

Earthworks (EW)

Issues

The [Earthworks](#) Chapter manages [earthworks associated with subdivision](#) to ensure that [sites](#) are suitable for development, and that instability hazards and adverse [effects](#) on heritage values and New Zealand kauri trees are managed.

Whangārei District has varied geology, soil type and ground [water](#) levels. This combined with variable climatic conditions creates a risk of [land](#) instability hazards. Generally, where there are steep slopes, little vegetation and high rainfall, [land](#) is likely to be subject to erosion and movement. Some [land](#) formations, including caves and sinkholes, are inherently unstable and constitute a major hazard.

[Land](#) instability issues can be created or exacerbated by inappropriate [earthworks](#). [Earthworks](#) are a necessary part of [subdivision](#) but need to be managed to ensure that the risk of [land](#) instability is avoided, remedied or mitigated and that adverse [effects](#) on heritage values and New Zealand kauri trees are managed.

The objectives, policies and rules set out below apply to [earthworks](#) undertaken in anticipation of, or as part of, a [subdivision](#) and apply in addition to the provisions for the underlying zone and any relevant District Wide and [Resource Area](#) provisions. In addition to the District Plan, [earthworks](#) are also regulated under the Regional Plan.

Objectives

EARTH-O1 – Land Instability	Minimise the risk of land instability when undertaking earthworks associated with subdivision .
EARTH-O2 –Kauri Dieback Disease	Avoid the spread of plant pathogens including <i>Phytophthora Agathidicida</i> (Kauri Dieback Disease).

Policies

EARTH-P1 – Adverse Effects	To avoid where practicable, or otherwise remedy or mitigate, adverse effects associated with land instability by managing earthworks associated with subdivision .
EARTH-P2 – Risk	To design and undertake earthworks associated with subdivision to minimise potential risks to people, property and the environment from land instability.
EARTH-P3 – Kauri Dieback Disease	To discourage earthworks within the vicinity of New Zealand Kauri tree (<i>Agathis Australis</i>) and to ensure that earthworks are designed so as to avoid the spread of plant pathogens including <i>Phytophthora Agathidicida</i> (Kauri Dieback Disease).

Rules

EARTH-R1	Earthworks Associated with Subdivision	
All Zones	Activity Status: Controlled Where: 1. The earthworks associated with subdivision do not occur within: a. A Site of Significance to Māori.	Activity Status when compliance not achieved: Restricted Discretionary Matters of discretion: 1. The matters of control listed in EARTH-R1. 2. Effects on heritage values.

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- b. 10m of any archaeological site.
- c. Three times the maximum radius of the canopy dripline of a New Zealand Kauri tree (*Agathis Australis*).
- 2. A [site](#) suitability report prepared by a suitably qualified and experienced professional (e.g. Chartered Professional Engineer) is provided which certifies that:
 - d. A 100m² [building area](#) within each [allotment](#) is suitable to construct a [building](#) either:
 - i. In accordance with NZS 3604/2011; or
 - ii. With specific engineering design of foundations.
 - b. [Access](#) to the certified [building area](#) within each [allotment](#) is suitable to construct.
- 3. The potential increased risk of instability based on the location, layout and design of the [subdivision](#).
- 4. The likelihood of a hazard arising from an unstable [land](#) event and the likely extent of any damage.
- 5. Any exacerbation of an existing [land](#) instability hazard or creation of a new [land](#) instability hazard and possible [effects](#) on public health and safety and other property.
- 6. The proposed use of, necessity for and design of hard engineering solutions for [land](#) instability hazards.
- 7. The ability to design, construct and maintain future [buildings](#), [structures](#) and [access](#) so that they are resilient to [land](#) instability hazards.
- 8. The need for a [site](#) suitability report or geotechnical assessment.
- 9. The potential [effects](#) on sources of [drinking water](#) for human consumption.
- 10. The extent to which appropriate methods are used to prevent the spread of plant pathogens or unwanted organisms (as listed under the Biosecurity [Act](#) 1993), including but not limited to Kauri Dieback Disease.

Matters of control:

1. [Effects](#) on the stability and safety of surrounding [land](#), [buildings](#) and [structures](#), including [infrastructure](#).
2. Protocol for accidental discovery of kōiwi, archaeology and artefacts of Māori origin.
3. Appropriate methods to avoid, or where avoidance is not possible, contain or control the spread of plant pathogens.
4. [Building](#) and [access](#) location, scale and design.
5. The adequacy of the [site](#) suitability report and any further information provided through the consent process and any conditions, recommendations and development restrictions.

Note:

1. *Acceptable means of compliance for the [site](#) suitability report are contained within the Whangārei District Council Environmental Engineering Standards.*

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EARTH-R2	Earthworks, Land Preparation, Cultivation, or Land Disturbance within a Kauri Hygiene Area	
<p>All Zones and Development Areas</p>	<p>Activity Status: Permitted</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The works are undertaken for the purpose of gardening on a site less than 2,000m² and: <ol style="list-style-type: none"> a. The maximum area disturbed within a single kauri hygiene area is 250m² within a site; and b. All soil, organic material (excluding crops grown for consumption) and surface water from the works within the kauri hygiene area are retained within the kauri hygiene area; and c. All tools, equipment, clothing and footwear are cleaned to the greatest extent practicable of all soil and organic material prior to entry into and exit from the Kauri Hygiene Area; and d. Any planting uses either: <ol style="list-style-type: none"> i. sterilised seeds or ii. seeds that have been harvested without coming into contact with soil; or iii. cuttings free of soil; or iv. accredited Phytophthora agathidicida free plants; or v. plants with their root system within the same Kauri Hygiene Area; e. The Whangārei District Council is notified within 3 months of the Kauri Hygiene Area being established. <p>OR</p> <ol style="list-style-type: none"> 2. The works are undertaken in accordance with an approved subdivision consent under EARTH-R1.1(c). <p>OR</p> <ol style="list-style-type: none"> 3. The works are undertaken by a local authority or a Network Utility Operator in relation to infrastructure 	<p>Activity Status when compliance not achieved: Controlled</p> <p>Where:</p> <ol style="list-style-type: none"> 1. The works are undertaken by a local authority or a Network Utility Operator for the purpose of the operation, repair, maintenance or minor upgrading of infrastructure. <p>Matters of Control:</p> <ol style="list-style-type: none"> 1. The extent to which the kauri dieback management plan is likely to be effective in avoiding the spread of kauri dieback disease. 2. Any recommendations and proposed mitigation measures of the kauri dieback management plan and any further information provided through the consent process. 3. The extent of earthworks, land preparation, cultivation or land disturbance within the kauri hygiene area. 4. Procedures for implementing, monitoring, reviewing and amending the kauri dieback management plan. 5. Operational needs of the local authority or Network Utility Operator. <p>Activity Status when compliance not achieved, and the activity is not a Controlled activity: Restricted Discretionary</p> <p>Matters of discretion:</p> <ol style="list-style-type: none"> 1. The matters of control listed in EARTH-R2.1 – 5. <p><i>Compliance Standard:</i></p> <ol style="list-style-type: none"> 1. Controlled activity Rule EARTH-R2.1 takes effect on 30 June 2023. 2. Note: An application may be made for a district wide resource consent rather than a site-specific consent pursuant to controlled activity Rule EARTH-R2.1. 3. Any application for a controlled or

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and are for the purpose of:

- a. Emergency works as defined by section 330 of the Resource Management Act 1991; or
- b. Works that are necessary to avoid or remedy unplanned network outages;

OR

4. The works are undertaken for the purpose of:
 - a. An emergency regulation made under section 150 of the Biosecurity Act 1993; or
 - b. Scientific work in relation to testing and monitoring for kauri dieback disease that is carried out with authority of the Minister under section 52 of the Biosecurity Act 1993.

Compliance Standard:

1. From 30 June 2023 permitted activity Rule EARTH-R2.3 is conditional on the management plan in EARTH-REQ2:
 - a. Containing a section on Emergency works and works that are necessary to avoid or remedy unplanned network outages; and
 - b. Having been certified by the Council.
2. Non-compliance with compliance standard (1)(a) or (b) above falls under controlled activity rule EARTH-R2.1.

restricted discretionary activity that is not a district wide resource consent shall comply with information requirement EARTH-REQ1.

4. Any application for a district wide resource consent shall comply with information requirement EARTH-REQ2.

EARTH-REQ1 Information Requirement– Kauri Dieback Management Plan

All Zones and Development Areas

1. Any application for a controlled or restricted discretionary activity under rule EARTH-R2.1 that is not for a district wide resource consent shall prepare and implement a kauri dieback management plan.
2. The purpose of the kauri dieback management plan is to set out the procedures that will be followed to avoid the risk of the spread of kauri dieback disease. These hygiene procedures are based on the knowledge that all kauri hygiene areas have the potential to contain *Phytophthora agathidicida*.
3. The kauri dieback management plan shall detail, where relevant:
 - a. An assessment of the overall risk of spreading kauri dieback, including:

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- i. The activities proposed and their potential vectoring of *Phytophthora agathidicida*.
 - ii. The frequency, duration and scale of the proposed activities.
 - iii. The risk associated with each activity before any procedures to mitigate risks are implemented.
 - iv. The procedures that will be implemented for each activity to mitigate the risks.
 - v. The risk of each activity after those procedures are implemented and followed.
- b. The kauri dieback management plan objectives to prevent or minimise the spread of kauri dieback.
 - c. The procedures that will be followed to prevent or minimise the spread of kauri dieback disease.
 - d. A site description relating to the area of proposed works (site name, site location and other identification details).
 - e. A map or maps showing:
 - i. The area that the management plan applies to.
 - ii. The location of each kauri tree within that area and its associated kauri hygiene area.
 - iii. Locations where access to the kauri hygiene area will be prevented (e.g. by fencing off, covering the soil with protective surface).
 - iv. The boundary of any kauri dieback disease containment areas.
 - v. Equipment and vehicle cleaning points (which are to be located within the kauri hygiene area or kauri dieback disease containment area).
 - vi. Any water bodies, fences, roads, tracks or structures within the kauri hygiene area and kauri dieback disease containment area.
 - vii. Proximity to other kauri trees.
 - viii. Areas where livestock have access to the kauri hygiene area or kauri dieback disease containment area.
 - f. The method by which the boundaries of any kauri hygiene area and kauri dieback disease containment area will be clearly marked out.
 - g. The procedures to be followed to ensure that any vehicles, equipment, clothing and footwear are cleaned to the greatest extent reasonably practicable prior to entry into and exit from the kauri hygiene area and kauri dieback disease containment area.
 - h. The procedures to be followed to ensure that any soil, organic material or surface water not retained within the kauri hygiene area are either:
 - i. Stored within a kauri dieback disease containment area; or
 - ii. Transported in a sealed vehicle/container to a landfill and the facilities at the landfill are suitable to dispose of infected or suspected infected material.
 - i. The water management procedures to be used for the washdown of vehicles, equipment and footwear used in a kauri hygiene area, including:
 - i. Methods to ensure that run-off does not enter any water bodies, the coastal marine area or separate kauri hygiene areas of any neighboring kauri trees.
 - ii. If on-site washdown is impracticable, procedures to undertake washdown at a facility where water is treated and managed.
 - j. For works within the kauri hygiene area that are likely to take longer than 12 months, the procedures to be followed to monitor, review and amend the kauri

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dieback management plan, including an annual report to Council until the completion of the works within the kauri hygiene area which details:

- i. All works undertaken in a kauri hygiene area in the preceding 12 months including the date, type of equipment and vehicle used, the cleaning procedures followed and the disposal location of all disturbed soil and organic material.
 - ii. A review of the kauri dieback management plan to ensure the continued effectiveness of the management plan, this may include auditing of kauri dieback management procedures and soil sampling within and surrounding hygiene areas.
 - iii. Any proposed amendments to the kauri dieback management plan.
- k. Any consultation undertaken with mana whenua and a summary of the results of that consultation.

EARTH-REQ2	Information Requirement– District-Wide Kauri Dieback Management Plan
	<ol style="list-style-type: none"> 1. Any application for a controlled or restricted discretionary activity under rule EARTH-R2.1 for a district wide resource consent shall prepare and implement a kauri dieback management plan. 2. The purpose of the kauri dieback management plan is to set out the procedures that will be followed to avoid the risk of the spread of kauri dieback disease. These hygiene procedures are based on the knowledge that all kauri hygiene areas have the potential to contain <i>Phytophthora agathidicida</i>. 3. For local authorities and Network Utility Operators, the District-Wide management plan shall include a section on emergency works and works that are necessary to avoid or remedy unplanned network outages. The purpose of this section of the management plan is to set out the procedures that will be followed to avoid the risk of the spread of kauri dieback disease in the context of emergency works and unplanned network outages which are, by their nature, dynamic, urgent and complex. <p>Emergency works and unplanned network outages</p> <ol style="list-style-type: none"> 4. For emergency works and unplanned network outages, the management plan shall include: <ol style="list-style-type: none"> a. an assessment of the activities including the: <ol style="list-style-type: none"> i. type, frequency, duration and scale of activities, so far as can be reasonably anticipated; ii. the context in which the activities are performed, including the purpose of the activities and the community benefit that the infrastructure provides; b. an assessment of the risk of spreading kauri dieback by reference to the activities identified in accordance with 4(a)(i); c. the controls to be implemented to minimise and mitigate the risk identified in the assessment in 4(b) and to address the interests identified in the assessment in 4(a)(ii); d. The residual risk.

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5. The controls in 4(c) may include general or flexible controls which are capable of tailoring to a particular activity and must include reasonably practicable methods to:
 - a. identify and record kauri and kauri hygiene areas;
 - b. identify and record vehicles that enter those areas;
 - c. minimise soil disturbance within kauri hygiene areas;
 - d. clean vehicles, equipment and items that contact soil and organic matter in kauri hygiene areas. This can include cleaning vehicles when back at a depot or facility; and
 - e. minimise the movement of potentially infected water, soil and organic matter between kauri hygiene areas or into waterways;
6. The management plan must establish:
 - a. a record keeping and audit process; and
 - b. a process for annual notification to the Whangārei District Council, including identification of activities undertaken with kauri hygiene areas.

All other works

7. For all other works, the kauri dieback management plan shall detail, where relevant:
 - a. An assessment of the risk of spreading kauri dieback, including:
 - i. The activities proposed and their potential vectoring of *Phytophthora agathidicida*.
 - ii. The potential frequency, duration and scale of the proposed activities.
 - iii. The risk associated with each activity before any procedures to mitigate risks are implemented.
 - iv. The procedures that will be implemented for each activity to mitigate the risks.
 - v. The risk of each activity after those procedures are implemented and followed.
 - b. The kauri dieback management plan objectives to prevent or minimise the spread of kauri dieback.
 - c. The procedures that will be followed to prevent or minimise the spread of kauri dieback disease.
 - d. Details of a suitable process for undertaking risk assessments, including pre-start site inspections to identify any necessary kauri dieback protection measures to be employed.
 - e. The method by which the boundaries of any kauri hygiene area and kauri dieback disease containment area will be clearly marked out.
 - f. The procedures to be followed to ensure that any vehicles, equipment, clothing and footwear are cleaned, to the greatest extent reasonably practicable, prior to entry into and exit from the kauri hygiene area and kauri dieback disease containment area. This can also include cleaning of vehicles when back at a depot or facility.
 - g. The procedures to be followed to ensure that any soil, organic material or surface water not retained within the kauri hygiene area are either:
 - i. stored within a kauri dieback disease containment area; or
 - ii. transported in a sealed vehicle/container to a landfill and the facilities at the landfill are suitable to dispose of infected or suspected infected material.

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- h. The water management procedures to be used in relation to the washdown of vehicles, equipment and footwear used in a kauri hygiene area, including:
 - i. Methods to ensure that run-off does not enter any water bodies, the coastal marine area or non-contiguous kauri hygiene areas of any neighbouring kauri trees.
 - ii. If on-site washdown is impracticable, procedures to undertake washdown at a facility where water is treated and managed.
- i. The procedures to be followed to monitor, review and amend the kauri dieback management plan, including an annual report to Council identifying the locations of earthworks undertaken within kauri hygiene areas,
- j. Any consultation undertaken with mana whenua and a summary of the results of that consultation.

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Revision and Sign-off Sheet

Editor	Paragraph	Change Reference	Council Decision Date	Operative Date	Approved By
AKM	Chapter Heading	Clause 16A Minor Amendments DSTPLN-659943184-396	21 February 2022	21 February 2022	DK
AKM	New EARTH-R2 EARTH-REQ1 EARTH-REQ2	Consent order ENV-2020-AKL-000127 DSTPLN-1744632856-2077	Environment Court Decision 30 June 2022		DK

Editor

Ashley Middleton (AKM)

Editor Position

Support Assistant

Approved By

Approver Position

Dominic Kula (DK)

GM Planning and Development