LAN.1
Landscapes

Index

LAN.1.1 Description and Expectations

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

LAN.1
Landscapes

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, whilst 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 building construction, earthworks and vegetation clearance can act to reduce the quality of landscapes. Special attention therefore 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 considered outstanding.

On the coast, the interaction between land and sea often provides a dynamic and scenic environment. However, for the same reason the coast 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 mounting demands for residential and lifestyle block subdivisions, places considerable strain upon areas of the coast that have elevated 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) and requires that district plans identify where protection of Outstanding Natural Features and landscapes is needed (NZCPS Policy 15). The NZCPS 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, as opposed to being man-made. 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.

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

LAN.1
Landscapes

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, hapu and/or whanau concerned. Protection of Outstanding Natural Landscapes containing such land therefore needs to be carefully balanced against the special requirements of RMA 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 Environments (e.g. Rural Production Environment, Living 1 Environment).

It is also appropriate to acknowledge that the naturalness of the mapped Outstanding Natural Landscapes is in large part attributable to past and present efforts by both private and public landowners, including the Whangarei District Council and the Department of Conservation, to actively retain and protect significant landforms and/or areas of indigenous vegetation within the District.

LAN.1.2 Objectives

1. Identify Outstanding Natural Features and Outstanding Natural Landscapes within the Whangarei District.
2. Protect the characteristics and qualities of identified Outstanding Natural Features and Outstanding Natural Landscapes from inappropriate subdivision, use and development.
3. Provide greatest protection for Outstanding Natural Features and Outstanding Natural Landscapes within the coastal environment.
4. Promote the conservation, enhancement and rehabilitation of Outstanding Natural Features and Outstanding Natural Landscapes.
5. Recognise that existing landuse 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.
6. Recognise that some Outstanding Natural Landscapes contain undeveloped Māori Land and make allowance for the special relationship of Māori to this ancestral land.

LAN.1.3 Policies

Identification

1. To identify the location and extent of the District's Outstanding Natural Features and Outstanding Natural Landscapes ~~that are sensitive to the effects of subdivision, use and development,~~ on the District Plan Resource Maps *and describe their characteristics and qualities in landscape assessment worksheets (Outstanding Natural Landscapes) and Schedule 8.4 (Outstanding Natural Features).*

Protection

2. To protect Outstanding Natural Features and Outstanding Natural Landscapes from inappropriate subdivision, land use and development with particular regard to their individual characteristics and qualities ~~as identified in landscape assessment worksheets (Outstanding~~

LAN.1
Landscapes

~~Natural Landscapes) and Schedule LAN.8 (Outstanding Natural Features)~~.

3. Within the Coastal Area, to avoid adverse effects of subdivision, use and development on the characteristics and qualities of Outstanding Natural Features and Outstanding Natural Landscapes by restricting potentially allowable activities to those:

   a. Of a scale, location and design that have ~~only~~ no more than minor or transitory adverse effects, including cumulative effects; or

   b. Associated with coastal hazard management that avoids the use of hard protection structures, such as seawalls and rock armouring, along with other visible artificial elements, except where such structures are the only practical means to protect significant existing development or infrastructure.

4. Outside of the Coastal Area, 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.

5. Subdivision, use and development in or on an Outstanding Natural Landscape shall be located and designed to avoid, to the greatest extent practicable, adverse landscape and/or visual effects by:

   a. Being integrated with identified characteristics and qualities of Outstanding Natural Landscapes;

   b. Avoiding sensitive landforms such as ridges, spurs, headlands, knolls and peaks;

   c. Being responsive to natural contours;

   d. Being visually unobtrusive;

   e. Maintaining established areas and patterns of indigenous vegetation cover; and

   f. Avoiding permanent earthworks scarring.

6. To assess the scale and significance of adverse effects of subdivision, use and development on the characteristics and qualities of Outstanding Natural Features and Outstanding Natural Landscapes by:

   a. Having particular regard to:

      i. The extent of the resource area affected;

      ii. The sensitivity of resource to change;

      iii. The degree of modification, damage, loss or destruction that will result from the activity;

      iv. The duration and frequency of adverse effects;

      v. Whether adverse effects are reversible or irreversible; and

      vi. The potential for spatial or temporal cumulative adverse effects of the proposed activity on its own or in combination with other authorised activities, including permitted activities; and

LAN.1
Landscapes

b. Recognising that a minor or transitory effect may not be an adverse effect.

7. The location, scale and form of earthworks, vegetation clearance 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.

Buildings and Structures

8. Buildings and structures, excluding regionally significant infrastructure, in Outstanding Natural Landscapes shall be located and designed so that they:

   a. Are inconspicuous when viewed from public land;

   b. Avoid locating upon, or intruding above, ridgelines, spurs, knolls and peaks where this results in adverse visual effects which cannot be remedied or mitigated;

   c. Use recessive colours and materials with low light reflectivity;

   d. Minimize artificial light spill; and

   e. Are visually recessive and blend with the surrounding vegetation and natural topography.

9. To allow for adverse effects arising from the establishment and operation of regionally significant infrastructure and community facilities in or on Outstanding Natural Features or Outstanding Natural Landscapes where:

   a. It is demonstrated that there is no practical alternative location;

   b. The proposal is generally consistent with Policies LAN.1.3.3(a) and LAN.1.3.4~~; and~~, taking into account the policies in Section 23 Network Utilities Operations.

   c. Measures are in place to avoid adverse effects ~~to the greatest extent practicable~~ as far as practicable, and adverse effects that cannot be avoided are remedied or mitigated as far as practicable to the extent that they are no more than minor.

   For the purposes of this policy:

   Regionally significant infrastructure means those structures and facilities listed within Appendix 3 Regional Significant Infrastructure of the RPS for Northland; and

   Community facilities include district parks, reserves and network infrastructure including roading.

Earthworks

10. To avoid large scale earthworks, including mineral extraction, in or on Outstanding Natural Features and Outstanding Natural Landscapes and manage adverse effects of other earthworks through permitted activity standards and consent requirements.

11. To avoid, to the greatest extent practicable, the adverse visual effects of earthworks, including accessway and building platform creation, within Outstanding Natural Features and Outstanding Natural Landscapes by:

   a. Careful analysis of existing site conditions;

   b. Consideration of alternative options and approaches; and

   c. Applying measures to blend areas altered by earthworks with the existing site conditions.

LAN.1
Landscapes

Relevant site conditions include site elevation, slope and orientation drainage patterns, together with soil and slope stability.

12. To ensure that adverse visual effects 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.

Indigenous Vegetation

13. 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.

Rehabilitation and Enhancement

14. To encourage the remediation of adverse effects of past or existing inappropriate land use activities on Outstanding Natural Landscapes.

15. To recognise the positive effects of development proposals that provide for the enhancement and rehabilitation of previously compromised localised areas within Outstanding Natural Landscapes.

16. 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:

    a. Provision of guidelines for landowners and professional advisors on appropriate landscape assessment and effects management options within Outstanding Natural Landscapes;

    b. Provision of a Council contribution toward the cost of professional landscape assessments required under LAN.2.3;

    c. 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;

    d. Provision of rates relief for covenanted areas within Outstanding Natural Features and Outstanding Natural Landscapes; and

    e. 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.

Existing Landuse

17. 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. ~~such as farming, forestry and horticulture, and provide for the continuation of such activities as far as is consistent with the overall protection of Outstanding Natural Features or Outstanding Natural Landscapes~~.

18. To provide for ~~allow adverse effects arising from~~ the maintenance and minor upgrading of existing authorised landuse and development in or on Outstanding Natural Features or Outstanding Natural Landscapes, wherever it is located, where:

LAN.1
Landscapes

a. The adverse effects generated ~~whilst~~ during the period the maintenance or minor upgrading is being undertaken are not significant; and

b. The adverse effects of the landuse 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.

Papakāinga Development

19. 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.

LAN.2

Eligibility and Notification Rules

LAN.2.1 Eligibility Rules

1. The rules below apply in addition to the rules of the underlying Environment. Where the standards are different between the underlying Environment and the Outstanding Natural Landscape or Outstanding Natural Feature area, the most restrictive rule shall apply.

LAN.2.2 Notification Rules

1. Proposals that are non-complying activities must be publicly notified.
2. All other subdivision and land use proposals requiring consent shall be subject to the notification tests of the RMA.

LAN.2.3 Landscape Evaluation Requirement

1. A site or property-specific landscape evaluation, prepared by a suitably qualified and experienced person, shall be submitted with all consent applications for subdivision, use or development within an Outstanding Natural Landscape. The landscape evaluation shall:
   a. Reflect the requirements of the policies within this section;
   b. 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;
   c. Document how potential adverse effects on the are to be avoided;
   d. Clearly identify where the avoidance of adverse effects is not considered practicable and record the nature and scale of those effects; and
   e. Demonstrate how unavoidable adverse effects will be remedied or mitigated.

LAN.3

Outstanding Natural Landscapes – Landuse Rules

LAN.3.1 Permitted Activities

LAN.3.1.1 General

1. Any activity not requiring consent as a controlled, restricted discretionary, discretionary or non-complying activity shall be a permitted activity.

LAN.3.1.2 Buildings and Structures

1. Construction of non-habitable buildings ancillary to rural production or network utility activities within an Outstanding Natural Landscape within the Coastal Area provided that:
   a. The gross floor area of any new building or buildings does not exceed 50m^2; and
   b. The highest point of the building does not project above the nearest ridgeline, knoll or peak when viewed from a public road, public reserve, and/or the coastal marine area within 2km of the site; and
   c. The exterior facades (excluding joinery) are coloured or painted with a colour with a reflectance value no greater than 35% and with a roof colour with a reflectance value no greater than 30% as defined within the BS5252 standard colour palette.
2. Construction of non-habitable buildings ancillary to rural production or network utility activities within an Outstanding Natural Landscape outside the Coastal Area where:
   a. The gross floor area of any new building or buildings does not exceed 100m^2; and
   b. The highest point of the building does not project above the nearest ridgeline, knoll or peak when viewed from a public road, public reserve, and/or the coastal marine area within 2km of the site; and
   c. The exterior facades (excluding joinery) are coloured or painted with a colour with a reflectance value no greater than 35% and with a roof colour with a reflectance value no greater than 30% as defined within the BS5252 standard colour palette.
3. External alteration or extension to an existing building, including a residential unit, within an Outstanding Natural Landscape provided that:
   a. The alteration or extension does not exceed 50m^2 in area or does not exceed 20% of the gross floor area of the existing building which is being altered or added to, whichever is the lesser; and
   b. The alteration or extension does not exceed the height of the existing building.
4. Maintenance and minor upgrading of buildings and structures associated with public parks, reserves, network utilities, or community infrastructure.
5. Installation of underground network utilities is **permitted** subject to compliance with Earthworks Rule 3.1.3.1 and Vegetation Clearance Rule 3.1.4.1.

LAN.3.1.3 Earthworks

1. Earthworks and farm quarries within an Outstanding Natural Landscape if:

a. The earthworks:

i. excavation and fill volume is less than 150m^3 and the area is less than 150m^2 in any 12 month period within a site; and

ii. height or depth is less than 2m over a continuous distance of less than 50m within a site; or

b. The work is directly associated with:

i. The repair and maintenance of roads, fences, utility connections, driveways, parking areas, effluent disposal systems, swimming pools, ~~garden amenities, gardening, planting of any vegetation, burial of marine mammals,~~ walking or cycling tracks, or farm and forestry tracks; or

ii. Garden amenities, gardening, planting of any vegetation; or

iii. The burial of marine mammals; or

~~iii~~ iv. A sand dune restoration project; or

~~iv~~ v. The provision of walking or cycling tracks less than 3m wide.

Note: 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.

LAN.3.1.4 Indigenous Vegetation Clearance

1. Indigenous vegetation clearance within an Outstanding Natural Landscape if it is:

a. Of less than or equal to 150m^2 of contiguous indigenous vegetation in any 12 month period within a site; ~~and~~or

b. Directly associated with:

i. Removal or pruning of trees, live or dead, that are a demonstrable danger to human life or structures; or

ii. Routine maintenance and repair within 3m of existing buildings and structures (including network utilities), tracks, lawns, gardens, fences, drains and other lawfully established activities; or

iii. Forestry operations and the affected vegetation or tree comprises the understorey directly beneath the exotic or native plantation forest canopy; or

iv. Vegetation removal for customary rights; or

v. Conservation planting, including planting for ecological restoration purposes; or

vi. temporary military training activity.

LAN.3.2 Controlled Activities

1. Earthworks or indigenous vegetation clearance within an Outstanding Natural Landscape, either within or outside of the Coastal Area, necessary to create a defined building platform and associated accessway(s):

a. Identified through a professional landscape assessment; and

b. Approved as part of a subdivision consent.

2. Construction of a residential unit within an Outstanding Natural Landscape, either within or outside of the Coastal Area, on a defined building platform:

a. Identified through a professional landscape assessment; and

b. Approved as part of a subdivision consent.

3. Control is reserved over:

a. The appropriateness of the landscape assessment in relation to site-specific protection of the identified characteristics and qualities of the Outstanding Natural Landscape.

b. The visual prominence of the proposed building, and associated accessway(s), with reference to building height, materials, and exterior reflectivity.

~~c.~~The suitability of the defined platform for the proposed building.

~~d.~~ Visual effects of platform access and onsite infrastructure arrangements.

~~e~~. c. Any mitigation measures proposed including landscape treatment and screening.

LAN.3.3 Restricted Discretionary Activities

1. Papakāinga development on ancestral Māori land within an Outstanding Natural Landscape outside of the Coastal Area.

2. Discretion is restricted to:

a. The proposed siting of the activity in relation to ridgelines or other important natural landscape elements.

b. The proposed location and design of the papakāinga development with respect to the concepts of tikanga Māori and kaitiakitanga.

c. The proposed location and design of buildings, structures, vehicle access, manoeuvring and parking spaces.

d. The extent of visible change to the Outstanding Natural Landscape which may result from the proposed activity.

e. The potential for more than minor adverse effects on the Outstanding Natural Landscape.

f. Any remediation or mitigation measures proposed to address adverse visual effects.

LAN.3.4 Discretionary Activities

1. Within an Outstanding Natural Landscape outside the Coastal Area:

a. Any activity that does not meet the permitted activity standards in Rules 3.1.2 (Buildings and Structures), 3.1.3 (Earthworks) or 3.1.4 (Indigenous Vegetation Clearance).

b. Construction of a residential unit within an Outstanding Natural Landscape where the activity does not comply with Rule 3.2.2.

c. The establishment of new production forestry.

d. Mineral extraction activities and farm quarry activities.

2. Construction of a residential unit within an Outstanding Natural Landscape within the Coastal Area where the activity does not comply with Rule 3.2.2; and

   a. The underlying zoning is Living 3; or

   b. The entire property title is included within the Outstanding Natural Landscape and does not include an existing dwelling.

3. Papakāinga development on ancestral Māori land within an Outstanding Natural Landscape within the Coastal Area.

4. External alteration or extension to an existing building, including a residential unit, within an Outstanding Natural Landscape within the Coastal Area that does not meet the permitted activity standards in Rule 3.1.2(3).

LAN.3.5 Non-Complying Activities

1. Within an Outstanding Natural Landscape within the Coastal Area:

   a. Any activity that does not meet the permitted activity standards in Rules 3.1.2 (Buildings and Structures), 3.1.3 (Earthworks) or 3.1.4 (Indigenous Vegetation Clearance).

   b. Construction of a residential unit within an Outstanding Natural Landscape which does not comply with Rule 3.4.2.

   c. The establishment of new production forestry.

LAN.3.6 Assessment Criteria

1. Relevant criteria set out in LAN.7 Assessment Criteria shall apply to the consideration of all resource consent applications for land use and development activities within Outstanding Natural Landscapes.

LAN.4

Outstanding Natural Landscapes – Subdivision

LAN.4.1 Discretionary Activities

1. Subdivision where a proposed boundary is within an Outstanding Natural Landscape outside of the Coastal Area.

LAN.4.2 Non-complying Activities

1. Subdivision where a proposed boundary is within an Outstanding Natural Landscape within the Coastal Area.

LAN.4.3 Guidance Note

1. For the purposes of LAN.4.1 and 4.2, a proposed boundary does not include the boundary of the parent allotment

LAN.4.4 Assessment Criteria

1. Relevant criteria set out in LAN.7 Assessment Criteria shall apply to the consideration of all resource consent applications for subdivision activity within Outstanding Natural Landscapes.

   Guidance Note: *subdivision proposals requesting additional allotments in accordance with Policy LAN.16(c) need to include sufficient supporting information to enable an accurate assessment against LAN.7 Criterion m (i) and (ii).*

LAN.5

Outstanding Natural Features – Landuse

LAN.5.1 Status of Activities in Outstanding Natural Features

1. The rules applying to activities in Outstanding Natural Features outside the Coastal Area are as specified in LAN.5 Table 1.

2. The rules applying to activities in Outstanding Natural Features within the Coastal Area are as specified in LAN.5 Table 2.

3. Any activity not prohibited or requiring consent as a restricted discretionary, discretionary or non-complying activity shall be a permitted activity.

LAN.5

Outstanding Natural Features – Landuse

LAN.5 Table 1. Activity Table for Outstanding Natural Features outside the Coastal Area

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

Note: earthworks thresholds apply over any 12 month period at a site.

Activity	Large landforms A1 A		Volcanic cones B	Smaller, more fragile landforms D	Exposures of geological material E	Caves F
Landuse and Development						
New buildings and structures incl. network utilities						
up to 5.5m in height	P	P	RD	NC	NC	D
5.5m up to 8m in height *- non-habitable buildings* *- residential dwellings*	P RD	RD RD	D D	NC NC	NC NC	D D
greater than 8m in height	RD	RD	D	NC	NC	D
Artificial crop protection structures complying with RPE 2.3.10 and using green or black cloth on external vertical faces.	P	-	-	-	-	-
Artificial crop protection structures complying with RPE 2.3.10 and using other than green or black cloth on external vertical faces.	RD	-	-	-	-	-
Minor upgrading of network utilities and buildings and structures associated with public parks, reserves and community infrastructure.	P	P	P	~~D~~RD	~~D~~RD	-RD
Buildings associated with temporary military training activity	P	P	P	RD	RD	RD

Outstanding Natural Features – Landuse

Fencing for ONF protection	P	P	P	P	P	P
Other fencing	P	P	P	D	D	~~D~~P
Stock grazing	P	P	P	- P	- P	-P
Forestry harvesting and replanting	P	P	P	-Pr	-Pr	-P
New forestry planting	RD	~~P~~RD	D	-Pr	-Pr	-RD
Earthworks						
General earthworks not expressly either permitted or requiring resource consent in this table.						
Up to 50 m^3	P	P	RD	NC	NC	D
50 m^3 up to ~~500~~150m^3	P	P	RD	NC	~~NC~~Pr	NC
150m^3 up to 1000m^3	P	D	D	NC	Pr	NC
greater than ~~5~~1000m^3	D	D	D	NC	Pr	NC
Maintenance and repair of network utilities, roading, tracks, driveways, carparking areas, parks, reserves and community infrastructure	P	P	P	P	P	P
Land preparation	P	P	~~D~~RD	-Pr	-Pr	-D
New public walking and cycling tracks	P	~~P~~D	D	NC	~~NC~~Pr	-D
New farm and forestry roading and tracking	P	~~P~~D	D	NC	~~NC~~Pr	-D
Farm Quarries ~~and forestry mineral extraction~~ ~~(quarrying)~~	Pr	~~D~~Pr	~~D~~Pr	Pr	Pr	Pr
Other mineral extraction activities	Pr	~~NC~~Pr	~~NC~~Pr	Pr	Pr	Pr

LAN.5

Outstanding Natural Features – Landuse

Indigenous Vegetation Clearance						
up to 500m²	P	P	RD	-	-	-P
greater than 500m²	D	D	D	-	-	-D

***P** = permitted **RD** = restricted discretionary **Pr** = prohibited **-** = not applicable **D** = discretionary **NC** = non-complying*

LAN.5

Outstanding Natural Features – Landuse

LAN.5 Table 2. Activity Table for Outstanding Natural Features within the Coastal Area

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

Note: earthworks thresholds apply over any 12 month period at a site.

Activity	**Large landforms** **A**	**Dynamic landforms and features** **C**	**Smaller, more fragile landforms** **D**	**Exposures of geological material** **E**	**Caves** **F**
Landuse and Development					
New buildings and structures incl. network utilities.	NC	NC	NC	NC	NC
Minor upgrading of network utilities and buildings and structures associated with public parks, reserves and community infrastructure.	~~D~~RD	~~D~~RD	~~D~~RD	~~D~~RD	~~D~~RD
Buildings associated with temporary military training activity	P	P	-D	-D	-P
Fencing for ONF protection	P	P	P	P	P
Other fencing	~~D~~P	~~D~~RD	D	D	P
Stock grazing	~~D~~P	D	-P	-P	-
Forestry harvesting and replanting	-	NC	-	-	-
New forestry planting	-Pr	NC	-Pr	-Pr	-
Earthworks					
General earthworks not expressly either permitted or requiring resource consent in this table.					

Outstanding Natural Features – Landuse

up to ~~2~~1150m³	D	NC	NC	NC	NC
greater than ~~2~~1150m³	NC	NC	NC	~~NC~~Pr	NC
Maintenance and repair of network utilities, roading, tracks, driveways, carparking areas, parks, reserves and community infrastructure.	P	P	P	P	-
Land preparation	-P	-NC	-Pr	-Pr	-
New public walking and cycling tracks	P	P	D	NC	-
New farm and forestry roading and tracking	-D	NC	NC	~~NC~~Pr	-
Farm quarrying ~~and forestry mineral extraction~~ ~~(quarrying)~~	Pr	~~NC~~Pr	Pr	Pr	Pr
Other mineral extraction activities	Pr	Pr	Pr	Pr	Pr
Indigenous Vegetation Clearance					
up to 250m²	D	NC	-	-	-
greater than 250m²	NC	NC	-	-	-

***P** = permitted* ***D** = discretionary* ***NC** = non-complying* ***Pr** = prohibited* ***-** = not applicable*

LAN.5.2 Permitted Activity Standards

1. New buildings and structures shall have a maximum reflectance value of 30%.
2. General earthworks shall result in no more than a 1.5m vertical cut face which is to be subsequently screened by a building or grassed or mass planted.

Outstanding Natural Features – Landuse

LAN.5.3 Restricted Discretionary Activities: Matters of Discretion

3. Discretion will be restricted to the matters below for the activities listed as restricted discretionary in LAN 5 Table 1:

   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.

   f. The ability of the Outstanding Natural Feature to absorb development.

   g. The visibility of the proposed use or development from public places.

LAN.5.4 Assessment Criteria

1. Relevant criteria set out in LAN.7 Assessment Criteria shall apply to the consideration of all resource consent applications for land use and development activities within Outstanding Natural Features.

LAN.6

Outstanding Natural Features – Subdivision

LAN.6.1 Discretionary Activities

1. Subdivision where a proposed boundary is within an Outstanding Natural Feature outside of the Coastal Area.

LAN.6.2 Non-complying Activities

1. Subdivision where a proposed boundary is within an Outstanding Natural Feature within the Coastal Area.

LAN.6.3 Guidance Note

1. For the purposes of LAN.4.1 and 4.2, a proposed boundary does not include the boundary of the parent allotment

LAN.6.4 Assessment Criteria

1. Relevant criteria set out in LAN.7 Assessment Criteria shall apply to the consideration of all resource consent applications for subdivision activity within Outstanding Natural Features.

Advice Note: *subdivision proposals requesting additional allotments in accordance with Policy LAN.16(c) need to include sufficient supporting information to enable an accurate assessment against LAN.7 Criteria m(i) and (ii).*

LAN.7

Assessment Criteria

LAN.7.1 Assessment Criteria

1. The following criteria shall apply to the consideration of restricted discretionary (where relevant), discretionary and non-complying resource consent applications for subdivision, land use, and development activities within identified Outstanding Natural Features or Outstanding Natural Landscapes.

    a. To extent to which the proposal is consistent with and not contrary to the objectives and policies contained in LAN.1.2 and 1.3.

    b. The extent to which the proposal is consistent with the Council adopted '*Guidelines for Managing Change in Outstanding Natural Landscapes 2016*' or any subsequent replacement version.

    c. The elements which make up the distinctive character and qualities of the feature or landscape as recorded in Schedule LAN.8 (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 site, 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 building, structure, utility or any development.

    g. The location and design of vehicle access, manoeuvring and parking spaces.

    h. The extent of visible change to the Outstanding Natural Feature or Outstanding Natural Landscape which may result from an activity.

    i. The potential for more than minor adverse effects on the Outstanding Natural Landscape.

    j. The extent to which adverse visual effects may be mitigated through locally appropriate vegetative screening or other means.

    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 lots 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 lots, 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 or will remediate existing 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 has 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.

3. For the extension or alteration of existing lawfully established hard coastal protection structures and for new hard coastal protection structures within an Outstanding Natural Feature or Outstanding Natural Landscape:

   a. any relevant coastal hazard management strategy, plan or assessment relating to the area where hard protection structures are proposed, including the ability to relocate buildings, structures, infrastructure or land uses which the structure is designed to protect; and

   b. the ability to use, retain or enhance natural defences in place of hard protection structures.

LAN.8

Schedule – Outstanding Natural Features

LAN.8.1 Information Source

The source of information for identifying and mapping Outstanding Natural Features within the Whangarei District is the ~~"Inventory (and maps) of Important Geological Sites and Landforms in the Northland Region", Geological Society of New Zealand unpublished report 95/2, edited by J Kenny and B Hayward (1995)~~ "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.

LAN.8.2 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.

LAN.8.3 Categories of Outstanding Natural Feature

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 purposes of LAN.5 Table 1, the subcategory A1 Large Landform ONF relates only to the Whatitiri shield volcano. This ONF 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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Schedule – Outstanding Natural Features

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.

LAN.8

Schedule – Outstanding Natural Features

LAN.8.4 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 east and subvolcanic andesite, dacite and rhyolite intrusions into the underlying Northland Allochthon in the west, just beneath the volcanic outcrop which forms the rocky peaks of Bream Head.	Coastal section and foreshore rocks, 5 km length of coastline from Busby Point east 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 highway 1 north of Whangarei.	200 m high, slightly eroded volcanic dacite dome, recently dated as < 2 million years old.	1.5 km west 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 2 ha lake backed by a forested watershed growing on eroded greywacke basement.	At end of Lake Ora Rd, 2 km southwest of Kamo.	C	3	
Parakiore rhyolite dome, Whangarei	A	Prominent volcanic landform, one of two young volcanic domes in Whangarei area.	200 m high, slightly eroded dacite dome with two peaks, recently dated as less than 2 million years old.	1 km W of SH1, 4 km 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 5-6 km; not breached. Reaches a maximum height of 351 m (ASL) and stands 154 m 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. They	3.5 km WNW of Maungatapere Mountain, approximately 5 km WSW of Maungatapere township.	B	2	

LAN.8

Schedule – Outstanding Natural Features

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 east and subvolcanic andesite, dacite and rhyolite intrusions into the underlying Northland Allochthon in the west, just beneath the volcanic outcrop which forms the rocky peaks of Bream Head.	Coastal section and foreshore rocks, 5 km length of coastline from Busby Point east to Bream Head and also the slopes up to the Bream Head ridge and rocky pinnacles.	C	3	
			follow a valley to the N and then to the SW.				

Schedule – Outstanding Natural Features

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 650 m 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 2-3 km in diameter and its height is 200 m ASL, rising 80 m above the surrounding area. Maruata cone has a distinct volcanic form and is bush covered. On the north side a small forestry settlement has been established.	This centre lies between Maruata Road and Puketotara Road, approximately 5 km 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, 1-2 km in diameter, breached to the SE, that stands 350 m 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 1.5 km W of Kamo township.	C	1	
Maungakaramea 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 150 m above the surrounding plateau. Mostly covered with native bush, however some pines have been planted. A large flow to the SE (4-5 km) ends in an 8 m 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.	Lies between O'Carrol Road and Crawford Road, approximately 1 km W of Maungakaramea township.	C	1	

LAN.8

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
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 1-1.5 km diameter, with scrub and native bush cover and a farm on the flank. Small crater on top. Around 3.5 km ESE of the Whatitiri centre, the peak is 359 m (ASL) but the cone stands 185 m above the surrounding plateau.	E of the intersection of Snooks Road and State Highway 14, approximately 3 km 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 1-2 km diameter cone, which stands 395 m ASL and is breached to the West. 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 150 m above the surrounding plateau, while flows extend approximately 6 km E from the centre, almost to Whangarei City.	Just SW of Pukenui State Forest and NE of the intersection of Kara Road and State Highway 14, approximately 2.5 km NE of Maungatapere township.	C	1	
Ngararatunua volcanic cone	B	Distinct scoria cone breached to south.	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 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 325 m ASL and it rises 125 m above the lava field. The composite cone is approximately 1.2km in diameter. It is the western most cone of a group of three	This centre lies between Three Mile Bush Road, Church Road and Rotomate Road, approximately 3.5 km W of Kamo.	C	1	

LAN.8

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
			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.	200 m high peak of remaining scoria cone rises 80 m above Kamo. Disused quarry had access from railway line in northeast and is overgrown with scrub and forest. Remains of a steam boiler still within the workings.	1 km west of Kamo centre with access into the reserve off Dip Rd.	C	2	
Parahaki 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 east side of Whangarei City.	East 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 above the surrounding lava field Two periods of cone building resulted in three separate flows.	Adjacent to and N of Ngunguru road, 7.5 km ENE of Kamo township.	C	1	

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
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 150 m high, on which a few houses stand, approximately 400 m E of Hurupaki scoria cone.	This centre lies between Three Mile Bush Road, Dip Road and Rotomate Road, approximately 3 km 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 North east of Whangarei.	C	2	

LAN.8

Schedule – Outstanding Natural Features

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 4 hectares 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 5 m limestone pinnacles in middle of bushed reserve. Several sink holes.	300 m east of Abbey Caves Road, half way between Whareora Road and Old Parua Bay Road; 2 km east of Parahaki and 3 km east 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.	West 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.	c. 100 x 50 m block of Whangarei Limestone with fluting, flagginess and small solution cracks.	Northwest 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, 10 m high, 3-5 m 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 limestone blocks - many with well-developed fluting, often deep and sharp. The top of one fallen pinnacle	Approx. 1 km east of SH 1 on Kamo Springs flat, Whangarei. 100 m southeast of old house, now bed and breakfast called The Rocks. In small area close to Whangarei city, protected in private reserve with bush remnants and QE2 covenant.	B	1	

Schedule – Outstanding Natural Features

			is the best fluting in Northland, if not the country.				
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 north, Whangarei Heads.	B	3	
Matarau Rd 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 10 m of road.	On east side of Matarau Rd, 0.6-0.8 km south of junction with Rushbrook Rd, 8 km 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 10 m wide and 2 m high travertine apron flowing down into raupo swamp (photo p. 8 in ref).	4.2 km SSW of Oakura beside forestry road at end of Pukapuka Rd. Springs just above raupo swamp, 30 m east of Orchard Rd.	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 south 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 200 m further east, on northern side of road, is a rock climbing reserve (Top Rocks and Main Crag). Steep hillside reserve with limestone bluffs on Sth side of ends of Ngahere Drive and Hospital Rd.	C	1	
Old Woman Rock, Hen Island	D	Unusual intertidal rock stack eroded into shape of woman, name-bearer for adjacent Wahine Bay.	Rock stack sits on intertidal platform and is eroded out of volcanic breccia.	Western entrance of Wahine Bay, Hen Island.	C	2	

Schedule – Outstanding Natural Features

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 Rd beside junction with Clapham Rd, 4 km north 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 north side of Russell Rd.	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.	6 m diameter, 4 m high travertine deposit extends from small spring down towards swamp. Mound is hard as concrete and orange stained on top.	3 km SW of junction of Matapouri and Clements Rd. 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 west of Pipiwai - Titoki Road / McCardle Road, 2km North of Titoki.	B	2	
Urquharts Bay concretions, Whangarei Heads	D	Most easily accessible large spherical concretions in the Whangarei area, Northland.	A number of spherical concretions up to 1.5 m diameter on the beach and eroding out of the Cretaceous parent rocks at the south end of Urquharts Bay.	On beach and in low eroding banks at south west end of Urquharts Bay, Whangarei Heads.	C		
Waikiekie karst	D	Most accessible example of rare solution runnels developed in allochthonous	A small area of karstic limestone protruding through grass and forming a small stream gorge. Karst is	From little gorge between Neville Road and Auckland-Dargaville railway line	C	2	

Schedule – Outstanding Natural Features

		Oligocene limestone of the Northland Allochthon.	extremely rare in the Northland Allochthon as allochthonous limestone is usually too muddy to develop karst features.	southwards between Tapuha Road and railway line for 300m.			
Waipu Caves and karst	D & F	Best and largest area of limestone karst geomorphology in Northland, south 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 north of Waipu Caves Road. About 3 km horizontal stream cave. Includes both Waipu Cave and Elver Canyon Cave.	North 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 500 m SE of Waipu Cove to point at western 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 Whatatiri 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, 2 km from turnoff from HWY 14.	C	2	
Waro karst, Hikurangi	D	Excellent example of karst pinnacles close to highway.	In Oligocene limestone.	North 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 26 m high waterfall where the Hatea River plunges over the eroding edge of a columnar-jointed basalt flow originating from Vinegar Hill. 30 m total thickness, with the base of the basalt corresponding with the base of the falls. Shows change from platy jointing	50 m downstream from Tutukaka Road bridge over the Hatea River, approximately 1 km E of Tikipunga, within the outer suburbs of Whangarei city.	C	3	

Schedule – Outstanding Natural Features

			near top of flow to columnar jointing near base.				

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.	West 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	
Houto spilite 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 roadcuttings.	C	2	
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 south side of main railway line just east of where it ran underneath the old North Rd.	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 2 m wide at contact with quartz-diorite are exposed in cliffs and shore platform.	In coastal cliff and foreshore at Flax Bay, east coast of Kauri Mt.	B	3	

LAN.8

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
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 500 m south on the east 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 100-200 m northeast of wharf at west 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, 7 km by road east of Ngunguru township, 30 km NE of Whangarei.	C	3	
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 north end of Ocean Beach, at end of Kauri Mt Rd.	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 southwestwards for 1 km.	B	1	

LAN.8

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
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 1.5 km 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 North 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 uncomformably on greywacke. This sequence is intruded by garnet hornblende andesite rich in unusual mantle xenoliths.	Whangarei Harbour, coastal rocks and low cliffs on South side of Reserve Point, 1 Km east of tip	B	2	
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. 5 m thick late Eocene algal limestone. Concentrically banded algal rhodolith spheres 1-6 cm 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 20 m, beside farm track near junction of three forks of a small stream, c. 200 m up flat section of valley from the coast. Stream valley mouth is largest and about midway between Mangawhati Pt and where Takahiwai Rd leaves coast.	B	1	
Taurikura Bay natural jetty	E	Best natural jetty formed by a dike in New Zealand.	Two metre wide andesite dike intruding Northland Allochthon and forming a	Foreshore of Taurikura Bay,	B	1	

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
			50m long jetty into bay. Fifty cm wide zone of baked muddy limestone on either side.	adjacent to Ody Road junction.			
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	South 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 4 hectares 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 5 m limestone pinnacles in middle of bushed reserve. Several sink holes.	300 m east of Abbey Caves Road, half way between Whareora Road and Old Parua Bay Road; 2 km east of Parahaki and 3 km east of Whangarei.	C	2	
Poor Knights sea arches and caves	F	Best developed sea arches, tunnels and caves in New Zealand. Includes completely submerged tunnels, air bubble caves - many of which have been named.	Numerous arches, tunnels and caves ranging up to 200m long and 50 m wide, eroded by the sea along joints in silicified rhyolite breccia. Located at present sea level, depths up to 30-40 m below present and uplifted to heights up to 80 m above present. On and through Tawhiti Rahi, Aorangi, Aorangaia and Archway islands. Tawhiti Rahi itself contains uplifted sea cave	Around the coast of the Poor Knights Islands e.g. Rikoriko Cave; Maomao Arch; Cathedral Arch.	B	3	

Schedule – Outstanding Natural Features

Feature name	Category	Significance	Brief description	Location	Importance	Vulnerability	Map No.
			c.60 m asl (dimensions 12 m deep, 8 m wide, 5 m high).				
Two Tone Cave, Waipu	F	One of the longest caves in Northland with numerous branches.	Horizontal stream cave about 3 km 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, south 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 north of Waipu Caves Road. About 3 km horizontal stream cave. Includes both Waipu Cave and Elver Canyon Cave.	North 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 500 m 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.*

Revision and Sign-off Sheet

LAN.8

Schedule – Outstanding Natural Features

Date Approved	Editor	Paragraph	Change Reference	Decision Date	Approved By

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