 10m high, 3-5m across pinnacles of Whangarei Limestone, on small low knoll in bush. Several fallen over. Many surrounding smaller limestone blocks - many with well-developed fluting, often deep and sharp. Several fallen over. Many surrounding smaller	Approx. 1km E of SH1 on Kamo Springs flat, Whangarei. 100m SE of old house, now bed and breakfast called The Rocks. In small area close to Whangarei City, protected in private reserve with bush	B	1	

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			limestone blocks - many with well-developed fluting, often deep and sharp. The top of one fallen pinnacle is the best fluting in Northland, if not the country.	remnants and QE2 covenant.			
Manaia stratovolcano breccia pinnacles	D	Most prominent exposures of Miocene volcanic breccia and the better of two areas of ridge top tors in the Whangarei Heads area.	Weakly stratified andesite breccia forming bluffs and spectacular pinnacles along Manaia ridge - remnants of cone facies of a stratovolcano.	Forming Mt Manaia and ridge to N, Whangarei Heads.	B	3	
Matarau Road basalt proto-karst, Kamo	D	One of most easily seen examples of basalt proto-karst near Whangarei. Large fluted boulders near road with solution basins on top.	Boulders of basalt (derived from Whangarei Volcanic Field) with solution fluting and basins on their surface. Hillside covered with basalt boulders some fluted. Best boulders within 10m of road .	On E side of Matarau Road, 0.6-0.8km S of junction with Rushbrook Road, 8km NW of Kamo.	C	1	
Mokau Stream soda spring and travertine, Helena Bay	D	One of the two best examples of travertine deposits from active soda springs in northern New Zealand.	Eastern spring has built up a 10m wide and 2m high travertine apron flowing down into raupo swamp (photo p. 8 in ref).	4.2km SSW of Oakura beside forestry road at end of Pukapuka Road. Springs just above raupo swamp, 30m E of Orchard Road.	C	1	
Ngahere Drive karst, Whangarei	D	Small but spectacular, easily accessible outcrops of lapiez-weathered limestone close to Whangarei.	Fluted and castellated crystalline Whangarei Limestone outcrops in two small reserves and in steep bushed reserve along and on S side of Ngahere Drive and end of Hospital Road. High bluffs in southern reserve and Top Rocks are used for rock climbing.	Half way along Ngahere Drive where the road splits to go either side of it. Also 200m further E, on northern side of road , is a rock climbing reserve (Top Rocks and Main Crag). Steep hillside reserve with limestone bluffs on S side of ends of Ngahere Drive and Hospital Road.	C	1	
Old Woman Rock, Hen Island	D	Unusual intertidal rock stack eroded into shape of woman, name-bearer	Rock stack sits on intertidal platform and is eroded out of volcanic breccia.	Western entrance of Wahine Bay, Hen Island.	C	2	

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		for adjacent Wahine Bay.					
Paradise Quarry karst, Portland, Whangarei	D	A small area of limestone (Paradise Stone) karst in its naturally exposed and weathered form, protected by a QE2 covenant.	Adjacent to a small building stone quarry which produces "Paradise Stone" - a popular limestone, used for decorative flagstones. An unusual rock type in Northland and source of a fossil lanternfish.	Paradise Quarry, Old Stone Road, near Portland.	C	2	
Paranui Falls, Whangarei	D	One of the five most scenic waterfalls over basalt lava flows in Northland.	Paranui Stream flows over edge of eroding basalt lava flow with a vertical drop an incised gorge-like basin.	On Paranui Stream, adjacent to Whareora Road beside junction with Clapham Road, 4km N of centre of Whangarei.	C	3	
Stoney Knowe basalt proto-karst, Helena Bay	D	Excellent small example of well-developed basalt proto-karst boulders.	Cap of Horeke Basalt on greywacke. Numerous large scattered basalt boulders, some developing solution-weathered surfaces.	In small fenced triangle of land between small cattle yards and access road to Huruiki Trig on N side of Russell Road.	B	1	
Te Wairoa soda spring and travertine, Matapouri Bay	D	One of the two best examples of travertine deposited by an active soda spring in northern New Zealand.	6m diameter, 4m high travertine deposit extends from small spring down towards swamp. Mound is hard as concrete and orange stained on top.	3km SW of junction of Matapouri and Clements Road. 600 m up a true left tributary of Te Wairoa Stream from end of road where it crosses main stream. On true left bank of tributary adjacent to small area of toitoi swamp.	C	1	
Titoki Natural Bridge	D	Best natural bridge formed in lava in New Zealand.	Stream flows through tunnel in basalt lava flow with natural bridge above. Tunnel is about 15m wide, 30m long and 10m high. Valley in regenerating bush	On Waitomotomo Stream, 500m W of Pipiwai - Titoki Road / McCardle Road, 2km N of Titoki.	B	2	
Urquharts Bay concretions, Whangarei Heads	D	Most easily accessible large spherical concretions in the	A number of spherical concretions up to 1.5m diameter on the beach and eroding	On beach and in low eroding banks at SW end of Urquharts	C		

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		Whangarei area, Northland.	out of the Cretaceous parent rocks at the S end of Urquharts Bay.	Bay, Whangarei Heads.			
Waikiekie karst	D	Most accessible example of rare solution runnels developed in allochthonous Oligocene limestone of the Northland Allochthon.	A small area of karstic limestone protruding through grass and forming a small stream gorge. Karst is extremely rare in the Northland Allochthon as allochthonous limestone is usually too muddy to develop karst features.	From little gorge between Neville Road and Auckland-Dargaville railway line southwards between Tapuha Road and railway line for 300m.	C	2	
Waipu Caves and karst	D & F	Best and largest area of limestone karst geomorphology in Northland, S of Whangarei. Includes largest cave passage in Northland. Fossil bone deposits in Paryphanta Passage.	Fluted boulders and sinkholes in Oligocene limestone at Waipu Caves reserve, Waipu Caves Walkway and along roadside. Best examples are N of Waipu Caves Road. About 3km horizontal stream cave. Includes both Waipu Cave and Elver Canyon Cave.	N of Waipu Caves Road, Waipu.	C	2	
Waipu Cove Oligocene-Miocene sequence and coastal karst	D & F	Only significant coastal karst and karstic sea cave in Northland. Exposes clear stratigraphic sedimentary relationship between Waitemata flysch, Te Kuiti Group limestone and basement.	Oligocene shallow water , flaggy, bioclastic, sandy limestone unconformably sits on Waipapa greywacke and passes abruptly and conformably up into deep water early Miocene Waitemata flysch. Outcrops and large fallen boulders developing solution runnels. One solution cave with speleothems around point from western end of Langs Beach (Q08 / 484 723).	Coastal section from 500m SE of Waipu Cove to point at W end of Langs Beach.	C	2	
Wairua Falls	D	One of the five largest waterfalls over basalt lava flows in Northland.	River falls over the edge of a lava flow from Whatitiri shield volcano and erodes into softer country rock alongside. A dam upstream diverts some of the water for hydro purposes.	At end of Wairua Falls Road, 2km from turnoff from SH14.	C	2	

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Waro karst, Hikurangi	D	Excellent example of karst pinnacles close to highway.	In Oligocene limestone.	N side of Hikurangi.	C	2	
Whangarei Falls	D	One of the five best examples of a waterfall cascading over the edge of an eroding basalt lava flow in northern New Zealand.	A scenic 26m high waterfall where the Hatea River plunges over the eroding edge of a columnar-jointed basalt flow originating from Vinegar Hill. 30m total thickness, with the base of the basalt corresponding with the base of the falls. Shows change from platy jointing near top of flow to columnar jointing near base.	50m downstream from Tutukaka Road bridge over the Hatea River, approximately 1km E of Tikipunga, within the outer suburbs of Whangarei City.	C	3	

E Exposures of Geological Material

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
Coppermine Island copper mineralisation	E	Good example of a porphyry copper deposit.	Pyrrhotite-chalcopyrite hydrothermal mineralisation in pyroxene diorite and dacite breccia.	W end of Coppermine Island, Chickens Group.	B	2	
Coppermine Island diorite intrusion	E	Only diorite plutons in Whangarei Heads region.	A dark coloured, coarse grained, pyroxene diorite, roughly elliptical in shape, with weak foliations parallel to the margins.	Coastal cliffs on the western end of Coppermine Island.	C	2	
Houtospilite and conical hill	E	Oldest known occurrence of allochthonous ophiolites (Tangihuas) in Northland. Forms iconic eroded conical hill.	Spilitic lava and pillows with intercalated red-brown marble and mudstone with earliest Cretaceous fossils (in road cut)	Forming Houto Hill and surrounding area, rock exposures are in road cuttings .	C	2	

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Kamo Brickworks Eocene coal measures	E	Best remaining permanent exposure of Kamo Coal Measures. Easily viewed.	Jarositic carbonaceous mudstone, sandstone, conglomerate and coal sequence typical of the lithologies of the late Eocene Kamo Coal Measures.	In cutting alongside former Kamo Brickworks building , now a garden centre. On S side of main railway line just Et of where it ran underneath the old North Road.	C	1	
Kauri Mountain hornfels and metallic mineralisation	E	Well-exposed example of hornfels (rocks metamorphosed by heat of intruding magma). Best example in Northland of veins of metallic mineralisation including galena, sphalerite and pyrite.	Hornfels up to 2m wide at contact with quartz-diorite are exposed in cliffs and shore platform.	In coastal cliff and foreshore at Flax Bay, E coast of Kauri Mt.	B	3	
Mangawhati Point limestone karst and greensand, Whangarei Harbour	E	Well exposed autochthonous middle Tertiary sequence beneath Northland Allochthon. Includes excellent example of coastal karst, intensively burrowed (Scolicia) calcareous greensand, the best crab fossil locality in Northland.	Conglomerate, glauconitic calcareous sandstone and bioclastic limestone overlain by basal allochthon. Includes Eocene sandstone beds with moderately rich fossil bivalves and crabs. Coastal karst extends around Mangawhati Pt. Allochthon lithologies include rare black chert.	Around Mangawhati Point extending 500m S on the E side along the foreshore.	C	2	
McLeod Bay Miocene unconformity, Whangarei Heads	E	Easily accessible and excellent exposure of deep water early Miocene thin-bedded sandstone and siltstone unconformably overlying Oligocene limestone and itself overlain by Northland Allochthon.	Sequence is near vertical and may be a block within Northland Allochthon. Provides a window into the history of the rocks deposited in this region prior to the incoming of the Northland Allochthon about 23 million years ago.	In foreshore 100-200m NE of wharf at W end of McLeod Bay.	C	2	
Ngunguru River mouth pillow basalt and peperite	E	The most accessible example of pillow basalt and peperite within basement greywacke (Waipapa Group) in northern New Zealand.	Coastal outcrops of Permian-Triassic Waipapa terrane pillow basalt with interbedded peperites (lava that has been brecciated by eruption into cold sea water).	Western end of Whangaumu (Wellingtons) Bay, 7km by road E of Ngunguru township, 30 km NE of Whangarei.	C	3	

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Ocean Beach autochthon-allochthon contact, Whangarei Heads	E	One of very few exposures where the basal contact of Northland Allochthon can be seen and provides clues into how and when it was emplaced.	Waipapa greywacke unconformably overlain by Waitemata Group sandstone and pebble breccia, in turn overlain by Northland Allochthon melange.	In intertidal rocks and low cliffs at the N end of Ocean Beach, at end of Kauri Mt Road.	C	2	
One Tree Point interglacial beach and dune deposits	E	Well exposed Late Pleistocene regressive coastal sand sequence. Only remaining exposures in the area that are not obscured by coastal foreshore protection works, and should be left in their unmodified state.	Coastal cliff and foreshore exposures show a shallowing upwards regressive sequence from shallow marine sand through beach sand to coastal foredune, with overlying swamp deposits in interdune hollows.	Southern shore of Whangarei Harbour west of Marsden Point, from One Tree Point SW wards for 1km.	B	1	
Onemama Point allochthonous sediments, Whangarei Harbour	E	Excellent exposures documenting earliest allochthon emplacement in this region.	Allochthonous olistostromes within Waitakian shallow water bioclastic sandstone facies.	From tip of Onemama Point to 1.5km to NW.	B	3	
Parua Bay basal allochthon mélange	E	One of the classic localities in Northland showing the base of the allochthon sitting on early Miocene rocks and greywacke	Mélange overlying decollement cut into c.5m of Miocene Waitemata Group bioclastic limestone and flysch, upon greywacke basement.	At eastern end of Parua Bay extending along foreshore N of Nook Road	B	3	
Parua Bay red chert, Whangarei Harbour	E	Excellent and most easily accessible exposure of red chert within greywacke basement sequence in Northland.	Intertidal outcrop over 80 x 50 m of foreshore adjacent to road .	Between Parua Bay boat ramp carpark and hotel.	C	2	
Reserve Point nephelinite flows and garnet andesite	E	Only known nephelinite flow in northern New Zealand, adjacent to garnet andesite intrusion rich in mantle xenoliths.	Up to 4m thick columnar jointed nephelinite flow lens with Runangan shallow water sediment sequence sitting uncomfortably on greywacke. This sequence is intruded by garnet hornblende andesite rich in unusual mantle xenoliths.	Whangarei Harbour, coastal rocks and low cliffs on S side of Reserve Point, 1km E of tip	B	2	

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Takahiwai algal limestone, Whangarei Harbour	E	One of the best examples of algal (rhodolith) limestones in New Zealand. Smallest of two known exposures in the vicinity.	Probably in-situ blocks of c. 5m thick late Eocene algal limestone. Concentrically banded algal rhodolith spheres 1-6cm diameter throughout, within distinctively bedded unit. Several blocks have been split open along bedding planes to expose plan views	Blocks cover area of c. 30 x 20m, beside farm track near junction of three forks of a small stream, c. 200m up flat section of valley from the coast. Stream valley mouth is largest and about midway between Mangawhati Pt and where Takahiwai Road leaves coast.	B	1	
Taurikura Bay natural jetty	E	Best natural jetty formed by a dike in New Zealand.	2m wide andesite dike intruding Northland Allochthon and forming a 50m long jetty into bay. Fifty cm wide zone of baked muddy limestone on either side.	Foreshore of Taurikura Bay, adjacent to Ody Road junction.	B	1	
Te Ruatahi dune sequence, Mimiwhangata	E	Occurrence of rich Holocene terrestrial fossil faunas in eroding dune sand.	Dune field containing late Holocene fossil land snail assemblages	S end of Te Ruatahi Beach, Mimiwhangata.	C	1	

F Caves

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
Abbey Caves and karst, Whangarei	D & F	One of the best preserved and most easily accessible areas of karst landforms and small caves in Northland.	About 4ha of vegetated karst with entrances to several caves on one partly underground stream, containing speleothems. Hundreds of limestone boulders with fluting and some castellated. Several 5m limestone pinnacles in middle of bushed reserve. Several sink holes.	300m E of Abbey Caves Road, half way between Whareora Road and Old Parua Bay Road; 2km E of Parihaka and 3km E of Whangarei.	C	2	
Poor Knights sea arches and caves	F	Best developed sea arches, tunnels and caves in New	Numerous arches, tunnels and caves ranging up to 200m	Around the coast of the Poor Knights	B	3	

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		Zealand. Includes completely submerged tunnels, air bubble caves - many of which have been named.	long and 50m wide, eroded by the sea along joints in silicified rhyolite breccia. Located at present sea level, depths up to 30-40m below present and uplifted to heights up to 80m above present. On and through Tawhiti Rahi, Aorangi, Aorangaia and Archway islands. Tawhiti Rahi itself contains uplifted sea cave c.60m asl (dimensions 12m deep, 8m wide, 5m high).	Islands e.g. Rikoriko Cave; Maomao Arch; Cathedral Arch.			
Two Tone Cave, Waipu	F	One of the longest caves in Northland with numerous branches.	Horizontal stream cave about 3km long. In places the cave floor is on greywacke.	Caves Road, Waipu.	C	3	
Waipu Caves and karst	D & F	Best and largest area of limestone karst geomorphology in Northland, S of Whangarei. Includes largest cave passage in Northland. Fossil bone deposits in Paryphanta Passage.	Fluted boulders and sinkholes in Oligocene limestone at Waipu Caves reserve, Waipu Caves Walkway and along roadside. Best examples are N of Waipu Caves Road. About 3km horizontal stream cave. Includes both Waipu Cave and Elver Canyon Cave.	N of Waipu Caves Road, Waipu.	C	2	
Waipu Cove Oligocene-Miocene sequence and coastal karst	D & F	Only significant coastal karst and karstic sea cave in Northland. Exposes clear stratigraphic sedimentary relationship between Waitemata flysch, Te Kuiti Group limestone and basement.	Oligocene shallow water , flaggy, bioclastic, sandy limestone unconformably sits on Waipapa greywacke and passes abruptly and conformably up into deep water early Miocene Waitemata flysch. Outcrops and large fallen boulders developing solution runnels. One solution cave with speleothems around point from western end of Langs Beach (Q08 / 484 723).	Coastal section from 500m SE of Waipu Cove to point at western end of Langs Beach.	C	2	

*Note: Abbey Caves, Waipu Cave and Waipu Cove cave records are duplicated under Category F for ease of reference.