

# Section 32 Report

## Ketuketu whenua/Earthworks

prepared for the

## Proposed Waimakariri District Plan

18 September 2021



**WAIMAKARIRI**  
DISTRICT COUNCIL

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# 1. EXECUTIVE SUMMARY

Earthworks are required for land development and other activities and can involve both excavation (cut) and raising (fill) of ground levels. Earthworks can also generate adverse effects, such as destroying or degrading significant cultural sites or natural values, or by being at a scale that is incompatible with the surrounding environment. Adverse effects on health and amenity include dust, sediment runoff, effects on the flow of floodwater, and noise.

The Proposed Earthworks Chapter permits a volume of earthworks that is aligned with the purpose and character of zones (or overlays), provides specifically for a range of anticipated activities, and applies standards to control the scale, location and other aspects of earthwork activities. Some additional provisions for specific activities or areas are included in other zone chapters, particularly the Sites and Areas of Significance to Maori and Energy and Infrastructure Chapters.

The key resource management issues identified for earthworks are:

- Existing broad standards for earthworks do not adequately manage effects on sensitive environments;
- The application of current earthworks standards are uncertain and complex;
- Large scale earthworks such as quarries require effective management;
- Overland flow paths are not always protected from earthworks;
- Erosion, land stability and visual effects from earthworks on slopes; and
- Earthworks near boundaries can affect neighbouring properties.

The key changes introduced for earthworks are:

- A separate Earthworks Chapter that includes specific objectives, policies, rules and standards to manage effects on sensitive environments;
- Specific rules for earthworks activities and earthworks standards including maximum volumes, height, depth and slope requirements;
- Management of large scale earthworks through resource consent assessment;
- Introduction of rules and standards for stockpiles, overland flow paths, sediment and erosion control, scale of earthworks and slope gradient and
- Introduction of setbacks from waterbodies, sand dunes, notable trees and site boundaries.

Overall, the proposed policies and methods are the most appropriate option to achieve the proposed objective for earthworks, management of associated effects in the District, and to meet the purpose of the Resource Management Act 1991.

## 2. OVERVIEW AND PURPOSE

### 2.1 Purpose of Section 32

The overarching purpose of Section 32 of the Resource Management Act 1991 (RMA) is to ensure that plans are developed using sound evidence and rigorous policy analysis, leading to more robust and enduring provisions.

Section 32 reports are intended to clearly and transparently communicate the reasoning behind plan provisions to the public. The report should provide a record of the evaluation process, including the

consultation, technical work, methods, assumptions and risks that informed that process. A robust report can prove highly useful to decision makers, particularly where it clearly communicates the analysis undertaken to identify the most appropriate way to achieve the purpose of the RMA.

The District Council is required to undertake an evaluation of any proposed District Plan provisions before notifying those provisions. The Section 32 evaluation report provides the reasoning and rationale for the proposed provisions and should be read in conjunction with those provisions.

## 2.2 Topic Description

The Earthworks Chapter provides district-wide provisions for earthworks activities. Earthworks are defined by the National Planning Standards to include alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock); but excludes gardening, cultivation, and disturbance of land for the installation of fence posts.

The National Environmental Standard for assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) came into effect in 2012. The NESCS contains thresholds for earthworks that are more stringent than those provided within the Operative Plan.

There have been four changes to the District Plan since it was made operative in November 2005 that have amended provisions related to earthworks:

<b>Operative District Plan Amendments Relating to Earthworks</b>		
<b>Plan Change 2 – Transmission Lines</b>	Introduced required setbacks from transmission lines for structures based on pylon spans, and earthworks around pylons and underlines.	Operative 17 August 2009
<b>Private Plan Change 05 – Ravenswood – Residential</b>	P05 rezoned an area of approximately 125 hectares adjacent to Woodend and included an amendment to Rule 23.3.4 and 23.3.5 so that it would only apply to Residential 6 and 6A Zones at Pegasus (and not Ravenswood).	Operative 19 March 2012
<b>Land Use Recovery Plan Action 25 i, ii, iii</b>	LURP Action 25 included some consequential amendments to Chapter 4 relating to rebuilding of existing business areas, greenfield priority areas for business	Operative 31 March 2014
<b>Land Use Recovery Plan Action 47</b>	LURP Action 47 included new Rules 23.1.1.9 (earthworks associated with land repair), 23.1.2.4 (earthworks exemption) and 31.12.2.4.	Operative 11 August 2015

## 2.3 Significance of this Topic

Earthworks are essential for many activities including residential, recreation and commercial site preparation, transportation, farming, the creation of structures such as dams, and for quarrying. At the same time, earthworks can have adverse effects on the environment, including effects on amenity values (such as noise and dust), vegetation, water quality, land stability, visual aspects of landscape, and risk from natural hazards.

Earthworks can also have adverse effects on significant values such as those within significant natural areas, areas of high natural coastal character and by uncovering or affecting sites of historic or cultural significance recognising that other controls such as through Regional Plan rules and the National Environmental Standards for Plantation Forestry also apply.

## 2.4 Current Objectives, Policies and Methods

The earthworks rules are currently contained in the Land and Water Margins chapters (separate chapters for objectives and policies and for rules), that also includes the provisions to manage vegetation clearance, water supply, destruction and demolition of structures, fencing of goats, activities on contaminated sites, and activity status for landfills, and solid waste transfer stations.

The objectives and policies do not specifically address earthworks and focus on the “life supporting capacity of the land resource”, and effects including “soil loss, soil structure deterioration, soil nutrient depletion, land contamination, and non-point pollution of waterways”.

Rules that include performance conditions apply to the following:

- Entry of soil into a water body
- Stockpiling of soil over vegetation
- Setbacks from rivers, lakes and wetlands
- Volume ratios for residential and business zones
- Area ratio for rural zones
- Earthquake repair earthworks
- Earthworks near transmission lines
- Specific rules for topsoil in a the Residential 5 Zone
- Wahi taonga, wahi tapu and urupa protocol within the Mapleham 4B Zone
- Specific earthworks requirements relating to development areas

Exemptions apply for maintenance and operation of regional council hazard protection and river maintenance works, specified utility related work, specified vertical holes and cultivation

Controlled Activities are as follows:

- Earthworks in identified conservation areas at Pegasus and on surrounding land where no resource consent has been approved for subdivision

Restricted Discretionary Activities are as follows:

- Earthworks that do not comply with the conditions stated
- Earthworks within the Kaiapoi Business 5 Zone where no geotechnical assessment has been undertaken and authorised

Discretionary Activities are as follows:

- Landfills and transfer stations

## 2.5 Information and Analysis

Table 1 – List of relevant background assessments and reports

Title	Author
Waimakariri District Landscape Evaluation: Outstanding Natural Features, Natural Landscapes and Significant Amenity Landscapes Prepared for Waimakariri District Council (26 September 2019)	Boffa Miskell
<b>Description of Report</b>	
The report identifies the values of the Outstanding Natural Landscapes and Features and identifies threats to landscape values including the alteration of natural landform from earthworks.	
Title	Author
Waimakariri District Council District Plan Review: Sites and Areas of Cultural Significance (August, 2018)	Mahaanui Kurataiao
<b>Description of Report</b>	
This report provides the mana whenua preferred approach to the identification and categorisation of sites and areas of cultural significance. It includes recommendations for proposed provisions and the preferred approach for earthworks provisions within these areas.	
Title	Author
Waimakariri Coastal Natural Character Study: Natural Character Study of the Waimakariri Coastal Environment Prepared for Waimakariri District Council (18 June 2018)	Boffa Miskell
<b>Description of Report</b>	
This study defines and maps the terrestrial component of Waimakariri District's Coastal Environment.	
Title	Author
Waimakariri District Localised Flood Hazard Assessment July 2015	Project Delivery Unit, Waimakariri District Council
<b>Description of Report</b>	
This assessment modelled the flood effects across the District for the 100, 200 and 500 Annual Recurrence Interval rain events and has been used to generate a map of modelled flood hazards.	
The report, and any subsequent updates to the modelling, are relevant to earthworks as changes to ground level may be required for flood mitigation, flood control works and ground level changes can also change or increase risk from flood hazards, for example by diverting water onto another property.	

## 2.6 Consultation Undertaken

Extensive consultation has been undertaken as part of this District Plan Review process with key stakeholders and the local community. Feedback from consultation relevant to earthworks is contained in Appendix One – Consultation, and is summarised below:

### 2.6.1 Summary of feedback:

- (a) The existing earthworks thresholds were identified as ambiguous, and there were various views on maximum volume or area measurements, relation to site size, or exemptions for work covered by building consent.
- (b) Earthworks that affect overland flow paths were identified as an issue, and potential conflict with regional requirements within the farm environment reporting framework were also identified. Infill of flow paths over time were particularly identified as an issue.
- (c) There was general support for management of stockpiles including maximum height and being set back from boundaries.
- (d) A range of comments on quarry operations were received including requests for setbacks from residential units using Australian technical guidance. Quarry industry comments sought recognition of the need for aggregate including the location of aggregate resources, and transportation costs.
- (e) Several comments requested that large-scale earthworks, such as quarries, require resource consent and management of effects associated with earthworks such as dust.
- (f) Some comments sought that specific activities were such as cultivation, tracks and infrastructure are enabled.
- (g) Sediment controls should not duplicate regional controls and may also be required by farm environment plans.
- (h) The National Environmental Standard for Plantation Forestry should be taken into account.
- (i) An advice note should be included to advise that an archaeological authority from Heritage New Zealand may be required.
- (j) Control earthworks near waterbodies and within the Coastal Environment including control of sediments (but not duplicating regional rules).

As part of plan development, staff from relevant Council sections were consulted on any earthworks issues observed in the District and options for the Proposed District Plan.

## 2.7 Iwi Authority Advice

Clause 3(1)(d) of Schedule 1 of the RMA sets out the requirements for local authorities to consult with iwi authorities during the preparation of a proposed plan. Clause 4A requires the District Council to



provide a copy of a draft proposed plan to iwi authorities and have particular regard to any advice received.

This section summarises the consultation feedback and advice received from the iwi authority relevant to the Earthworks Chapter and the District Council's consideration of, and response to (as required by Section 32(4A)(b) of the RMA), that feedback/advice.

Detailed advice on the draft chapter was provided to Council through Mahaanui Kurataiao Limited. Council has considered the advice provided in that review, which is summarised in the following table.

Further consultation with Mahaanui Kurataiao Limited considered the management of earthworks within Sites and Areas of Significance to Maori and led to further refinement of provisions within the Sites and Areas of Significance to Maori and Earthworks Chapters of the Proposed Plan.

Table 3 - Consideration of advice from Iwi Authority

Date	Iwi Authority	Subject Matter	Advice Received	Consideration of, and response to, Advice
	Ngāi Tūāhuriri Rūnanga	Introduction	Need to recognise the Sites and Areas of Significance to Maori Chapter, clarify the relationship between the two chapters and be consistent.	Clarifying the relationship between the Earthworks and Sites and Areas of Significance to Maori Chapters has been addressed for efficient/effective district plan administration.  Consistency between chapters has been addressed.
			Ridgelines within Outstanding Natural Landscape Overlays need a method identified	Policies provide for protection of natural character, and values of natural landscape. Matters of Discretion include consideration of landform including prominent ridgelines.
			Suggested amendment to Matter of Discretion to consider the effects on dynamic coastal processes.	EW - MD6 covers a range of considerations for earthworks within the Coastal Environment Overlay including consideration of any effects on coastal processes.
			Requested clarification of information for discovery of an archaeological site.	Advice notes have been proposed to draw attention to the requirements for accidental discovery of archaeological sites.
			Restrict earthworks for maintenance of tracks, footpaths and roads to the depth previously disturbed.	It is proposed to limit maintenance that is permitted to the extent of previous disturbance.
			Allow a greater volume of earthworks for small sites to allow the building of a house.	The proposed volumes were amended to better relate to building requirements for small sites.

			Earthworks for rural areas are significantly larger than in neighbouring district plans. Explain reasoning or amend limits.	The limits for rural areas have been amended to those that are more consistent with neighbouring councils while still permitting a reasonable range of earthworks activities in rural zones (noting that cultivation and fencing are excluded from the definition of earthworks).
			Recommend greater control of earthworks on steep slopes.	Proposed provisions were amended to limit permitted earthworks to slopes that are no greater than 1:4 (25%).
			Recommend a standard to control sediment beyond the site, and potentially into waterways.	Setbacks from waterbodies have been proposed together with a standard to prevent sediment transfer from the site of earthworks activity.

## 2.8 Reference to Other Relevant Evaluations

This Section 32 topic report should be read in conjunction with the following evaluations:

- Natural hazards: earthworks in hazard areas
- Rural zones: sets out the activity status large-scale earthworks activities in rural areas e.g. quarrying, landfills
- Notable trees: earthworks within the root protection area
- Historic heritage: earthworks within a heritage setting
- Sites and areas of significance to Māori: earthworks in culturally sensitive areas
- Natural character of freshwater bodies: management of activities in relation to freshwater values
- Ecosystems and indigenous biodiversity: the values to be protected from earthworks activities
- Energy and infrastructure : earthworks for a range of infrastructure
- Natural features and landscapes: this chapter establishes values that are sensitive to earthworks activities
- Coastal Environment: this chapter establishes values that are sensitive to earthworks activities
- Subdivision: earthworks are frequently required to prepare subdivided land for subsequent development.
- Contaminated Land: contains policy for disturbance of contaminated land.

## 3. STATUTORY AND POLICY CONTEXT

### 3.1 Resource Management Act

Section 5 of the RMA sets out the purpose of the RMA, which is to promote the sustainable management of natural and physical resources. In achieving this purpose, authorities need to recognise and provide for matters of national importance identified in Section 6, have particular regard to other matters listed in Section 7, and take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) under Section 8.

#### 3.1.1 Section 6

The following section 6 matters are generally relevant to the management of earthworks. The evaluation of earthworks for some identified areas or district wide topics are covered within separate section 32 evaluation reports, for example, Sites and Areas of Significance to Maori.

*(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;*

Earthworks within sensitive environments have the potential to generate adverse effects such as sedimentation of waterbodies, disturbance of dune landforms and ecology and drainage of wetlands. Provisions to protect these resources are included within the Earthworks Chapter and other relevant chapters.

*(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development;*

Earthworks have the potential to detract from the values associated with outstanding natural features and landscapes, such as through vegetation clearance or creation of tracks and deposition of spoil.

*(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;*

Earthworks can degrade, destroy or remove indigenous vegetation and significant habitats, and controls are therefore required for protection of these resources from the effects of earthworks.

*(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;*

The need to control earthworks effects to protect cultural resources has been recognised in the Proposed Plan through provisions in the earthworks chapter that include thresholds and setback rules for earthworks activities, and provisions within other relevant chapters including Sites and Areas of Significance to Maori and provisions that manage potential effects on water quality.

*(f) the protection of historic heritage from inappropriate subdivision, use, and development;*

Provisions to restrict earthworks within sites of historic heritage recognise the importance of this matter.

*(g) the protection of protected customary rights; and*

Proposed provisions recognise the adverse effects that earthworks can have on customary rights such as mahinga kai.

*(h) the management of significant risks from natural hazards.*

The specific matters of national importance relevant to earthworks are also covered by the overlay topics s32 reports, such as Coastal Environment and Natural Hazards.

### **3.1.2 Section 7**

The Section 7, other matters, relevant to earthworks are:

*(b) the efficient use and development of natural and physical resources*

*(c) the maintenance and enhancement of amenity values*

*(d) intrinsic values of ecosystems*

*(f) maintenance and enhancement of the quality of the environment*

*(g) any finite characteristics of natural and physical resources*

*(i) the effects of climate change*

The above matters are relevant to the design, location and management of earthworks to enable land use and development, and to maintain or enhance amenity values and the quality of the environment, and not adversely affect the intrinsic values of ecosystems or finite characteristics of resources.

Climate change effects include the frequency and severity of natural hazards. Earthworks can be used to help manage risk from natural hazards (such as the creation of stop banks or fire breaks) or can exacerbate risk (for example by diverting the flow of floodwater).

Provisions are proposed that address these matters.

### **3.1.3 Section 8**

Section 8 of the RMA requires the Council to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). Consultation with mana whenua has been undertaken and feedback has informed the section 32 evaluations for the District Plan Review. Section 74(2A) further requires councils to take into account relevant Iwi Management Plans and their bearing on the resource management issues of the District.

The proposed Earthworks Chapter has taken into accounts comments received from mana whenua through Mahaanui Kurataiao Ltd and policy within the Iwi Management Plan (discussed in Section 3.4).

## **3.2 National Instruments**

The following national instruments are relevant:

### **3.2.1 National Planning Standards**

Under RMA s75 (3), a District Plan must give effect to a National Planning Standard. The Proposed Waimakariri District Plan has been prepared in accordance with National Planning Standards 2019, which were introduced by the Resource Legislation Amendment Act 2017 to make plans and policy statements more useable, accessible and easier to prepare.

The Proposed District Plan will give effect to the National Planning Standards by including a separate district-wide chapter for earthworks and by using standardised definitions and standards.

The following RMA and National Planning Standards definitions are included in, and relevant to, the earthworks chapter:

- Amenity values
- Bed
- Discharge
- Dust
- Earthworks
- Environment
- Ground level
- Height
- Historic heritage
- Lake
- Land
- Landfill
- Mana whenua
- Mining
- Quarry
- River
- Road
- Site
- Stormwater
- Subdivision
- Wastewater
- Water
- Wetland

### **3.2.2 National Policy Statements and Environmental Standards**

#### *3.2.2.1 National Policy Statement for Freshwater Management 2020 (NPSFM)*

The NPSFM provides direction on the management of activities that affect the health of fresh water. While Regional Plans will mainly implement the NPSFM, the proposed provisions for earthworks include setbacks from waterbodies and controls for sedimentation that would support the directions in the NPSFM to enhance the health of fresh water.

#### *3.2.2.2 New Zealand Coastal Policy Statement 1994 (NZCPS)*

The New Zealand Coastal Policy Statement is a national policy statement under the Resource Management Act 1991. Its purpose is to state policies in order to achieve the purpose of the Act – ‘to promote the sustainable management of natural and physical resources’ – in relation to the coastal environment.

Of particular relevance is Policy 22 sedimentation, including “Reduce sediment loadings in runoff and in stormwater systems through controls on land use activities”.

The District Plan seeks to achieve this policy through controls on earthworks, along with a policy framework to consider impacts on the coastal environment as a receiving environment. It is also achieved through matters of discretion where “the extent to which the earthworks will result in an increase in sedimentation in the coastal environment” is a matter to be considered for earthworks that exceed thresholds.

The NZCPS provides a guide for the management of the coastal environment and is relevant to earthworks activities in, or where they affect the coastal environment, including coastal landforms and natural character.

The proposed provisions for earthworks consider the preservation of the natural character of the coastal environment within policy and specifically as a matter of assessment of restricted discretionary activities. Areas within the coastal environment identifies as outstanding natural features have specific earthworks controls proposed.

#### *3.2.2.3 National Policy Statement on Urban Development 2020 (NPSUD)*

The NPS-UD 2020 was gazetted in August 2020 and replaced the 2016 NPS-UDC. It was introduced to recognise the national significance of urban environments and provide sufficient development capacity to meet the different needs of people and communities. Relevance to earthworks is largely related to the preparation of greenfield land for urban development.

#### *3.2.2.4 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS).*

The NESCS is relevant to the proposed earthworks provisions as it establishes a regulatory framework for sampling and disturbance (i.e., earthworks) of contaminated soils. The NESCS is discussed more fully in the section 32 report for the Contaminated Land Chapter.

Provisions are proposed to permit test bore holes that would apply to the testing of contaminated land.

#### *3.2.2.5 National Environmental Standard for Plantation Forestry*

Earthworks associated with plantation forestry are regulated under the NES-PF. Earthworks include the construction of forestry roads, tracks, landings and river crossing approaches, cut and fill operations, maintenance and upgrade of existing earthworks, and forestry road widening and realignment; but does not include soil disturbance by machinery passes, forestry quarrying, or mechanical land preparation.

Earthworks are a permitted activity in relation to territorial authority functions, and prevail over district plan rules for earthworks associated with plantation forestry under the NES-PF.

The District Plan can be more stringent than the NESPF for forestry in areas identified as outstanding natural features and landscapes, and significant natural areas.

The proposed provisions for earthworks acknowledge this approach and do not require consent for earthworks permitted under the NES-PF.

#### *3.2.2.6 The National Environmental Standards for Electricity Transmission Activities (NESETA) 2009 and the National Environmental Standard for Telecommunication Facilities (NESTF) 2016*

The NESETA 2009 and the NESTF 2016 have controls for earthworks in relation to infrastructure. Earthworks managed under the NESETA and the NESTF are not subject to provisions in this chapter other than where the District Plan deals with terms and conditions nor covered in the NES or in the circumstances where the District Plan is allowed to be more stringent than the NESTF including if the activity is located:

1. within the dripline of a tree or other vegetation in the road reserve protected in the district plan,
2. within the dripline of a tree, group of trees, or other vegetation outside the road reserve identified as being of special significance protected in the district plan,
3. in an area identified in the district plan as having historic heritage values,
4. in a landscape feature identified in the district plan as having special visual amenity values,
5. in an area identified in the district plan as a significant habitat for indigenous vegetation,
6. on an area identified in the district plan as a significant habitat for indigenous fauna,
7. in an area identified in the district plan as an outstanding natural landscape or feature,
8. in an area where the district plan has rules to protect the adjoining coastal marine area.

### 3.3 Regional policy statement and plans

#### *3.3.1 Canterbury Regional Policy Statement*

The Proposed District Plan must give effect to the Canterbury Regional Policy Statement 2013(CRPS). The CRPS is a high level policy document with the Earthworks Chapter helping to deliver a range of policy directions. The main policies of relevance are:

**Policy 5.3.2 Development conditions (Wider Region)** seeks to enable development which avoids or mitigates reverse sensitivity effects and conflicts between incompatible activities.

#### Comment:

This is relevant for District Plan management of earthworks effects in relation to sensitive environments or activities including through rules for maximum quantities of earthworks, maximum heights and separation of activities. This is also achieved through provisions in



other proposed chapters that control the activity status or location of activities that either involve earthworks, or are sensitive activities.

**Policy 8.3.3 (Coastal environment)** includes direction to avoid adverse effects on the coastal environment. A range of values are identified such as amenity, cultural and recreational values, natural character, outstanding natural features and outstanding natural landscapes and the mauri of coastal ecosystems.

Comment

The proposed controls for earthworks will support the maintenance of the values identified by limiting or avoiding earthworks in specific coastal environments and through policy direction to preserve the natural character of the coastal environment.

**Policies 11.3.1 to 11.3.5 and 11.3.7 (Natural Hazards)** outlines that inappropriate development should be avoided in high hazard areas, and that natural hazard mitigation measures are only acceptable when the natural hazard risk cannot be avoided and the adverse effects of the works are avoided, remedied or mitigated.

Comment:

The proposed provisions anticipate earthworks within hazard areas where they do not exacerbate risk or impede flood water conveyance and rules are included for earthworks within hazard areas and overland flow paths.

**Policy 13.3.1 (Historic Heritage)** seeks to protect historic and cultural heritage items, places and areas.

Comment:

Protection of historic and cultural heritage resources is provided for through earthworks rules relating to the location and permitted scale of earthworks activities.

**Policy 14.3.3 (Air Quality)** relates to localised adverse effects on air quality.

Comment:

Although no actions are noted for territorial or local authorities, it is noted that the management of earthworks also includes policy direction to consider dust effects (on health and amenity), and control of the scale of earthworks through rules and standards will support the control of adverse effects on air quality.

**Objective 15.2.2 (prevention of soil erosion) and Policy 15.3.2 (significant induced soil erosion)**

Comment:

The CRPS identifies that the District Plan should have objectives and policies, and may have methods to ensure land use does not have significant long term adverse effects on soil quality. Objectives and policies and methods have been included to address this, including management of earthworks on sloping land and management of sediment.

**3.3.2 Land and Water Regional Plan (LWRP)**

The LWRP provides direction on land and water management and identifies that discharges from earthworks are a regional responsibility. The plan includes provisions for earthworks in relation to

surface and ground water, gravel extraction, effects on aquifers, soil erosion, setbacks for earthworks from surface freshwater bodies, dams, and vegetation clearance in riparian areas.

Comment:

The proposed provisions seek to complement regional controls by managing the scale and location of earthworks and providing consideration of amenity and landscape values not covered by the regional rules.

### 3.3.3 *Regional Coastal Environment Plan for the Canterbury Region (RCEP) 2005*

The purpose of this Plan is to promote the sustainable management of the natural and physical resources of the Coastal Marine Area and the coastal environment and to promote the integrated management of that environment. In particular, the Plan sets out the issues relating to:

- i) Protection and enhancement of the coast
- ii) Water quality
- iii) Controls on activities and structures; and
- iv) Coastal hazards.

Comment:

The proposed provisions manage coastal resources in an integrated manner, with setbacks included for earthworks in the dunes area, control of sedimentation and consideration of effects from earthworks on the preservation of the natural character of the coastal environment.

### 3.3.4 *Canterbury Regional River Gravel Management Strategy 2012*

This strategy provides a framework for sustainable management of gravel extracted from rivers throughout Canterbury and sets out the role of the Regional Council for the management of gravel extraction from rivers, and the outcomes and methods by which gravel extraction should occur.

Comment:

The proposed provisions for earthworks in the riverbed of Outstanding Natural Feature – Waimakariri River or Significant Amenity Landscape Ashley/Rakahuri do not include gravel extraction and note that regional plans may apply.

### 3.3.5 *Canterbury Air Regional Plan (CARP) 2017*

The CARP seeks to maintain or improve air quality and provide for people's health and cultural well-being.

Provisions relevant to earthworks are:

**Policies 6.8 and 6.32 (offensive and objectionable effects)** seek to manage significant effects of discharges to air, including effects beyond property boundaries and through management plans.

**Policy 6.9 (separation from sensitive activities)** seeks to ensure activities are appropriately located and separated in relation to the level of sensitivity.

**Policy 6.13 (cumulative effects)** seeks to minimise cumulative effects of discharges to air through good environmental practices and use of the best practicable option.

Comment:

It is anticipated that this regional plan will be the principal plan for the management of discharges to air and the proposed District Plan provisions will support the above policies by including policy requiring minimisation of dust effects beyond the site, and matters of discretion that also consider dust effects.

### 3.4 Iwi Management Plan

The Mahaanui Iwi Management Plan 2013 is relevant to this topic. Issue P11 identifies that *'earthworks associated with land use and development need to be managed to avoid damaging or destroying sites of significance, and to avoid or minimise erosion and sedimentation.'*

The following policies within the Ranginui and Papatūānuku sections are also relevant to earthworks:

**Discharge to Air (R1)** identifies that discharge of contaminants to air can adversely affect Ngāi Tahu values.

Comment:

Provisions to control the effects from earthworks, including dust released to air, are proposed.

**Subdivision and development section (P4)** includes Ngāi Tahu subdivision and development guidelines for earthworks. Sections 3.1 – 3.4 seek that earthworks include scenarios for accidental discovery of (archaeological material), that bare land is minimised to reduce erosion or sedimentation and protect waterways, and that excess soil should preferably be used on the site.

Comment:

Proposed advice notes in relation to protocols and requirements for accidental discovery of archaeological material are included, and rules for erosion and sediment control are also proposed.

**Policy P11.1 (earthworks assessment)** seeks that proposals for earthworks be assessed with particular regard to potential effects on wāhi tapu and wāhi taonga,; waterways, wetlands and waipuna; indigenous biodiversity; natural landforms and features, including ridge lines; proposed erosion and sediment control measures; and rehabilitation and remediation plans following earthworks.

Comment:

The proposed provisions are consistent with the policy direction and include policies, rules and matters of discretion that address sites and areas of significance to mana whenua, setbacks from waterways and sites of natural significance, and rules for earthworks on sloping land, and to control sedimentation. The proposed provisions are also complementary to the provisions relating to Sites and areas of significance to Māori.

**Policy P11.2** seeks that tāngata whenua are able to identify restricted discretionary activities where there are Ngāi Tahu values as a matter of discretion.

Comment:

Proposed provisions in the Earthworks Chapter and Sites and Areas of Significance to Maori Chapter identify where resource consent for a restricted discretionary activity is required and the matters to which discretion is limited.

**Policies P11.3 to P11.6** relate to sites or areas of significance, whether they are known or unknown, and addressing potential for modification or damage.

Comment:

Within the proposed Earthworks Chapter, the policies and matters of discretion include archaeological sites and sites and areas of significance to Te Ngāi Tūāhuriri Rūnanga. Advice notes draw attention to accidental discovery requirements.

### 3.5 Any relevant management plans and strategies

The following management plans and strategies are relevant to this matter:

#### 3.5.1 Waimakariri Stormwater Bylaw 2011

This Bylaw applies and operates throughout the Waimakariri District and aims to control the discharge of contaminants into public drains. The bylaw is needed to ensure that the Council can maintain the aquatic health of its drains, and meet the permitted activity and resource consent standards relating to its discharges from communal stormwater systems.

The bylaw includes controls for earthwork activities, stormwater discharge, pollution prevention plans (Southbrook ODP), monitoring requirements and penalties.

#### 3.5.1 Waimakariri Engineering Code of Practice

Engineering standards that assist in implementation of District Plan requirements and resource consent conditions, including works requiring earthworks such as for roads and infrastructure.

### 3.6 Any other relevant legislation or regulations

The following legislation or regulations are relevant to this matter:

#### 3.6.1 Building Act 2004

The building consent process provides some ability to control earthworks where building consent is required. This is limited to the effects of sediment as a nuisance to adjacent property or infrastructure and also to land stability issues. The Building Act consent process can require measures to ensure sites remain stable and limit the discharge of sediment to other properties or roads, or stormwater services.

#### 3.6.2 Historic Places Act 1993 and the Heritage New Zealand Pouhere Taonga Act 2014

Earthworks can result in the disturbance or destruction of archaeological or waahi tapu sites. Section 10 of the Historic Places Act requires an authorisation to be obtained from the New Zealand Historic Places Trust before any known or probable archaeological site can be destroyed, damaged or modified. For this reason, no specific controls are proposed. Earthworks' consents can include an advice note to this effect.

Discretion can be specified in the district plan to allow these matters to be directly dealt with through the consent process, including the imposition of associated conditions. The Heritage New Zealand Pouhere Taonga Act 2014 also contains penalties for unauthorised site damage.

#### 3.6.3 Fire and Emergency New Zealand Act 2017

Fire and Emergency New Zealand (FENZ) may, by notice, if it reasonably considers it necessary for the purpose of fire control, require a landholder to make and clear any firebreak on the landholder's land. The need for earthworks to create firebreaks have been

### **3.6.4 The Canterbury Regional Council Erosion and Sediment Control Toolbox for Canterbury 2019**

These guidelines provide guidance on sediment control measures for a range of earthworks and different types of sites.

## **3.7 Any plans of adjacent territorial authorities**

The District Council is required to have regard to the extent to which the district plan needs to be consistent with the plans and proposed plans of adjacent territorial authorities under Section 74(2)(c) of the RMA.

### **3.7.1 Christchurch District Plan**

The Operative Christchurch District Plan addresses earthworks in a section that also manages subdivision and development. The Plan has a focus on earthquake recovery, and earthworks objectives and policies include specific consideration of this.

Rules and activity standards for earthworks include exemptions, including an exemption for earthworks subject to approved building consents to avoid any duplication with building consent processes. The exemption relies on an approved building consent, which usually is not in place at the time of resource consent application. Earthworks volume thresholds are low because they do not include earthworks where the building consent exemption applies and also recognises that much of the land in and around Christchurch City is flat, reducing the need for earthworks. Specific earthworks standards apply where natural hazards and other values (such as landscape) have been identified

### **3.7.2 Proposed Selwyn District Plan**

The Proposed Selwyn District Plan was notified in October 2020, and has been developed under the National Planning Standards 2019. The Proposed Selwyn District Plan contains an Earthworks Chapter that seeks to both enable earthworks and manage their effects. Rules permit earthworks subject to complying with standards that reflect the nature of the zone and the location, purpose and timeframes of earthworks activities. Restricted discretionary activity status generally applies where standards are not met.

### **3.7.3 Hurunui District Plan**

The operative Hurunui District Plan is an effects-based plan that was reviewed prior to the introduction of the National Planning Standards. Provisions for earthworks are contained within zone or district wide chapters, and include standards to control the scale and location of earthworks, including elevation, which takes into account the high country location of parts of Hurunui District.

The Hurunui District Plan includes rules for aggregate and mineral extraction, such as setbacks, and a policy requiring rehabilitation of land where the extraction of aggregate and mineral resources has occurred so that an alternative land use can subsequently be established. The plan also includes exemptions for maintenance, repair or replacement of:

- livestock fences;
- stock or household water supply pipes,

- tanks, troughs or stock water ponds;
- firebreaks;
- the maintenance of existing farm tracks; and
- earthworks associated with forestry.

Comment:

The plans of adjoining local authorities are broadly consistent with the policy framework, rules and standards of the proposed provisions, as they recognise that earthworks are required for a range of activities, but seek to control potential adverse effects on the amenity, character of zones and other areas as well as on natural and cultural values and recognising natural hazards.

### **3.7.4 Other Recent District Plans**

The management of earthworks in other recent district plans have also been considered, including those proposed for New Plymouth, Porirua and Timaru, which have been developed under the National Planning Standards.

## **4. KEY RESOURCE MANAGEMENT ISSUES**

The resource management issues have been identified using sources of information including (but not limited to) the following:

- a. Monitoring and District Plan Effectiveness Review of the Operative District Plan
- b. Internal and external stakeholder consultation
- c. Issues and Options and 'What's the Plan' consultation responses; and
- d. Review of best practice and background reports.

### **4.1.1 Issue 1: Existing broad standards for earthworks do not adequately manage effects on sensitive environments**

Earthworks may harm or destroy sensitive areas, such those of cultural or historical significance, high natural character, or indigenous biodiversity. Public consultation indicated a desire to provide activity standards that reflect the sensitivity of the area, and provide greater protection.

### **4.1.2 Issue 2: The application of current earthworks standards are uncertain and complex**

The Operative District Plan rules using earthworks ratios have been identified as complicated and uncertain in their application, and open to different interpretations, including the definition of 'earthworks' itself. Rules should be clear in their application and the effect they are designed to manage.

### **4.1.3 Issue 3: Large scale earthworks such as quarries require effective management**

Activities, where the earthworks are the primary purpose of the activity and an on-going component such as quarrying, mining, dams, landfills and cleanfills are subject to standards such as noise and transport within the Operative Plan, but the activity itself is not specifically identified or managed.

#### 4.1.4 Issue 4: Overland flow paths are not always protected from earthworks

Filling of land within overland flow path may exacerbate flooding effects for other sites, by diverting the flow of water or reducing on site capacity to contain flood water. The ability to identify where Overland Flow Paths are on generally flat terrain is also important.

#### 4.1.5 Issue 5: Erosion, land stability and visual effects from earthworks on slopes.

The Operative District Plan does not specifically control earthworks on slopes, which have potential to cause land stability, erosion and visual effects. On visually prominent sites, scarring from earthworks may be obtrusive and detract from landscape qualities.

#### 4.1.6 Issue 6: Earthworks near boundaries can affect neighbouring properties

Earthworks near boundaries, resulting in different ground levels, is an issue where Council receives complaints. Council has some standard conditions used for subdivision consents that limit maximum fill heights within proximity to boundaries. These conditions are mainly to prevent differential height, amenity issues, and stormwater runoff.

Earthworks near boundaries can be an issue in close proximity to a neighbouring site including matters such as integrity of structure, instability, and drainage. The current plan does not have a rule that enables these issues to be addressed.

## 5. OVERVIEW OF PROPOSED OBJECTIVES, POLICIES AND METHODS

### 5.1 Strategic Direction

Objective SD-01, Natural Environment, is relevant as earthworks may be required for public access, but can also adversely affect natural features, landscape and character areas and indigenous biodiversity.

Objective SD-03, Infrastructure, is relevant to the extent that earthworks are a necessary component of the infrastructure envisaged.

Objective SD-05, Ngāi Tahu mana whenua / Te Ngāi Tūāhuriri Rūnanga, is relevant as earthworks can disturb or destroy cultural sites, or values associated with land and water.

Objective SD-06, natural hazards and resilience, is relevant to the extent that earthworks may be required for mitigation of natural hazard risk, but may also adversely affect risk from natural hazards, for example, where earthworks result in diversion of flood water.

### 5.2 Zone / District-wide Subject

Earthworks is a district-wide chapter in the Proposed Plan.

## 5.3 Proposed Objectives and Policies

An objective and six policies are proposed as follows:

Objective
<p><b>EW-O1: Earthworks</b></p> <p>Earthworks are undertaken in a way that minimises adverse effects on amenity values, property, infrastructure and the health and safety of people and the environment.</p>
Policies
<p><b>EW-P1: Earthworks</b></p> <p>Enable earthworks where they:</p> <ol style="list-style-type: none"> <li>1. are compatible with the character, values and qualities of the location and surrounding environment;</li> <li>2. avoid any adverse effects on any sites or areas identified as ONL, ONF, SAL, Coastal Environment Overlay, SNA, SASM, Natural Open Space Zone, surface water bodies and their margins, or any notable tree, historic heritage or heritage setting, remedied or mitigated in accordance with the provisions in the chapters for those sites, areas or items.</li> <li>3. minimise erosion and avoid adverse effects from stormwater or sediment discharge from the site;</li> <li>4. avoid increasing the risk to people or property from natural hazards;</li> <li>5. maintain the stability of land including adjoining land, infrastructure, buildings and structures;</li> <li>6. minimise the modification or disturbance of land, including any associated retaining structures, on the visual amenity values of the surrounding area; and</li> <li>7. minimise adverse dust, vibration and visual effects beyond the site.</li> </ol>
<p><b>EW-P2 Earthworks within Flood Hazard Assessment Overlays</b></p> <p>Allow earthworks within the Urban Flood Assessment Overlay and Non-Urban Flood Assessment Overlay where;</p> <ol style="list-style-type: none"> <li>1. the earthworks do not increase the flooding risk to the site or neighbouring sites through the displacement of flood waters;</li> <li>2. the earthworks associated with proposed subdivision, development or use do not increase the risk to life or property; and</li> <li>3. the ability to convey flood waters is not impeded as a result of the earthworks.</li> </ol>
<p><b>EW-P3 Archaeological sites, and sites and areas of significance to Māori</b></p> <p>Earthworks avoid, remedy or mitigate adverse effects on archaeological sites and sites and areas of cultural significance to Māori, by having regard to:</p> <ol style="list-style-type: none"> <li>1. the particular cultural or historical values of the site and the extent to which these values may be affected;</li> </ol>



2. any consultation with mana whenua, in particular any identified mitigation measures or the incorporation of mātauranga Māori into the scale and extent of the earthworks; and
3. any consultation with HNZPT.

#### **EW-P4 Scale of earthworks in urban environments**

Minimise adverse effects related to the scale of earthworks on character, and amenity values within or adjacent to urban environments by:

1. encouraging the integrated design and management of earthworks associated with subdivision, development and use;
2. minimising any off-site effects of earthworks by controlling the duration and sequencing of earthworks; and
3. avoiding quarry, landfill, cleanfill, mining, or dam activities within or adjacent to urban environments.

#### **EW-P5 Rehabilitation**

Require site rehabilitation during or immediately following the completion of earthworks activity to minimise adverse effects on amenity values, natural values, cultural values, quality of the surrounding environment and the future use of the site, and encourage rehabilitation that incorporates ecological enhancement and habitat for indigenous fauna and the use of locally sourced indigenous vegetation.

#### **EW-P6 Water resources**

Avoid adverse effects of earthworks on ground and surface water bodies that could result in water contamination and adverse effects on mahinga kai.

## 5.4 Proposed Methods

The following methods are proposed to implement the objectives and policies:

### 5.4.1 Rules

Earthworks activities are either permitted outright, permitted where activity standards are met, or provided for through a specific rule for the activity. Specific activity rules provide for earthworks for:

- road, footpath, cycleway, track, carpark and accessway maintenance and repair (noting that roads are proposed to be designated within the Proposed Plan)
- interment within a burial ground, cemetery, or urupa burial plot
- maintenance of community scale (public) water races or drains
- flood protection or mitigation (community scale)
- overland flow paths
- wells, test pits or boreholes
- firebreaks

- underground infrastructure
- stockpiling
- farm quarries
- general earthworks
- earthworks and sand dunes

#### 5.4.2 Earthworks standards for the following are proposed:

- maximum earthworks volume for zones and overlays;
- general setbacks
- setbacks from waterbodies
- setbacks from root protection area
- excavation and filling
- maximum slope
- sediment control

#### 5.4.3 Provisions in other District Plan chapters

Other proposed chapter provisions also manage earthworks as part of the overall management of the relevant topic. The relevant chapters are listed in Section 2.8.

#### 5.4.4 Methods outside the District Plan

A range of other methods can also manage earthworks such as public education, guidelines, bylaws, management plan requirements, compliance with regulations under other legislation.

#### 5.4.5 Advice notes

Advice notes are included within rules and a separate advice notes section to draw attention to other relevant matters such as requirements under other legislation or bylaws.

#### 5.4.6 Matters of Discretion

Restricted discretionary activities have the matters to which discretion is restricted specified in the proposed chapter, and include:

- Activity operation, scale, form and location
- Nuisance and reverse sensitivity
- Land stability
- Flooding and drainage
- Rehabilitation
- Coastal environment and hazards
- Water bodies, vegetation and fauna
- Outstanding natural features and landscapes

#### 5.4.7 The RMA and National Planning Standards definitions used are identified in s3.2 of this report. Other definitions are included for:

- |                            |                     |
|----------------------------|---------------------|
| • Accessway                | • Farm quarry       |
| • Alteration               | • Gravel extraction |
| • Archaeological site      | • Heritage setting  |
| • Cemetery                 | • Heritage values   |
| • Electricity transmission | • High Hazard Area  |
| • Emergency                | • Hospital          |

- Indigenous fauna
- Indigenous vegetation
- Industrial zones
- Infrastructure
- Interment
- landscaping
- Mahinga kai
- Mana whenua
- Mining
- Plantation forestry
- Plot
- Rehabilitation
- Root protection area
- Sensitive activity
- Setback
- Significant natural area
- Wastewater system
- Water supply

## 6. SCALE AND SIGNIFICANCE EVALUATION

Section 32 (1)(c) of the RMA requires that a Section 32 report contain a level of detail that corresponds with the scale and significance of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed objectives, policies and methods.

The level of detail undertaken for the subsequent evaluation of the proposed objectives, policies and methods has been determined by this scale and significance assessment.

In particular, Section 32 (1)(c) of the RMA requires that:

- Any new proposals need to be examined for their appropriateness in achieving the purpose of the RMA;
- The benefits and costs, and risks of new policies and methods on the community, the economy and the environment need to be clearly identified and assessed; and
- All advice received from iwi authorities, and the response to the advice, needs to be summarised.

Further, the analysis has to be documented to assist stakeholders and decision-makers understand the rationale for the proposed objectives, policies and methods under consideration.

In making this assessment regard has been had to a range of scale and significance factors, including whether the provisions:

- (a) Are of regional or district wide significance;
- (b) Involve a matter of national importance in terms of Section 6 of the RMA;
- (c) Involve another matter under Section 7 of the RMA;
- (d) Raise any principles of the Treaty of Waitangi (Te Tiriti o Waitangi) under Section 8 of the RMA;
- (e) Address an existing or new resource management issue;
- (f) Adversely affect people's health and safety;
- (g) Adversely affect those with particular interests including Maori;
- (h) Adversely affect a large number of people;
- (i) Result in a significant change to the character and amenity of local communities;
- (j) Result in a significance change to development opportunities or land use options;
- (k) Limit options for future generations to remedy effects;
- (l) Whether the effects have been considered implicitly or explicitly by higher order documents;  
and
- (m) Include regulations or other interventions that will impose significant costs on individuals or communities.

Policies and methods have been evaluated as a package, as together they address a particular issue and seek to meet a specific objective.

## 6.1 Evaluation of Scale and Significance

	Low	Medium	High
Degree of change from the Operative Plan		✓	
The proposed provisions extend and clarify management of earthworks and their effects, amend standards for measurement and introduce rules for specific activities. Provisions are contained within a separate chapter with supporting objectives and policies.			
Effects on matters of national importance		✓	
Earthworks management is necessary to recognise a number of the matters of national importance and are provided for in the proposed provisions as discussed in Section 3.1.			
Scale of effects geographically (local, district wide, regional, national)		✓	
The scale of effects in district-wide as earthworks are required to support a range of activities and development, and as essential component of some activities such as landfills and quarries.			
Scale of effects on people (how many will be affected – single landowners, multiple landowners, neighbourhoods, the public generally, future generations?)	✓		
Many earthworks have temporary effects as they are works that prepare land for other uses, although some activities are ongoing in nature.  Temporary effects which are managed by standards and rules should not generate significant effects, and larger scale activities which are managed through resource consent should not generate significant adverse effects beyond the site.			
Scale of effects on those with specific interests, e.g., Mana whenua, industry groups		✓	
Earthworks are important for a range of development activities of interest to special interest groups such as the residential development sector, farmers and quarry operators. Controls on the scale and location of earthworks may affect interest groups, but will also provide protection for natural and cultural resources, amenity values and environmental character.			
Degree of policy risk – does it involve effects that have been considered implicitly or explicitly by higher order documents? Does it involve effects addressed by other standards/commonly accepted best practice? Is it consistent, inconsistent or contrary to those?	✓		
Part 2 of the RMA, National Planning Standards, the approach of other local district plans, and other higher order policy directions provide strong policy support for the direction of the proposed provisions.			
Likelihood of increased costs or restrictions on individuals, communities or businesses	✓		

The provisions are generally enabling of a range of earthworks that operate within limits that are consistent with the receiving environment, and avoid sensitive areas such as SNA's. There may be costs and restrictions associated with the resource consent process should reduce costs that would otherwise be borne by the community or natural environment.

**Summary of Scale and Significance**

Overall, the scale and significance of the proposal is **low to medium**. The level of detail in this report corresponds with the scale and significance of the environmental, economic and cultural effects that are anticipated from the implementation of the proposed earthworks provisions.

## 7. EVALUATION OF PROPOSED OBJECTIVES

Section 32(1)(a) of the RMA requires the District Council to evaluate the extent to which the objectives are the most appropriate way to achieve the purpose of the RMA. The level of detail undertaken for the evaluation of the proposed objectives has been determined by the preceding scale and significance assessment. Below is a summary of the proposed objectives that have been identified as the most appropriate to address the resource management issue(s) and achieve the purpose of the RMA, against those objectives in the operative plan.

### 7.1 Evaluation of Proposed Objectives

Existing Objective - status quo	Appropriateness to achieve the purpose of the RMA
None	<p><b>Relevance:</b> not relevant due to lack of a specific objective.</p> <p><b>Reasonableness:</b> As there is no specific objective, for guidance it would be necessary to view other district plan objectives to assess for relevance to the particular activity, and the zone in which it occurs to provide some guidance on environmental expectations.</p> <p>This approach is less reasonable than the proposed objective.</p> <p><b>Achievability:</b> not applicable as no objective is specified.</p>

Proposed Objective	Appropriateness to achieve the purpose of the RMA
<p>Earthworks</p> <p>Enable earthworks where they:</p> <ol style="list-style-type: none"> <li>1. are compatible with the character, values and qualities of the location and surrounding environment;</li> <li>2. preserve the natural character of the coastal environment, surface water bodies and their margins;</li> </ol>	<p><b>Relevance:</b> The objective addresses relevant resource management issues including consideration of environmental, heritage, cultural, amenity and natural values and qualities, the coastal environment, surface water bodies and protection of natural features and landscapes and open space.</p> <p>This approach is relevant to the matters in Part 2 of the RMA and the direction provided through consultation.</p> <p><b>Reasonableness:</b> The objective is a clear statement and should provide guidance to the community, applicants and decision makers as to the circumstances where earthworks</p>

Proposed Objective	Appropriateness to achieve the purpose of the RMA
<ol style="list-style-type: none"> <li>3. protect the natural character and values associated with any significant natural area, natural feature, natural landscape, or natural open space from the adverse effects of subdivision, use and development;</li> <li>4. maintain the character and values associated with any notable tree, historic heritage or open space;</li> <li>5. minimise erosion and avoid adverse effects from stormwater or sediment discharge from the site;</li> <li>6. maintain the stability of land including adjoining land, infrastructure, buildings and structures;</li> <li>7. minimise the modification or disturbance of land, including any associated retaining structures, on the visual amenity of the surrounding area; and</li> <li>8. minimise adverse dust, vibration and visual effects beyond the site.</li> </ol>	<p>would be appropriate, require control, or should be declined.</p> <p><b>Achievability:</b> the objective will be able to be achieved through application of rules and standards, provisions in other District Plan chapters (such as activity status determination for zones and overlays) and requirements of regional plans for land, water, air and the coast. Methods outside of the District Plan including guidelines and Bylaws will also support achievement of the objective.</p>
Evaluation of Alternative Approaches	Appropriateness to achieve the purpose of the RMA
<p>A less specific approach to the management of earthworks that more generally prescribes aims for amenity and a range of values</p>	<p><b>Relevance:</b> This approach would be less relevant to the management of earthworks in relation to Part 2 matters and the character and values of zones, overlays and other identified areas or sites. It is also less relevant as it does not address the issues identified.</p> <p><b>Reasonableness:</b> This approach would be less reasonable as it would give little guidance to the community, applicants and decision makers on the expected outcomes.</p> <p><b>Achievability:</b> Less likely to achieve the outcomes specified in the Part 2 matters as general considerations may overlook specific issues, for example sites of cultural significance or within the coastal environment.</p>

## 7.2 Summary - Evaluation of Proposed Objectives

The proposed objective is the most appropriate to achieve the purpose and principles of the Act (Part 2), as it enables a range of earthworks where standards that control potential affects, mainly relating to the scale or location of the activity, are applied. This is consistent with the direction to enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety while avoiding, remedying or mitigating any adverse effects.

Clearer direction is provided for the circumstances in which greater control may be required to protect particular resources or values, however the objective is generally enabling.

## 8. EVALUATION OF PROPOSED POLICIES AND METHODS

Section 32 (1)(b) of the RMA requires an evaluation of whether the proposed policies and methods are the most appropriate way to achieve the proposed objectives by identifying other reasonably practicable options, assessing the efficiency and effectiveness of the proposed policies and methods

in achieving the objectives, and summarising the reasons for deciding on the proposed policies and methods.

The level of detail undertaken for the evaluation of the proposed policies and methods has been determined by the preceding scale and significance assessment.

The assessment must identify and assess the benefits and costs of environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed policies and methods, including opportunities for economic growth and employment.

The assessment must, if practicable, quantify the benefits and costs and assess the risk of acting or not acting if there is uncertain or insufficient information available about the subject matter.

Policies and methods have been evaluated as a package, as together they address a particular issue and seek to meet a specific objective.



## 8.1 Evaluation of Proposed Policies and Methods

Proposed provisions to achieve the objective relating to earthworks	Benefits Environmental, economic, social and cultural effects anticipated	Costs Environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
<b>Option A: Proposed Approach</b>				
<p>(Refer to sections 5.3 and 5.4 for a description of the proposed Policies and Methods)</p>	<p><b>Environmental:</b> More specific provision to address issues and Part 2 matters should provide for maintenance and enhancement of the environment.</p> <p>Controls flooding effects including the diversion of floodwater that results from the filling of overland flow paths.</p> <p>Controls for earthworks on sloping land will assist in managing potential erosion, land stability, runoff and visual effects.</p> <p><b>Economic:</b> Small scale and temporary earthworks are generally permitted.</p> <p>Clearer direction should reduce costs related to understanding and complying with provisions, and</p>	<p><b>Environmental and Social and Cultural:</b></p> <p>Some short term earthworks effects are anticipated, but will be limited by scale and location requirements.</p> <p><b>Economic:</b> Change in approach may have some short term costs associated with transitioning to a new Plan structure and content such as determining the volume of earthworks.</p> <p>Stronger emphasis on natural, cultural and amenity values may reduce flexibility for developers.</p>	<p>(a) Provisions are efficient and effective as they will allow earthworks at a scale consistent with activities and sensitivities within the receiving environment.</p> <p>(b) Where resource consent is required, this is generally for a restricted discretionary activity which efficiently limits assessment to identified relevant matters.</p> <p>(c) Provides more effective management of overland flow paths outside of resource consent assessment.</p> <p>(d) Proposed volume standards for residential areas are effective and efficient as they establish a permitted volume that is not dependent on an external process such as building consent.</p> <p>(e) Overlays are protected according to the sensitivity of</p>	<p>Sufficient information is available to act.</p> <p><b>Risk of not acting:</b></p> <p>(a) Failure to address the issues identified in Section 4.</p> <p>(b) Failure to implement National Planning Standards.</p> <p>(c) District Plan would not fully implement Part 2 of the RMA.</p> <p>(d) Would not be consistent with the approach of other newer district plans.</p> <p>(e) Loss or depletion of natural, cultural and heritage values.</p> <p>(f) Effects on amenity values may be inconsistent with the character of the area.</p> <p>(g) Overland flow paths may be incrementally changed over time altering floodwater flow patterns and imposing off-site flooding effects.</p>

Proposed provisions to achieve the objective relating to earthworks	Benefits Environmental, economic, social and cultural effects anticipated	Costs Environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
	<p>reduce instances of non-compliance through mis-interpretation of provisions.</p> <p>For large scale earthworks, resource consent process can provide a clear operating framework that provides ongoing certainty for operation.</p> <p><b>Social and cultural:</b> Earthworks are enabled that support social wellbeing and safety, such as for hazard mitigation, and are controlled to protect cultural and heritage resources.</p> <p>Approach has taken into account the Iwi Management Plan policy directions and consultation comments from mana whenua.</p> <p>Identification of specific activities enables certain activities with significant community benefits such as maintenance of roads and paths.</p> <p>Neighbouring properties will be protected from potential effects of earthworks against boundaries.</p>		<p>the particular environment/values the plan is seeking to protect</p> <p>(f) The approach integrates with other chapters in the Proposed Plan and does not duplicate regional plan requirements.</p> <p>(g) Activity rules will allow for easier identification of the status of earthworks activities, and application of standards has been clarified.</p> <p>(h) Policies provide clear guidance to decision makers and the approach is generally enabling, recognising the need for earthworks, while providing protection to identified values and resources.</p> <p>(i) The approach addresses current identified issues.</p>	<p>(h) Higher potential for adverse effects on community health and wellbeing from earthworks effects such as dust.</p> <p>(i) Uncertain effects on the character of zones</p> <p><b>Risk of Acting:</b> None identified</p> <p>Overall, the risk of not acting is outweighed by the benefits of acting.</p>

Proposed provisions to achieve the objective relating to earthworks	Benefits Environmental, economic, social and cultural effects anticipated	Costs Environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
	Greater certainty for the community for the volume and location of earthworks that can be expected, and where resource consent will be required.			
<p><b>Opportunities for economic growth and employment</b></p> <p>The proposed provisions enable a range of earthworks activities to occur that directly support development and employment opportunities such as residential and commercial building, and farming operations. Large scale earthworks are assessed through a resource consent process that, if approved, will provide certainty for ongoing operation of business activities, and the conditions they must meet. Environmental protection supports amenity and character that also broadly supports business activity within the District, for example, tourism.</p>				
<p><b>Option B: Status Quo</b></p>				
<p>No changes to current policies and rules No rules for overland flow paths, district-wide slope cut, or depth/height near boundaries Carry over existing thresholds/activity status for earthworks within overlays</p>	<p><b>Environmental:</b> Provides some protection for specified areas including ratio controls and setbacks.</p> <p><b>Economic:</b> Familiarity of provisions for current plan users, noting the identified interpretation issues in Section 4.</p> <p>Flexible for development within an effects framework.</p> <p>Provides exemptions for some activities where the level of effect is anticipated to be insignificant.</p>	<p><b>Environmental:</b> Provisions are less specific in how protection of environmental values are to be achieved.</p> <p>Different interpretation of ratio thresholds could lead to uncertain outcomes for environmental quality and character.</p> <p>Lack of specific policy does not give clear guidance to decision makers.</p> <p><b>Economic:</b> Costs associated with interpretation of rules.</p>	<p>(a) Less effective as the option does not cover all matters identified in the issues, higher order documents or Part 2 RMA.</p> <p>(b) Less efficient as the rules to control the scale of earthworks apply very broadly and interpretation has been identified as unclear through consultation.</p> <p>(c) Provisions are less likely to achieve the objective, particularly due to lack of policy for earthworks.</p>	<p>Sufficient information is available to identify that there is risk in acting on this option.</p> <p>The risk of not acting is that issues are not addressed, and the plan is weak at achieving the sustainable management purpose of the RMA.</p>

Proposed provisions to achieve the objective relating to earthworks	Benefits Environmental, economic, social and cultural effects anticipated	Costs Environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
	<p>The provisions are generally enabling.</p> <p><b>Social and Cultural:</b> Exemptions are provided for some activities that provide protection for communities such as stop banks and coastal protection.</p>	<p>Cost associated with any resource consent process and compliance.</p> <p>Cost associated with maintaining operations of activities should reverse sensitivity issues emerge.</p> <p>Cost associated with off-site effects from disruption of overland flow paths.</p> <p><b>Social and Cultural:</b> Potential for reverse sensitivity where large scale activities are not managed through resource consent.</p> <p>Cultural sites have some protection but this is less specific than the proposed provisions.</p>	<p>(d) The current approach may be partially effective but the broad approach to management of effects is likely to be ineffective for particular zones and overlays where characteristics, values or resources are identified that may be sensitive to the effects from earthworks.</p> <p>(e) Area based thresholds may be effective for regulating potential effects from dust but can lead to large differences in the scale of earthworks with no controls over volume, height or depth, or management of issues relating to site gradient and consequent erosion and sediment discharge.</p> <p>(f) Provisions have been identified as having a low level of effectiveness for the management of ground level in overland flow paths.</p> <p>(g) General lack of rules for proximity to boundary is less effective for managing land stability and amenity matters associated with earthworks.</p>	

Proposed provisions to achieve the objective relating to earthworks	Benefits Environmental, economic, social and cultural effects anticipated	Costs Environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
			(h) Overall, this option is less efficient and effective	
<p><b>Opportunities for economic growth and employment</b></p> <p>Although the provisions enable a range of earthworks, the rules are less certain in their application, and less likely to manage reverse sensitivity effects, which may affect business continuity.</p>				
<p><b>Quantification</b></p> <p>Section 32(2)(b) requires that if practicable the benefits and costs of a proposal are quantified.</p> <p>Given the assessment of the scale and significance of the proposed changes above it is considered that quantifying costs and benefits would add significant time and cost to the s32 evaluation processes. The evaluation in this report identifies where there may be additional cost(s), however the exact quantification of the benefits and costs discussed was not considered necessary, beneficial or practicable.</p>				
Options to achieve the District Plan objectives relating to earthworks	Benefits	Costs	Efficiency and Effectiveness	Risk of acting / not acting
<p><b>Option C:</b></p> <p><b>As for Proposed Approach but require resource consent for works within overland flow paths</b></p>	<p>As for proposed approach and:</p> <p><b>Environmental:</b> Greater protection of overland flow paths from the adverse effects from filling of land as each case would be assessed.</p> <p><b>Economic:</b>  Overland flow during a flood event would be more predictable (if flows are not altered) and location for</p>	<p>As for proposed approach and:</p> <p><b>Environmental:</b> Earthworks required for environmental enhancement within overland flow paths may be delayed or not carried out due to cost implications related to resource consent process.</p> <p><b>Economic:</b></p>	<p>As for proposed approach and:</p> <p>(a) Effective in maintaining overland flow particularly within rural areas as each situation can be assessed and conditions applied to avoid floodwater diversion effects on other sites. The proposed rule requires that off-site flooding effects are not increased, so may achieve a similar outcome.</p>	<p>As for proposed approach and:</p> <p>The risk of acting is that greater cost will be imposed on the rural community (predominantly) where earthworks that raise ground level are proposed.</p> <p>The risk of not acting is that the general requirement to not increase depth or flow of floodwater on another property would result in variable compliance results.</p>

Proposed provisions to achieve the objective relating to earthworks	Benefits Environmental, economic, social and cultural effects anticipated	Costs Environmental, economic, social and cultural effects anticipated	Efficiency and Effectiveness	Risk of acting / not acting if there is uncertain or insufficient information about the subject matter of the provisions
	<p>investment would potentially be more secure. For example, building sites identified as clear of flooding would be less likely to be affected by diverted flow from another site.</p> <p><b>Social and Cultural:</b></p> <p>Greater protection from off-site effects from the diversion of floodwater, including effects on the safety of people and protection of property.</p>	<p>Higher cost for land owners as any earthworks would require resource consent.</p> <p>Cost for the council (and therefore community) to process consents and to identify flow paths with greater accuracy.</p> <p>Cost of delays related to consent process.</p> <p>Cost to monitor and enforce consent conditions, and identify earthworks carried out without resource consent</p> <p><b>Social and Cultural</b> Costs applying to resource consent process for any social or cultural projects within overland flow paths.</p>	<p>(b) Less efficient than the proposed rule for overland flow paths due to cost and time to process resource consent applications, and potentially large number of applications that would be generated.</p>	<p>Risk for either acting or not acting is similar in relation to the requirements for public education and monitoring for non-complying earthworks.</p>
<p><b>Opportunities for economic growth and employment</b> No opportunities identified.</p>				
<p><b>Quantification</b> Section 32(2)(b) requires that if practicable the benefits and costs of a proposal are quantified.</p> <p>Given the assessment of the scale and significance of the proposed changes above it is considered that quantifying costs and benefits would add significant time and cost to the s32 evaluation processes. The evaluation in this report identifies where there may be additional cost(s), however the exact quantification of the benefits and costs discussed was not considered necessary, beneficial or practicable.</p>				

## 8.2 Summary - Evaluation of Proposed Policies and Methods

The proposed policies and methods are the most appropriate option as the benefits outweigh the costs, and the methods efficiently and effectively give effect to the proposed objective. The status quo option is less effective or efficient and the costs outweigh the benefits, and the alternative option is less appropriate due to higher cost and resourcing requirements and similar outcomes to the proposed provisions.

## 9. SUMMARY

This evaluation has been undertaken to identify the need, benefits and costs, and the appropriateness of the proposed approach having regard to its effectiveness and efficiency relative to other means, in achieving the purpose of the RMA. The evaluation demonstrates that the proposed provisions are the most appropriate as:

- (a) It includes a separate chapter for objectives and policies and methods to enable and provide for the management of adverse effects of earthworks, and is aligned with the National Planning Standards.
- (b) Specific objectives and policies, rules, standards, definitions and matters of discretion are proposed to:
  - Introduce policy guidance for the earthworks activities that are anticipated within zones and overlays in the District;
  - Provide clear direction for applicants, the community and decision makers of the outcomes sought in relation to the management of earthworks on community health and wellbeing, natural, heritage and cultural values;
  - Enable earthworks activities that are consistent with the values, character and resources in the receiving environment;
  - Enable or manage earthworks in relation to specified infrastructure and natural hazard protection;
  - Include rules for specific activities and general standards that apply to broadly to activities and zones;
  - Clarify the application of standards; and
  - Be consistent with District Plans of adjacent councils, other recently proposed District Plans throughout New Zealand.

## Appendix One: Consultation

Table 2 – Specific consultation processes

Date	Group	Subject Matter
September 2017	Community	Issues and Options consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Improve controls for earthworks.</li> <li>• Quarries should be non-complying in rural zones.</li> <li>• Earthworks for new subdivisions should require environmental management plans and liaison with affected people.</li> <li>• The application of separation distances between an activity and an existing dwelling (irrespective of zone) is probably the best approach, e.g. regard quarrying as a prohibited activity within 1,000 metres of any existing dwelling irrespective of zone. The lack of detailed information for separation distances in New Zealand (as per the Ministry of the Environment website) and the lead should probably be taken from the New South Wales or Victoria environmental agencies.</li> <li>• Council should require stockpiling and removal of aggregate to be consented and restrict activity on such sites to daylight hours only. This should reduce the damage to roads by 50%, stop sleep disturbance caused by trucks and reduce the risk of accidents</li> <li>•</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Proposed provisions to mitigate adverse effects including consideration of the location character, values, and qualities of the zone or overlay and the wider environment.</li> <li>• Quarries are to be treated as a specific activity in the relevant zone chapters. Activity status that require resource consent are proposed, except for minor farm related quarry activities.</li> <li>• Separation distances have been proposed between quarry activity and potentially sensitive activities.</li> </ul>		
Date	Group	Subject Matter
September 2017	Department of Conservation (DOC)	Issues and options consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• The current broad ratio based approach of area of land disturbed per hectare are ineffective for all earthworks issues</li> <li>• Prefer volume based measure with additional matters of discretion or matters that need to be considered as part of that earthworks rule.</li> </ul>		



- The ratio approach is difficult to apply in practice whereas a volumetric approach is far easier to apply. Additionally, volumetric based rules for earthworks also need to consider matters such as effects on the surface of the land to be removed such as indigenous vegetation and the habitat of indigenous species for instance, as well as matters such as amenity protection (dust) and control of sedimentation.

#### Response

Provisions including rules for earthworks thresholds mainly based on volume are proposed, together with consideration of sensitive areas and resources (such as indigenous vegetation) and water quality. Proposed provisions are included for sediment control and a various amenity protection matters.

Date	Group	Subject Matter
September 2017	Federated Farmers	Issues and options consultation

#### Feedback

- Concerned by any proposals that add to the current cost of doing business in the district.
- The Environment Canterbury Land and Water Plan has a range of earthworks rules which specifically protect sensitive environments.
- Region-wide rules are adequate for the protection of sensitive areas from the adverse or unintended impacts of earthworks. Federated Farmers is opposed to any duplication of rules and support the use of region-wide rules for the ease of understanding and administration for its members, who may farm across a number of districts or regions.

#### Response

Duplication with regional rules has been avoided, and use of district wide rules for a variety of sensitive areas or effects have been proposed to protect sensitive environments and activities.

Date	Group	Subject Matter
September 2017	Mainpower	Issues and options consultation

#### Feedback

More enabling provisions for utilities should be developed for earthworks.

#### Response

Earthworks for the installation of underground infrastructure is proposed as a permitted activity where standards are met.

Date	Group	Subject Matter
September 2017	Horticulture NZ (HortNZ)	Issues and options consultation

#### Feedback

- It is difficult to determine when a resource consent is required and should be reviewed.
- HortNZ anticipates that cultivation of land for horticultural practices will be provided for as a permitted activity. A definition of cultivation would also include harvesting of the crop as crops such as potatoes disturb the soil during harvesting.

<b>Response</b>		
<ul style="list-style-type: none"> <li>• Thresholds have been drafted to provide certainty for plan users.</li> <li>• Cultivation is not included in the National Planning Standards definition of earthworks, however a separate definition is included. Other chapters such as those for noise and rural zones also cover cultivation.</li> <li>• No specific rules for cultivation are included within the earthworks chapter as they are not included in the definition of earthworks.</li> </ul>		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
September 2017	Waimakariri Irrigation Ltd	Issues and options consultation
<b>Feedback</b>		
An exemption from earthworks rules for maintenance of irrigation schemes is required, such as cleaning out water races and cultivation for, or harvesting of agricultural and horticultural crops, which are excluded from the earthworks rules.		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Earthworks to maintain and enhance water races or drains, under the control of the District Council, Regional Council or the Crown are proposed to be permitted.</li> <li>• No rules are proposed in the earthworks chapter for cultivation or harvesting as they are not included in the definition of earthworks, however these matters are covered in other proposed District Plan chapters.</li> </ul>		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
September 2017	Environment Canterbury	Issues and options consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Support different thresholds for specific activities to provide greater certainty for applicants and greater consistency for the appropriate location of activities generating large scale earthworks. This would be consistent with the location based approach in the LWRP and integrate with the Canterbury Air Regional Plan for dust effects (such as the requirement for dust management plans where applicable).</li> <li>•</li> </ul>		
<b>Response</b>		
There are specific threshold for activities, where a specific management approach is more appropriate, and integration with regional plans has been considered.		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
September 2017	Kaiapoi Tuahiwi Community Board	Issues and options consultation
<b>Feedback</b>		
Support new or revised District Plan provisions to identify and apply different thresholds depending on activities and the sensitivity of the area to the earthworks effects.		

<b>Response</b>		
There are specific thresholds for activities, where a specific management approach is more appropriate.		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
September 2017	Oxford Ohoka Community Board	Issues and option consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Earthworks could be managed better and monitored.</li> <li>• Some concerns regarding the loss of clay from the substrate soil when such earthworks are dug leading to problems with water loss and retention.</li> <li>• It is also unclear what is being buried under and within larger earthworks and how this is monitored.</li> <li>• monitoring is important to ensure inappropriate material, potentially creating future hazards, is not buried.</li> <li>• Clear rules required for quarrying and the associated effects of quarrying — trucks, dust and other particulates need to be defined.</li> <li>• It is noted that some methods of cultivation may produce dust and these will need to continue and potentially be separately defined to those associated with quarrying.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Proposed earthworks provisions are more specific for particular activities and include provisions for quarrying and farm quarries.</li> <li>• It is proposed that resource consent is required for quarries allowing for management plan and monitoring conditions to be imposed</li> </ul>		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
September 2017	Spark/Chorus/Vodafone	Issues and options consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Up to 450m<sup>3</sup> of ancillary earthworks for constructing equipment in rural zones is required under the new NESTF subject to providing an earthworks management plan.</li> <li>• Any restrictions on earthworks relating to access tracks for network utilities would not be supported in rural areas that are not subject to sensitive natural area overlays (e.g. ONL's).</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Earthworks for the maintenance, repair, and resealing of access tracks are proposed to be permitted.</li> </ul>		

- New access tracks will be subject to the threshold for the applicable zone, therefore minor earthworks for this purpose will be permitted. Standards for earthworks on sloping land are proposed to manage or avoid effects on land stability, runoff, sediment and other matters.

Date	Group	Subject Matter
September 2017	Isaac Community Association	Issues and options consultation

**Feedback**

- The District Plan should have clear guidelines on quarrying activity and how close it can be to a dwelling.
- It is essential to set policy for quarrying activity because aggregate quarrying within the Waimakariri District has been predominately riverbed-based. This activity is now moving to land-based locations. Secondly, Waimakariri has one of the highest number of 'lifestyle' blocks of any district. Many of these continue to be included under rural zoning rather specific rural residential zones. This now permits quarry applications to be made adjacent to a number of dwellings. For instance, the proposed Isaac Block Quarry would have had 12 dwellings within 100m, the nearest being 40m away.

**Response**

- The location of quarry activities are principally managed in the Rural chapters of the Proposed Plan, however the proposed objectives and policies for the Earthworks Chapter include consideration of amenity values and safety of people and property, and the location in respect of the character of the environment (among other matters). As quarry activities will require resource consent, the location of sensitive activities will be able to be addressed and considered.
- Various setback distances have been proposed for farm quarries.

Date	Group	Subject Matter
September 2017	Rayonier Matariki Forests	Issues and options consultation

**Feedback**

- The new National Environmental Standard for Plantation Forestry sets standards for earthworks, and apply for plantation forestry activities over 1ha.
- Current district plan earthworks controls have not been an issue for forestry activities therefore option 1 is favoured (retain current District Plan controls).

**Response**

The NESPF has been recognised and earthworks thresholds for rural zone have been revised to allow a similar level of activity, but in a way that applies to a whole site. Therefore, effects of a forestry activity not captured by the NESPF can be considered over the whole of a site.

Date	Group	Subject Matter
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September 2017	Heritage NZ	Issues and options consultation
<b>Feedback</b>		
Proposed new District Plan earthworks rules should include an advice note that earthworks potentially affecting recorded or unrecorded archaeological sites may require an archaeological authority from Heritage NZ.		
<b>Response</b>		
Advice notes have been included.		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
September 2017	Canterbury District Health Board	Issues and options consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>The District Plan should support soil structure and quality and avoid adverse impacts on waterbodies. The current provisions focus on volume rather than the activity. The CDHB supports applying different thresholds dependent on the activity and sensitivity of the area to earthworks effects.</li> <li>Minimum setbacks from residential properties should be included for quarrying which has the potential to create significant nuisance to surrounding properties from dust and current provisions do not appear to effectively mitigate against this. Industry best practice and Guidance documents, recommend a setback of at least 500m.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>Setbacks from waterbodies are proposed - further provisions for waterbody protection are also included within other proposed chapters.</li> <li>Thresholds for activities are proposed where specific management is able to be anticipated in relation to potential effects.</li> <li>The location and activity status requirements for quarry activities are included within the proposed provisions for zone chapters, and more particularly, the rural zone chapters.</li> <li>Objectives, policies and matters of discretion for the proposed Earthworks Chapter also contain guidance in relation to public amenity, health and safety.</li> </ul>		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
10 December 2018	Fulton Hogan	Quarrying
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>Quarries too far from transport network become uneconomic.</li> <li>Transport is one of the biggest costs and quarries need to be located near to end use.</li> <li>Could consider rail as an opportunity to supply materials without the effect.</li> </ul>		

- Quarry zoning not supported due to influence on land price.
- Unsure if there would be enough supply (river resource would not have time to recharge) if there were another earthquake.
- Longevity is important - It takes a long time to establish a supply, and need to forecast at least five years ahead.
- If too restrictive on the location then may not be able to get a quality product.
- It is a big job to move a plant to a neighbouring location, preference for 80ha and above.
- The industry was fortunate to have planned ahead when the earthquakes occurred. They had to make changes to meet a different demand.
- Residential growth pushing into rural will have a massive effect on quarries to find appropriate locations to establish.
- Traffic movements and dust are key issues to mitigate.
- Good relations with the community are important. Suggested Council establish a code of practice to set minimum baselines.
- Hours of operation: Some quarries e.g. in Christchurch have conditions to carry-out night works on main arterials so do not disrupt the road network.
- Separation distances: There is not a one size fits all approach. It depends on the duration, frequency and intensity of the activity. If there are separation distances then a cascading approach would be appropriate.
- Noise: Screens are the noisiest aspect of quarrying. There are many mitigation methods, including controlling noise at the source.
- All quarries require resource consent so conditions are set for what they are able to do so adverse effects do not increase.
- Requiring Environmental Management Plans and Operational Management Plans is a good approach for the District Plan. Christchurch City has standards regarding this.
- Rehabilitation and thinking of the end land use of the site is important (what it will be after).

#### **Response**

- The location and activity status requirements for quarry activities are included within the proposed provisions for zone chapters, and more particularly, the rural zone chapters.
- Objectives, policies and matters of discretion for the proposed Earthworks Chapter also contain guidance in relation to public amenity, health and safety.
- No specific quarry zone has been proposed.
- Quarries are a specific activity in the zone chapters.

Date	Group	Subject Matter
28 Jan, 2019	Aggregate and Quarry Association	Quarrying
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>The current demand for aggregate is about 7 tonnes/capita/annum. The demand for aggregate in Canterbury is expected to continue because of housing pressure.</li> <li>Quarries are moving further and further away from the market. This drives up the price of aggregate.</li> <li>Reverse sensitivity is an issue, and housing near quarries is problematic. This is why it is important to protect the urban fringes from the encroachment of quarries by ensuring residential (particularly rural residential) is not in locations which is suitable for quarrying.</li> <li>Aggregate has to be considered a viable land use and should be protected. Otherwise aggregate would have to be imported.</li> </ul>		
<b>Response</b>		
<p>The concerns are principally addressed within the Rural, Large Lot Residential and Subdivision Chapters of the proposed plan where quarry activities are provided for through a resource consent process and expectations for rural and rural residential development, character and density are provided, as well as provisions for management of any reverse sensitivity effects.</p>		
Date	Group	Subject Matter
Feb-April 2019	Canterbury Regional Council	Earthworks and regional plans, overland flow paths
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>The Canterbury Air Regional Plan contains rules for controlling dust from earthworks, including the dust management plan in <a href="#">Schedule 2</a>.</li> <li>Discharge rules in the Land and Water Regional Plan will also be relevant near waterbodies. i.e., consent requirements will be triggered if sediment loads are breached. Setbacks from waterbodies can provide consistency with regional plan without duplicating any regulation.</li> <li>In relation to overland flow paths, there is merit having a robust definition and an indicative implementation approach. Using GIS mapping to provide indicative information is a good approach, but a definition will be useful to supplement mapped information and as a catch-all for flow paths not picked up by mapping.</li> <li>Recommended considering changing the wording of the definition from “where surface runoff will flow” to “where surface run off is likely to flow’ for overland flow.</li> <li>Recommended changing “maintaining the flow” to “not increasing the flow” which would enable attenuation of flow (when flooding) on a property e.g. by creating a wetland or settling pond.</li> </ul>		
<b>Response</b>		

- Dust is considered as an effect of earthworks, but not managed specifically to avoid duplication of regional rules.
- Setback rules (where they exceed a certain depth or height) included which would manage amenity effects (such as dust as well as stability, drainage and flooding).
- Setbacks from waterbodies included to manage effects not considered by regional plans e.g. landscape and amenity values.
- Specific large scale activities, such as quarrying, managed separately as activities in the zone chapters.
- Wording suggestions incorporated into the proposed definition.

Date	Group	Subject Matter
July, 2019	Community	What's the Plan consultation

#### Feedback

- Stopbanks are an earthwork activity that requires special treatment
- Limits on stockpile heights and setbacks should be introduced, and earthworks near water should require special treatment.
- Support limits on heights and setbacks of stockpiles but these need to be varied from zone to zone.
- Do not support thresholds being based on volume but would like to see the ratio rules being revised and easier to follow.

#### Response

- Earthworks for hazard mitigation and for stockpile height and setbacks are proposed.
- Ratio rules have been revised.
- Thresholds based on volume have been proposed to provide greater certainty of the scale of earthworks operations.

Date	Group	Subject Matter
July 2019	New Zealand Archaeological Association	What's the Plan consultation

#### Feedback

The Waimakariri District Council has a responsibility to make its constituents aware of their responsibilities regarding the Heritage New Zealand Pouhere Taonga Act 2014. Resource consents for earthworks within the vicinity of archaeological sites should include a clause that the consent holder should contact Heritage New Zealand Pouhere Taonga or an archaeologist to determine if the works will require an archaeological authority.

#### Response

Advice notes for this matter are proposed.

Date	Group	Subject Matter
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July 2019	Pegasus Residents Group Incorporated	What's the Plan consultation
<b>Feedback</b>		
Supported introduction of stockpile height and setback controls to protect residential homes.		
<b>Response</b>		
Stockpile height and setback controls are proposed		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
July 2019	Woodend-Sefton Community Board	What's the Plan consultation
<b>Feedback</b>		
Are there any earthwork activities that you think should require special treatment? Any near wetlands should be protected. Protect streams, and waterflow.		
<b>Response</b>		
Waterbody setbacks included.		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
July 2019	Kaiapoi-Tuahiwi Community Board	What's the Plan consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Need to acknowledge potential impact of earthworks on a large site will be a lot smaller than for a smaller site.</li> <li>• Support limits on stockpile heights and setbacks– need to vary from zone to zone.</li> <li>• Overland flow paths should be protected.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Impact of earthworks on sites of varying sizes and within different zones are proposed to be managed though a range of thresholds for earthworks including ratios for site area.</li> <li>• Stockpile height and setback controls are proposed.</li> <li>• Overland flow paths rule is proposed.</li> </ul>		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
July 2019	Rayonier New Zealand	What's the Plan consultation
<b>Feedback</b>		
Rayonier supports removing any duplication with the Regional Plan and recognition of the National Environmental Standard for Plantation Forestry.		
<b>Response</b>		
Duplication with regional rules have been addressed in consultation with Canterbury Regional Council and NESPF is recognised.		

Date	Group	Subject Matter
July 2019	Horticulture New Zealand	What's the Plan consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Ensure that root ripping and farm tracks are provided for as an activity ancillary to the primary production activity.</li> <li>• Change provisions to manage the amount of earthworks permissible in a year (e.g. volume per site). Volume per site is dependent on the definition of site. It is not always an appropriate measure for larger rural landholdings.</li> <li>• The District Plan rules should manage sensitive areas where potential for adverse effects from earthworks are significant.</li> <li>• Having more restrictive approaches for earthwork thresholds on sensitive environments (SNA/ONL) should be effects based.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Cultivation is not captured by earthworks provisions as they are not included within the National Planning Standards definition of 'earthworks'.</li> <li>• Volume thresholds based on zones and size of sites are proposed.</li> <li>• Setbacks are included between earthworks activities and identified sensitive environments. Proposed objectives and policies also identify the direction sought in relation to location and potential adverse effects.</li> </ul>		
Date	Group	Subject Matter
July 2019	Ohoka Residents Association	What's the Plan consultation
<b>Feedback</b>		
Limits on stockpile heights and setbacks should be introduced.		
<b>Response</b>		
Stockpile height and setback controls are proposed.		
Date	Group	Subject Matter
July 2019	Federated Farmers	What's the Plan consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Recommend the volume control is staggered based on the size of the site in question.</li> <li>• Regional rules set by ECan's Land and Water Plan are sufficient, and should not be duplicated.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Volume thresholds based on zones and size of sites are proposed.</li> <li>• Duplication with regional rules have been addressed in consultation with Canterbury Regional Council.</li> </ul>		

Date	Group	Subject Matter
July 2019	Canterbury District Health Board	What's the Plan consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Supports introducing limits for stockpile heights and setbacks.</li> <li>• Earthworks near rivers and the coastal environment need specific rules, particularly for protecting mahinga kai.</li> <li>• Earthworks should be allowed but environmental health impacts need to be effectively managed.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• Stockpile height and setback controls are proposed.</li> <li>• Waterbody setbacks included.</li> <li>• Earthworks within the coastal environment.</li> <li>• Earthworks threshold rules and matters of discretion provide protection of environmental health matters.</li> </ul>		
Date	Group	Subject Matter
July 2019	Spark	What's the plan consultation
<b>Feedback</b>		
Supports removal of rules that duplicate other legislation.		
<b>Response</b>		
Duplication removed.		
Date	Group	Subject Matter
July 2019	Department of Conservation	What's the Plan consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Do not provide for earthworks in Significant Natural Areas and the incorporate landscape treatment using locally sourced native planting and weed and pest conditions as a requirement of consent.</li> <li>• Support introducing limits on stockpile heights and setbacks.</li> <li>• Support more restrictive thresholds for SNAs, and outstanding natural features and landscapes.</li> <li>• Do not enable earthworks where they affect a sensitive environment/feature such as a waterway.</li> <li>• Support including volume per site limits, support removal of duplicated rules, recognise NES for plantation forestry.</li> </ul>		

<b>Response</b>		
<ul style="list-style-type: none"> <li>• Earthworks not permitted in SNAs, and threshold for each outstanding natural features and landscapes are proposed.</li> <li>• Stockpile height and setback controls are proposed.</li> <li>• Waterway setbacks included.</li> <li>• Volume thresholds based on zones and size of sites are proposed and duplication with other rules is not proposed.</li> </ul>		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
July 2019	Z energy, BP Oil, and Mobil	What's the Plan consultation
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• Controls should not unnecessarily restrict short-term construction activities.</li> <li>• Consider the removal and replacement of fuel storage tanks as a well-defined activity controlled by the NESCS and as such recommends it does not need to be addressed separately via the District Plan provisions.</li> </ul>		
<b>Response</b>		
Earthworks associated with removal and replacement of an existing fuel storage system are provided for as a permitted activity.		
<b>Date</b>	<b>Group</b>	<b>Subject Matter</b>
August 2019	Misura (Surveyors)	Earthworks thresholds
<b>Feedback</b>		
<ul style="list-style-type: none"> <li>• The existing rules are workable but can be confusing</li> <li>• Effects of an amount of earthworks are generally the same despite the size of the site.</li> <li>• If you move and shift soil elsewhere is it counted twice?</li> <li>• There is nothing in the current plan about height against boundaries and this can be an issue.</li> <li>• Volume of earthworks would have to be determined as part of the assessment if volume measure used.</li> <li>• Hard to monitor volume over a period. Difficult to monitor volumes in cases such as fill being dumped over a period of time.</li> <li>• Need to be clear about what is meant by 'site'.</li> </ul>		
<b>Response</b>		
<ul style="list-style-type: none"> <li>• The definition of earthworks includes both cut and fill and a definition. Thresholds for volume have been included related to site size and zone, as well as for specific activities.</li> </ul>		

<ul style="list-style-type: none"> <li>• A rule for height/depth of earthworks against boundaries has been included.</li> <li>• The National Planning Standards definition of site is to be used.</li> </ul>		
Date	Group	Subject Matter
August, 2019	Gavin Court, Development Consultants Limited	Earthworks thresholds
Feedback		
<ul style="list-style-type: none"> <li>• Rules are not well defined and have been inconsistently administered.</li> <li>• Retrospective consents have been applied for filling of hollows in land (overland flow paths).</li> <li>• In rural areas should apply a permitted baseline approach e.g in relation to cultivation but do not capture ploughing.</li> <li>• Roadworks caused similar effects to activities requiring consent. However these often do not get caught.</li> <li>• In urban areas, where more earth is disturbed than an average-sized house (say 300m<sup>2</sup>), this can have an effect e.g. noise and rubbish, therefore earthworks that have building consent should be permitted, subject to standards.</li> <li>• Earthworks should be considered during subdivision (as a separate activity), rather than relying on the standard engineering conditions, and considering it as part of the activity as a whole.</li> </ul>		
Response		
<ul style="list-style-type: none"> <li>• Volume thresholds have been introduced and clarified.</li> <li>• Cultivation is excluded from the definition of earthworks, and is therefore not considered by the Earthworks Chapter</li> <li>• The thresholds will be calculated over a site as a whole, rather than 1ha grids.</li> <li>• Earthworks thresholds for residential zones have considered average house size and amenity considerations relating to earthworks in living environments.</li> </ul>		
Date	Group	Subject Matter
August 2019	Woods Christchurch (Surveyors)	Earthworks thresholds
Feedback		
Current earthworks rules are confusing e.g. if it only applies to part of a site.		
Response		
The thresholds proposed will be calculated over a site as a whole, rather than 1ha grids.		
Date	Group	Subject Matter
August 2019	Davis Ogilvie	Earthworks thresholds
Feedback		

- Earthworks provisions are clearer if they are per site rather than per project.
- Depth can be a more effective control for stability and structural integrity than setbacks. Suggested 0.6m depth which is consistent with Christchurch City Council provisions.
- Could continue with the current approach with implementation clarification or use an area per site; or a volume per site ratio.
- If area and depth controls are used, this establishes a maximum volume.
- An area percentage approach is not preferred as this could allow a large site to have very large earthworks permitted.
- Variation of site sizes in a zone is not an issue as rules should focus on the amount of earthworks is being undertaken (not relative to the site).
- Don't think for intermediate projects e.g. 7 or 8 units would think it is unreasonable to get consent for earthworks, unlike a single house. Large projects would require consent.

#### Response

- Earthworks are proposed per site, rather than per project.
- A depth/height rule and boundary setbacks are proposed.
- Volume and volume per site area thresholds are proposed.
- Resource consent is proposed to be required for projects that exceed the thresholds.

Date	Group	Subject Matter
18 September, 2019	Claire McKeever, Eliot Sinclair Senior Planner	Earthworks thresholds

#### Threshold

- Large projects are expected to trigger consent and the rules for this should be clear. Controls for small-scale earthworks need consideration but should not be an issue if erosion sediment controls are carried out effectively.
- Building consent exemptions can work well where the volume threshold is low but allowance is made for the building footprint
- It can be difficult to accurately assess whether earthworks comply or not.
- There are regional rules for stockpiling which manage the effects of dust on sensitive activities. Placement is not always obvious at the time of the consent and there may not be much choice where to put it.
- Preference for volume and area approach.

- Calendar year is a better than 12 month period as it could resolve the issue of someone doing earthworks one day and counting the next day as the next 12 month period, for instance. However a 12 month period is used in the NESCS.
- Consider a depth near boundaries rule, although depth could be picked up in volume assessment. ECan deal with water table matters.
- Preference not to use per project thresholds
- Ratio approach should be calculated over the site as a whole, and not in 1000m<sup>2</sup>/1ha parts.

#### Response

- Ratio approach for volume threshold will be over the site as a whole.
- Earthworks threshold are high enough to allow for a building footprint.
- Stockpiling is a separate activity with height and area controls.
- A 12 month period is proposed rather than calendar year noting the same issue would apply in December and January for a calendar based approach.
- Project-based thresholds are not proposed and will not duplicate regional rules for water table clearance.
- A depth/height within setbacks rule has been included to capture effects such as stability, drainage and visual effects on neighbouring properties

Date	Group	Subject Matter
3 December 2019	Meeting with Horticulture New Zealand and Federated Farmers	Earthworks

#### Feedback

Growers have to control sediment under farm environment plans and they have a sediment control guidance document. If a grower is near a waterway they can have a sediment control pond to collect sediment before it flows into the waterway.

#### Response

Sediment controls are proposed to apply district-wide that will complement regional guidance. Where these matters are already addressed through farm environment plans it should be likely that the activity would comply.

Date	Group	Subject Matter
4 <sup>th</sup> December, 2019	Waimakariri Irrigation and Dairy New Zealand	Earthworks

#### Feedback

- An area with an overland flow path will be identified in a farm environment plan as an area where water pools so it has to be either fenced off or filled in, because any wet area can lead to e-coli and leaching, and this can create some tensions.

- Could be problematic to define overland flow path

**Response**

Filling of overland flow paths that exceed the permitted threshold for any site is proposed to require assessment through resource consent. Fencing may be needed under a farm environment plan if filling is not approved.