

Before the Hearings Panel

At Waimakariri District Council

Under Schedule 1 of the Resource Management Act 1991

In the matter of the Proposed Waimakariri District Plan

Between Various submitters

And **Waimakariri District Council**
Respondent

**Initial reply on Earthworks Ketuketu Whenua – Peter Wilson on behalf of
Waimakariri District Council**

Date: 30 November 2023

INTRODUCTION:

1. My full name is Peter Gordon Wilson. I am employed as a Senior Policy Planner with the Waimakariri District Council. I am the Reporting Officer for the Earthworks topic and prepared the s42A Report.
2. I have read the evidence and tabled statements provided by submitters at hearing five and relevant to the Section 42A Report – Earthworks Ketuketu Whenua.
3. I have prepared this Council final reply on behalf of the Waimakariri District Council (Council) in respect of matters raised through Hearing Stream 5. I submitted an initial right of reply on 29 September 2023
4. I am authorised to provide this evidence on behalf of the District Council.

QUALIFICATIONS, EXPERIENCE AND CODE OF CONDUCT

5. Appendix D of my section 42A report sets out my qualifications and experience.
6. I confirm that I am continuing to abide by the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note 2023.

SCOPE OF REPLY

7. This is my final right of reply on the Earthworks chapter topic. My initial right of reply was published on 29 September 2023.
8. I outlined in the initial right of reply that some questions and matters required the conclusion of expert conferencing before I could answer them.
9. As expert conferencing has now occurred, with a joint witness statement produced, I can respond to the remaining matters.

MATTERS

10. The primary difference between my initial and final rights of reply is the inclusion of the content from the Energy and Infrastructure (EI) and Earthworks (EW) JWS.
11. EW-R1 enables maintenance and repair of roads, but as notified, did not reference of telecommunications facilities or transmission lines. It also duplicates EI-R2 which permits the activity subject to no earthworks standards. I recommend the incorporation of the relevant earthworks standards into EI-R2, as recommended in the JWS, and the subsequent deletion of EW-R1.
12. I recommend that EW-R3 has the reference to EW-R5 deleted, as EW-R5 has been recommended for deletion based on the acceptance of the proposed amendment to the natural hazards chapter.

13. I recommend EW-R4 is amended to be consistent with Mr Willis' recommendations on the Natural Hazards chapter.
14. I recommend advice note AN1 is amended to be consistent with the JWS and the other changes.
15. I am conscious that AN1 may require further amendment, along with other provisions of the PDP, including advice notes, if the recommendations in the upcoming memorandum on giving effect to the NPS on Commercial Forestry are adopted in any wrap up reports from the relevant chapter authors.

OTHER CHANGES REQUIRED

16. With the deletion of provisions, there will be a need to ensure that numbering, references, and general formatting are correct. I considered that numbering and referencing formatting changes of this nature would be best undertaken in the final rights of reply for any wrap-up hearing, in the form of a final recommended Appendix A.

Updated Appendix A – Recommended Changes

This captures changes as a result of:

- Response to questions prior to hearing stream 5
- 29 September Right of Reply
- 30 November Joint Witness Statement on Energy and Infrastructure

Appearance	Explanation
Black text	Text as notified.
Red text with <u>underlining</u> or strikethrough	Amendments recommended in section 42A report or reply report.
Blue text with <u>underlining</u> or strikethrough	Additional amendments recommended by the Initial Reply Report.
Purple text with <u>underlining</u> or strikethrough	Additional amendments experts are recommending as part of a Joint Witness Statement.
Green text with <u>underlining</u> or strikethrough	Amendments recommended by the Final Reply Report.

Introduction

This chapter provides for and manages earthworks across the District and recognises that earthworks are an integral part of the use and development of land for residential activities, industrial¹, rural and commercial activities at a variety of scales.

Other potentially relevant plan provisions:

Canterbury Land and Water Regional Plan Rule 5.175 which outlines setbacks for earthworks adjacent to waterbodies.

Insert following policy into urban environment zone chapters RESZ, CMUZ, INZ, OSRZ, SPZ(HOS), SPZ(HOS), SPZ(KR), SPZ(PBKR), SPZ(PR), SPZ(MCC):

avoiding quarry, landfill, cleanfill area, mining, or dam activities within to urban environments².

Definitions

Coastal hazard mitigation works: ~~Any means work and or~~ structure designed to prevent or mitigate coastal hazards, such as coastal erosion and seawater inundation. It includes ~~soft engineering natural hazard mitigation beach re-nourishment, dune replacement, and sand fences, seawalls, groynes, gabions and revetments~~ and hard engineering natural hazard mitigation³.

Rehabilitation: In relation to the Earthworks chapter⁴, means restoring land that has been damaged by earthworks activity, to as near to pre-disturbance conditions as possible.

EW-P1	Enabling earthworks
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¹ Daiken New Zealand Limited [145.23]

² Fulton Hogan [41.33]

³ DOC [419.8]

⁴ DOC [419.23]

Enable earthworks where they:

1. are compatible with the ~~character~~amenity values and qualities⁵ of the location and surrounding environment;
2. avoid, remedy or mitigate any adverse effects on any sites or areas identified as ONL, ONF, SAL, Coastal Environment Overlay, SNA, mahinga kai⁶ and sites and areas of significance to Māori, Natural Open Space Zone, surface freshwater bodies and their margins, or any notable tree, historic heritage or heritage setting;
3. minimise erosion and avoid adverse effects from stormwater or sediment discharge from the site;
4. avoid increasing the risk to people or property from natural hazards;
5. maintain the stability of land including adjoining land, infrastructure, buildings and structures;
6. minimise the modification or disturbance of land, including any associated retaining structures, ~~on the visual amenity values of the surrounding area~~⁷; and
7. minimise adverse dust, vibration and visual effects beyond the site.

EW-P4

Scale of earthworks within or adjacent to 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 area, mining, or dam activities within or adjacent to urban environments.~~⁸

⁵ Summerset [207.16]

⁶ ECan [316.156], Summerset [207.16]

⁷ Summerset [207.16]


⁸ Fulton Hogan [41.33]


EW-P6	Water resources - Avoid, Manage adverse effects of earthworks on ground and surface water bodies that could result in water contamination and adverse effects on mahinga kai ⁹ .
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EW-R1	Earthworks for the maintenance and repair of roads, footpaths, cycleways, tracks, carparks, and accessways ¹⁰	
All Zones	Activity status: PER - Where: <ol style="list-style-type: none"> 1. EW-S4 and EW-S7 are met; 2. the earthworks are within the formed area of the road, footpath, cycleway, track, carpark or accessway; and 3. the earthworks are contained within ground previously disturbed through construction of the road, footpath, cycleway, track, carpark, accessway. 	Activity status when compliance not achieved: RDIS - Matters of discretion are restricted to: <ul style="list-style-type: none"> • EW-MD1 - Activity operation, scale, form and location • EW-MD2 - Nuisance and reverse sensitivity • EW-MD3 - Land stability • EW-MD4 - Natural hazards • EW-MD5 - Rehabilitation • EW-MD6 - Coastal environment and hazards • EW-MD7 - Water bodies, vegetation and fauna • EW-MD8 - Outstanding natural features and landscapes

⁹ ECan [316.156], Summerset [207.16]

¹⁰ Transpower [195.105]

EW-R3	Earthworks for maintenance of existing <u>community scale irrigation/stockwater networks</u>¹¹, public water races or drains	
All Zones	<p>Activity status: PER</p> <p>Where:</p> <ol style="list-style-type: none"> EW-S1 to EW-S7 are met;  the disposal or stockpiling of any dredged material to land shall meet EW-S1, EW-R9 (stockpiling), EW-S2 and EW-R5 (overland flow paths), and the activity is undertaken by the Crown, Regional Council, District Council or their nominated agent. 	<p>Activity status where compliance not achieved: RDIS</p> <p>Matters of discretion are restricted to:</p> <ul style="list-style-type: none"> EW-MD1 - Activity operation, scale, form and location EW-MD4 - Natural hazards EW-MD5 - Rehabilitation EW-MD6 - Coastal environment and hazards EW-MD7 - Water bodies, vegetation and fauna

EW-R4	Earthworks for community scale natural hazards mitigation works	
<p>Urban Flood Assessment Overlay</p> <p>Non-Urban Flood Assessment Overlay</p>	<p>Activity status: PER</p> <p>Where:</p> <ol style="list-style-type: none"> EW-S1 to EW-S7 are met.  Rules NH-R8, NH-R9, NH-R10 are met¹² 	<p>Activity status where compliance not achieved: DIS</p>

¹¹ WIL [210.43, 210.44]

¹² ECan [316.157]

EW-R5	Earthworks within an overland flow path	
Urban Flood Assessment Overlay - Non-Urban Flood Assessment Overlay	Activity status: PER - Where: <ol style="list-style-type: none"> EW-S1 to EW-S7 are met; and the height of any filling does not exceed 0.25m above the ground level at (18 September 2021); or <u>activity does not exacerbate flooding on any other property by displacing or diverting floodwater on surrounding land in a 0.5% AEP event¹³</u> the filling is for a building platform that is located greater than 2m from any site boundary within the Urban Flood Assessment Overlay, or greater than 10m from any site boundary within the Non-Urban Flood Assessment Overlay; or the flood depth in a 0.5% AEP event is less than 100mm. 	
EW-R8	Earthworks for underground infrastructure <i>This rule does not apply to any treatment plants, pump stations, canals, infiltration basins, open raw water storage ponds/lakes and treated water reservoirs provided for under EW-R11.</i>	
All Zones	Activity status: PER Where: <ol style="list-style-type: none"> the activity is permitted under EI-R4, EI-R10, EI-R46 	Activity status when compliance not achieved: RDIS Matters of discretion are restricted to:

¹³ ECan [316.158] and consequential from Mr Willis's s42A for natural hazards chapter

		EW-MD1 - Activity operation, scale, form and location EW-MD6 - Coastal environment and hazards EW-MD7 - Water bodies, vegetation and fauna TREE-MD1 - Pruning, root protection area, trunk and crown, removal TREE-MD2 - Extent of benefit or need for the activity or works
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EW-R10	Earthworks for farm quarries¹⁴	
General Rural Zone	Activity status: PER Where: 1. EW-S1 to EW-S7 are met; and the maximum area of any farm quarry shall be 1500m² per site.	

EW-R13	EW-R13 Earthworks undertaken in relation to the removal or replacement of a fuel storage system¹⁵	
All zones	Activity status: PER	Activity status when compliance not achieved: RDIS Matters of discretion are restricted to:

¹⁴ Cl 16(2), sch 1, RMA minor error

¹⁵ Eic Miles Rowe, hearing stream 5

Where:

1. The activity complies with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 (NESCS); and
2. the activity shall not be located within 20m of the bank of any river or lake, 50m from the margin of any wetland; and
3. EW-S4, EW-S6 and EW-S7 are met;

- EW-MD1 - Activity operation, scale, form and location
- EW-MD2 - Nuisance and reverse sensitivity
- EW-MD3 - Land stability
- EW-MD4 - Natural hazards
- EW-MD5 - Rehabilitation
- EW-MD6 - Coastal environment and hazards
- EW-MD7 - Water bodies, vegetation and fauna
- EW-MD8 - Natural features and landscapes

EW-S2 General setbacks

1. Earthworks more than 300mm in height or depth shall be set back a minimum of 2m from any boundary of a site in different ownership.

For clarity, these standards do not apply to earthworks wholly within the footprint of a building where subject to an approved building consent

Activity status when compliance not achieved: RDIS

Matters of discretion are restricted to:

- EW-MD1 - Activity operation, scale, form and location
- EW-MD2 - Nuisance and reverse sensitivity
- EW-MD3 - Land stability
- EW-MD4 - Natural hazards
- EW-MD5 - Rehabilitation
- EW-MD6 - Coastal environment and hazards
- EW-MD7 - Water bodies, vegetation and fauna

- [EW-MD8](#) - Outstanding natural features and landscapes

~~EW-S3 Setback from water bodies~~

- ~~1. Earthworks shall not be undertaken:

 - ~~a. within 20m from the bank of any stream, river, or~~
 - ~~b. within 50m of the edge of any wetland or lake.~~~~

~~Activity status when compliance not achieved: RDIS~~

~~Matters of discretion are restricted to:~~

- ~~• [EW-MD7](#) - [Water bodies](#), vegetation and fauna~~

EW-S5 Excavation and filling

1. Except for the burial of dead animals, and for offal pits, earthworks shall achieve the following:
 - a. a maximum height of 1.5m above ground level,
 - b. a maximum depth of 1m¹⁶ below ground level;
 - c. material used for filling of land must be cleanfill material.

¹⁶ Summerset [207.21]

Table EW-1 General standards for earthworks

Special Purpose Zone (Pegasus Resort), Special Purpose Zone (Museum and Conference Centre), Special Purpose Zone (Pines Beach and Kairaki Regeneration Zone), Local Centre Zone, Large Format Zone, Town Centre Zone, Industrial Zones	1000m ² <u>or 50m³ per 100m² of site area, whichever is greater</u> ¹⁷
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Advisory Note

- ...
- *for network utilities the thresholds apply to the area and volume of work being undertaken at any one time at a particular location such that, where practicable, progressive closure and stabilisation of works could be adopted to maintain the activity within the thresholds*

EW-AN1

Activities and structures may also be subject to controls outside the District Plan. Reference should also be made to any other applicable rules or constraints within other legislation or ownership requirements including the following:

1. Earthworks may require building consent under the Building Act 2004.
2. The Stockwater Race Bylaw 2019, the Waimakariri River Regional Plan 2004, and the Canterbury Land and Water Regional Plan 2018 may apply.
3. Resource consent may be required under regional plans including the Canterbury Land and Water Regional Plan 2018 and the Canterbury Air Regional Plan 2017. Earthworks within the beds [and on the margins](#) of lakes and rivers ~~is~~ [are](#) regulated under the regional planning framework (Canterbury LWRP) [and earthworks in the coastal marine area under the Canterbury Regional Coastal Environment Plan](#)¹⁸.
4. The NESPF regulates earthworks for forestry purposes, and the NESCS manages the effects on human health from the disturbance or removal of contaminated soil. [Specific activities \(i.e. soil sampling and removing or replacing fuel storage systems\) are regulated under](#)

¹⁷ Ngai Tahu Property [411.30]

¹⁸ ECan [316.159],

~~the NESCS as well as under the rules of this chapter~~ ¹⁹. Earthworks managed under the ~~NESCS and~~ NESPF are not subject to provisions in this chapter other than where the District Plan deals with terms and conditions not covered in the NES or in the circumstances where the District Plan is allowed to be more stringent. The District Plan can be more stringent than the NESPF for forestry in outstanding natural features and landscapes, and SNAs.

- ~~5. The NESETA and the NESTF 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 they address terms and conditions not 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:~~
- ~~a. within the root protection area of a notable tree or other vegetation in the road reserve listed in the District Plan;~~
 - ~~b. within the root protection area of a notable tree, group of trees, or other vegetation outside the road reserve identified as being of special significance listed in the District Plan;~~
 - ~~c. in an place identified in the District Plan as having heritage values;~~
 - ~~d. in a landscape feature identified in the District Plan as having special visual amenity values (however described);~~
 - ~~e. in an area identified in the District Plan as a significant habitat for indigenous vegetation (however described);~~
 - ~~f. on an area identified in the District Plan as a significant habitat for indigenous fauna;~~
 - ~~g. in an area identified in the District Plan as an outstanding natural landscape or feature;~~
 - ~~h. in an area where the District Plan has rules to protect the adjoining CMA.~~ ²⁰
6. If any activity associated with a project, including earthworks, may modify, damage or destroy an archaeological site(s), an authority from HNZPT must be obtained for the work to proceed lawfully. The Heritage New Zealand Pouhere Taonga Act 2014 contains penalties for unauthorised site damage.

EW-AN4

These standards do not apply in the following situations:

¹⁹ Z Energy Limited, BP Oil New Zealand Limited, Mobil Oil New Zealand Limited [276.39]

²⁰ Transpower [195.106]

- a) during a state of emergency or transition period declared [under the Civil Defence Emergency Management Act 2002](#) or where direction to undertake specific earthworks has been issued by the controller or recovery manager [under the Civil Defence Emergency Management Act 2002](#)²¹; or
- b) [during a biosecurity emergency declared by an authorised person under the Biosecurity Act 1993](#)²².

<p>EW-MD1</p>	<p>Activity operation, scale, form and location</p> <ol style="list-style-type: none"> 1. Location, volume and area of earthworks. 2. The operational need or functional need for the earthworks in the location. 3. Any effects on the natural character and amenity values of the site and surrounding area. 4. Any effects on archaeological sites, heritage values or the heritage setting of the site or within the surrounding area. 5. Any disturbance of culturally significant sites and any proposed mitigation measures. 6. Any effects on the health and structural integrity of any notable tree and any effects on the values that have been identified for the notable tree. 7. Public health and safety including contingency provisions for emergency response. 8. Mitigation including fencing, planting and landscaping. 9. Effects on soil quality. 10. Final contour and ground level resulting from excavation or filling. 11. Vehicle movements associated with earthworks. 12. Any effects on the operation, maintenance, upgrade and development of the National Grid and transmission lines²³. 13. Any constraint on the future development potential of the site or surrounding sites. 14. The safe and efficient functioning of infrastructure, including specified infrastructure²⁴
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²¹ Amended in response to Commissioner questions at hearing 5.

²² Federated Farmers [414.170, 414.173], NZPork & HortNZ hearing 5 EIC

²³ Mainpower [249.33]

²⁴ Waka Kotahi [275.42], WIL [210.60]

EW-MD5	<p>Rehabilitation</p> <ol style="list-style-type: none"> 1. Any proposed site rehabilitation, considering: <ol style="list-style-type: none"> a. the location, gradient and depth of the earthworks; b. availability of clean fill material and time frames for rehabilitation; c. any adverse effects on traffic, dust, groundwater, drainage and landscape; d. any re-vegetation, including the use of indigenous and non indigenous plant varieties from seed sourced from the relevant ecological district within which the planting is to take place²⁵, and any weed and pest control proposed, and e. any mitigation or proposed mitigation. 2. Any quarry site rehabilitation plan, prepared by a person suitably qualified or experienced in site rehabilitation
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EW-MD7	<p>Water bodies, vegetation and fauna</p> <ol style="list-style-type: none"> 1. The extent to which the disturbance of the soil, including disturbance of contaminated land, adversely affects areas of significant indigenous vegetation and significant habitats of indigenous fauna. 2. Any removal of, or disturbance to, indigenous vegetation including consistency with the provisions in the ECO chapter.²⁶ 3. Any effects on the natural character and water quality of any water body²⁷. 4. The extent to which the earthworks will restrict public access and enjoyment of the margin of any water body.
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²⁵ Federated Farmers [414.29]

²⁶ DOC [419.123]

²⁷ Consequential to removal of EW-P6 and EW-S3

5. The extent to which the habitat of trout, salmon, and indigenous aquatic species, may be adversely affected by any disturbance on the riparian margin²⁸ ~~margin of the water body~~.
6. Fencing, planting and landscaping.
7. The extent to which the land use will adversely affect wahi taonga and mahinga kai.
8. For ngā wai, the matters specified in SASM-MD3 Nga Wai.

²⁸ DOC [419.123]