IN THE ENVIRONMENT COURT
AT AUCKLAND

I TE KŌTI TAIAO O AOTEAROA
KI TĀMAKI MAKAURAU

Decision [2025] NZEnvC 062

IN THE MATTER OF	an application under ss 314 and 316 of the Resource Management Act 1991
BETWEEN	GISBORNE DISTRICT COUNCIL
	(ENV-2024-AKL-000246)
	Applicant
AND	ARATU FORESTS LIMITED
	First Respondent
AND	MATTHEW CHARLES CRAPP
	Second Respondent
AND	MANA TAIAO TAIRĀWHITI INCORPORATED
	Section 274 Party

Court:	Environment Judge M J L Dickey, sitting alone under s 309 of the Act
Last case event:	25 February 2025
Date of Decision:	28 February 2025
Date of Issue:	28 February 2025

DECISION OF THE ENVIRONMENT COURT ON APPLICATION FOR ENFORCEMENT ORDERS BY CONSENT

A: Under ss 279(1)(b), 314 and 316 of the Resource Management Act 1991, the Environment Court, by consent, makes the orders attached in **Annexure A**.

B: Under s 285 of the Act, there is no order as to costs.

REASONS

Introduction

[1] These orders are made by consent. It is appropriate however that the Court provides the context for the application and the statutory basis for the orders. A recent decision of the Court, *Gisborne District Council v China Forestry Group New Zealand Company Limited*,[1] addresses the statutory foundation for enforcement orders in circumstances that are similar to this case and to that extent is a useful reference. The issues relate to the discharge of woody debris and sediment from commercial forestry activities.

[2] In setting out the background, I rely on the grounds set out by the Council in its application but I record that the evidence supporting the Council's position was not tested in a hearing, as the orders which are to be imposed are agreed.

Application for enforcement orders

[3] On 2 December 2024, Gisborne District Council filed an application seeking enforcement orders against Aratu Forests Limited (**Aratu**) and Matthew Charles Crapp in respect of the forest located approximately 38 kilometres north of Gisborne in Waimata Valley, known as "Wakaroa Forest". The application was filed together with 13 affidavits in support.[2] The orders sought are largely those that I make today,

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1 [2024] NZEnvC 189.

2 Affidavit of Kevin Ford sworn 15 November 2024; Affidavit of Joanna Noble sworn 28 November 2024; Affidavit of Matthew McCloy sworn 26 November 2024; Affidavit of Dr Jack McConchie sworn 6 November 2024; Affidavit of Leigh Utting affirmed 11 November 2024; Affidavit of Matt Wilkes sworn 31 October 2024; Affidavit of David Sluter sworn 8 November 2024; Affidavit of Gary McKenzie sworn 6 November 2024; Affidavit of Andrew Shelton 12 November 2024; Affidavit of Daniel Haverty affirmed 30 October 2024; Affidavit of Murry Cave affirmed 11 November 2024; Affidavit of Chris McSweeney sworn 29 October 2024; and Affidavit of Kiri McComb sworn 2 December 2024.

save that the application for orders against Mr Crapp is adjourned to enable the parties to discuss their issues.

[4] Wakaroa Forest is a 1,310-hectare plantation pine forest owned by Aratu. Aratu holds the relevant forestry harvesting and earthworks consents for the forest.

[5] Aratu is owned by an international forestry investment company, which is based in Australia and owns 550,000 net hectares of forests around the world. In total, Aratu owns 35,000 hectares of plantation forest in the Gisborne area of which 27,000 hectares is production forest.[3]

[6] The properties that comprise Wakaroa Forest have the following legal descriptions:[4]

(a) Identifier GS5D/386 – Lot 1-2 Deposited Plan 7888, Lot 1-2 Deposited Plan 7886, Lot 6 Deposited Plan 6573, Lot 1 Deposited Plan 5624, Part Papakorokoro 5 Block and Section 18 and Section 21-22 Block III Waimata Survey District. The area to which this title relates is 323.4490 hectares.

(b) Identifier GS4D/307 – Lot 1 Deposited Plan 6514, Lot 1 Deposited Plan 6515, Lot 1-3 Deposited Plan 6721, Lot 1 Deposited Plan 6722 and Lot 1 Deposited Plan 6723. The area to which this title relates is 810.7370 hectares.

(c) Identifier GS5B/428 – Section 7-9, Part Section 6 and Part Section 12 Block III Waimata Survey District and Lot 2 Deposited Plan 7682. The area which this title relates is 564.54 hectares.

(d) Identifier GS4C/196 – Section 11 Block III Waimata Survey. The area to which this area relates is 4.6 hectares.

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3 Application for Enforcement Orders dated 2 December 2024 at [4-5].
4 Ibid, [3].

Grounds for application

[7] The terrain in Wakaroa Forest is steep and prone to severe erosion. At least half of Wakaroa Forest is in the red zone, being land defined in Regulation 3 of the Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2017 (**NES-CF**) as having an erosion susceptibility rating of "very high". Most of Wakaroa Forest is also classified as Land Overlay 3 or 3A (that is, the most highly erodible soils in the Gisborne region) under the Tairāwhiti Resource Management Plan (**TRMP**).[5]

[8] There are a number of streams that flow through Wakaroa Forest and join with larger rivers. These include the Mangahouku Stream, which flows in a southeasterly direction from Wakaroa Forest into the Waimata River at a point approximately 3.5 kilometres east of the forest. The Waimata River flows into the sea near Gisborne city.[6]

[9] Other streams flow from the northern and western parts of Wakaroa Forest into the Waipaoa River, including the Mangaoai Stream which has its headwaters in Wakaroa Forest. The Waipaoa River flows into the sea south of Gisborne.[7]

[10] At least six streams within Wakaroa Forest are classified as Protected Watercourses in Schedule 7 of the Gisborne Regional Freshwater Plan. Protected watercourses are watercourses that receive enhanced protection under the TRMP and are intended to be retired as part of vegetation clearance resource consents. The watercourses in Wakaroa Forest that are specified as protected include the Mangahouku Stream and its tributaries, the Mangaehu Stream and its tributaries, and the Mangataikehu Stream and its tributaries.[8]

Resource consents

[11] Between 2008 and 2023, the majority of pine trees at Wakaroa Forest were

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5 Ibid, [7].
6 Ibid, [8].
7 Ibid, [9].
8 Ibid, [10].

harvested under three resource consents issued to Aratu.[9] The harvesting consents also authorised earthworks associated with harvesting, namely earthworks to construct forestry roads and log processing landings (also known as "skids").[10] Each of those resource consents had a 10-year term. None of the resource consents expressly authorised the discharge of contaminants (e.g. slash, harvesting debris, felled trees, wind throw trees and/or sediment) into water, or onto land where those contaminants could enter water.[11]

[12] The consents had similar conditions but related to different parts of the forest. They are summarised as follows:[12]

(a) Consent RR-2008-6604-00, which authorised clearfell harvesting in an area of 753 hectares in the southern part of Wakaroa Forest. That part of the forest is within the Waimata River catchment. The consent also authorised the formation of 26.5 kilometres of roads and the construction of 77 landings. Consent RR-2008-6604-00 expired on June 2018 but the majority of harvesting had been completed by 2016.

(b) Consent LV-2016-106989-00, which authorised clearfell harvesting of 325.8 of pinus radiata in the middle of Wakaroa Forest. The consent also authorised the construction of an additional 7.71 kilometres of logging road and 27 landings. This consent expires in March 2026.

(c) Consent LV-2016-107163-00, which authorised clearfell harvesting of 235.05 hectares of pinus radiata in the northernmost part of Wakaroa Forest. The consent also authorises construction of 9.43km of road, 17 landings and 3 extraction pads in the forest. This consent expires in August 2026.

Compliance history

[13] The Council submitted that harvesting practices at Wakaroa Forest have been

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9 RR-2008-6604-00 and several variations; LV-2016-106989-00; LV-2016-107163-00.
10 Affidavit of Kevin Ford sworn 15 November 2024, at [33].
11 Above n 3 at [11].
12 Above n 11 at [34].

poor and include leaving large amounts of slash, felled trees/logs and windthrow on unstable skid sites and slopes where it was at high risk of being mobilised by erosion and/or large rain events into watercourses.[13]

[14] The widespread nature of these practices at Wakaroa Forest have resulted in multiple discharges of sediment and woody debris during adverse weather events to streams, with significant adverse environmental effects on watercourses both within and downstream of Wakaroa Forest.[14]

[15] During rain events in June 2018, large amounts of sediment and forestry harvesting debris were mobilised from a number of collapsed skid sites and hill faces in Wakaroa Forest. This resulted in that material migrating out of the forest into the Waimata River and the Waipaoa River. This material caused significant damage to properties and infrastructure immediately downstream of Wakaroa Forest, including to Uttings Bridge on Waimata Road.[15]

[16] The Council prosecuted Aratu in relation to the June 2018 discharges at Wakaroa Forest. In February 2020 Aratu was convicted for the June 2018 discharges at Wakaroa Forest and fined $150,000.[16]

[17] However, large amounts of the slash, harvesting debris and felled trees that were mobilised within Wakaroa Forest during the June 2018 rain event, remained in streams and gullies and on slopes at the forest. This included a large debris dam within the Mangaoai Stream at Wakaroa Forest (later referred to by Aratu as "Site E"). Aratu told the Council that this debris dam could not be removed but was unlikely to mobilise in future rain events. However, most of the material that formed this log jam was later re-mobilised during a large rain event in March 2022.[17]

[18] By 22 April 2022, there were six large debris dam sites at Wakaroa Forest. Three of these locations (sites A to C) were located within the Mangahouku Stream, which

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13 Above n 3 at [12].
14 Ibid, [13].
15 Ibid, [14].
16 *Gisborne District Council v Aratu Forests Limited* [2020] NZDC 2808.
17 Above n 3, at [16].

flows from Wakaroa Forest to Uttings Bridge before entering the Waimata River. Three of these locations (sites D, E and F) were located in the north of the forest within the Mangaoai Stream catchment.[18]

Council investigations of Wakaroa Forest in 2022

[19] On 19 May 2022 the Council inspected Wakaroa Forest and identified a number of compliance issues and resource consent contraventions, including poorly constructed roads and skid sites, accumulations of slash on skid sites that were at risk of collapse, recent collapses of sediment and/or woody debris from skid sites and roads to streams below those skid sites and roads.[19]

[20] After the Council highlighted these issues, Aratu provided the Council with a proposed Forest Management Plan for Wakaroa Forest. This plan included three newly identified debris dams (Sites G, H & I) located within the Mangaoai Stream and Mangaruaki Stream catchments.[20]

[21] On 27 October 2022 the Council approved an amended version of the Wakaroa Forest Management Plan. The Council is unaware of any steps undertaken by Aratu to implement the management plan prior to the weather events of January and February 2023.[21]

Council inspections following Cyclone Hale and Cyclone Gabrielle

[22] The Gisborne region was affected by Cyclone Hale in early January 2023 and then by Cyclone Gabrielle in mid-February 2023.

[23] During these weather events large volumes of felled trees, slash, logging debris, waste logging material and windthrow trees from commercial pine forests were mobilised in Wakaroa Forest. This material had been left on unstable skid sites or slopes following harvesting or had been left within gully systems or watercourses in

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18 Ibid, [17].
19 Ibid, [18].
20 Ibid, [19].
21 Ibid, [20].

Wakaroa Forest after previous weather events.[22]

[24] Large amounts of the woody debris that was mobilised in Wakaroa Forest during the cyclones in January and February 2023 migrated out of the forest via the Mangahouku Stream, the Mangaruaki Stream and the Mangaoai Stream. The Mangahouku Stream flows to the Waimata River while the Mangaruaki Stream and the Mangaoai Stream are tributaries of the Waipaoa River.[23]

[25] Following Cyclone Hale and Cyclone Gabrielle, Council officers carried out aerial assessments and ground-based inspections of Wakaroa Forest and the properties immediately downstream of the forest.

[26] After Cyclone Gabrielle, Council officers found that significant new amounts of woody debris and sediment had mobilised out of Wakaroa Forest and into the neighbouring property, accumulations of woody debris, and new log jams, among others.[24]

[27] During an inspection of Wakaroa Forest under a search warrant on 28 February 2024, Council officers identified 18 debris dams within streams at Wakaroa Forest and observed issues within the forest resulting from the accumulation of woody debris and logs.[25]

[28] On 9 September 2024, Council officers and two independent experts engaged by the Council (Dr Jack McConchie and Matt McCloy), carried out a further inspection of Wakaroa Forest to assess the risk of woody debris and sediment mobilising. Aratu representatives were present during this inspection. During this inspection the officers and Council experts observed that there remained the following issues:[26]

(a) large amounts of woody debris, including log jams within watercourses at

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22 Ibid, [22].
23 Ibid, [23].
24 Ibid, [25].
25 Ibid, [26].
26 Ibid, [27].

the forest, that appeared at high risk of mobilisation;

(b) large amounts of woody debris on steep and erodible slopes at high risk of collapse into watercourses below; and

(c) problems with water controls at skid sites that appeared to be exacerbating erosion and increasing the risk of future forest infrastructure failures.

[29] The overall state of Wakaroa Forest was poor and the Council considered there to be a high risk of mobilisation of further sediment and woody debris discharges if adequate remedial work is not carried out.

Environmental effects of forestry mobilisation in Wakaroa Forest

[30] The environmental effects associated with the log jams and woody debris entering watercourses at Wakaroa Forest include damage caused to instream habitat, blockages interrupting the continuity of flow for anything living in the stream, the negative stressor effects on aquatic ecosystems caused by sediment, downstream damage, and accumulative impacts associated with any future events. Large woody debris can also block and damage downstream watercourses, damage downstream properties and infrastructure (including bridges), and cause marine hazards at Gisborne beaches.

[31] The Council advised that the issues at Wakaroa Forest are part of a broader problem in the Tairāwhiti region involving ongoing large-scale forestry debris mobilisation in weather events.

[32] Since 2015, the Tairāwhiti region has experienced significant damage to watercourses, beaches near river mouths, and infrastructure as the result of woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) discharging from commercial pine forests during significant rain events. These significant rain events (and the associated damage from forestry slash mobilised in these events) are a persistent risk. The frequency and scale of the damage from such events has increased recently.

[33] Discharges of woody debris and sediment also adversely impact freshwater and coastal ecosystems, downstream property and communities, and the associated costs borne by the ratepayers and central government. The Council has spent more than $1.2M since July 2018 clearing forestry debris from the main affected beaches in the region (i.e. Waikanae Beach and Tolaga Bay). Central government has allocated more than $53M to fund the removal of large woody debris from beaches and waterways in the Gisborne region following Cyclone Gabrielle.

[34] The poor forestry harvesting practices in the region, in combination with the steep topography and highly erodible soils, mean that unless forest owners and operators remove woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) from unstable locations during harvesting, the environmental impacts in forests and downstream of forests will recur until all of the material is flushed from the forests.

[35] Wakaroa Forest is typical in all respects. It has steep hill faces and highly erodible soil. More than 1,000 hectares of clear fell harvesting has been carried out at the forest with poor skid site construction and large amounts of slash and felled trees being left at the conclusion of harvesting where it can migrate down slopes into streams which flow into the Waimata River or Waipaoa River, both of which flow into the sea near Gisborne.

Further grounds for application

[36] In making its application, the Council argued that the ongoing discharges of contaminants to watercourses that have occurred at and from Wakaroa Forest as the result of the commercial forestry harvesting activities are contraventions of s 15(1)(b) of the RMA.[27] It also submitted that the issues at Wakaroa Forest also engage s 17 of the Act.

[37] The Council submitted that its previous attempts to address the compliance issues at Wakaroa Forest (including prosecution, abatement notices, compliance

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27 Ibid, [35].

reports and a forest management plan) have failed to stop the ongoing discharges of contaminants at and from Wakaroa Forest.[28]

[38] The Respondent did not file any notice of opposition.

[39] Mana Taiao Tairāwhiti Incorporated joined the proceedings pursuant to s 274 of the Act.

Agreement reached

[40] On 21 February 2025, the parties filed a joint memorandum advising the Court that agreement had been reached on the orders. The parties have agreed that these orders can be made by consent, with no issue as to costs.

[41] The intent of the agreed enforcement orders is to cease discharges of woody debris (including felled trees, windthrow trees, slash, harvesting debris) and sediment from commercial forestry activities into streams within and beyond Wakaroa Forest. The proposed orders do this by:

(a) first, requiring elimination or minimisation of the risks posed by skid sites, waterways, roads and ill slopes; and

(b) secondly, requiring the installation and maintenance of slash catching devices to effectively mitigate any remaining risks after all required remedial works on skid sites, waterways, roads and hill slopes, have been completed. Slash catchers are not to be relied on as the primary means of risk management.

Evaluation

[42] The Council seeks various orders in reliance on various provisions of the Act, including ss 15, 17, and 314(1)-(5). In summary, the sections on which the Council relies, and which enable the Court to make enforcement orders are as follows:

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28 Ibid, [36].

(a) Section 314(1)(a)(i) to require a person to cease anything that contravenes or is likely to contravene the Act and under (a)(ii) is likely to be noxious, dangerous, offensive or objectionable so as to have adverse effect on the environment.

(b) Section 314(1)(b)(i) to ensure compliance by or on behalf of a person with the Act and under (b)(ii) that is necessary to avoid, remedy or mitigate a likely adverse effect on the environment caused by or on behalf of that person.

(c) Section 314(1)(c) to remedy or mitigate any adverse effect on the environment caused by or on behalf of that person.

(d) Section 314(1)(d) to require a person to pay or reimburse actual and reasonable costs relating to adverse effects on the environment where there is failure to comply with orders and abatement notices, among others.

(e) Section 314(1)(da) to do something that is necessary to avoid, remedy or mitigate an adverse effect on the environment relating to land of which the person is the owner or occupier.

(f) Section 15 prohibits the discharge of contaminants unless they are expressly allowed by a rule in a plan, national environmental standard or other regulation or a resource consent.

(g) Section 17 imposes a general duty to avoid, remedy or mitigate the adverse effects of an activity.

[43] I accept that the issues at Wakaroa Forest have caused actual adverse effects on the environment with the potential for them to continue if unaddressed. Accordingly, I am satisfied that it is necessary to make enforcement orders against the Respondent to ensure that discharges of woody debris and sediment from commercial forestry activities within Wakaroa Forest cease and migration from the Forest ceases. Further, that remedial works are undertaken at the Forest to prevent future discharges.

Outcome

[44] Under ss 314, 316 and 279(1)(b) of the Resource Management Act 1991, the Court, by consent, makes the orders against Aratu Forests Limited as set out in **Annexure A**.

[45] Under s 285 of the Act, there is no order as to costs.

M J L Dickey
Environment Judge | Kaiwhakawā o te Kōti Taiao

ANNEXURE A

IN THE ENVIRONMENT COURT
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IN THE MATTER OF	an application under ss 314 and 316 of the Resource Management Act 1991
BETWEEN	GISBORNE DISTRICT COUNCIL
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	First Respondent
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	Second Respondent
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	Section 274 Party

ENFORCEMENT ORDERS BY CONSENT

A: Under ss 279(1)(b), 314 and 316 of the Resource Management Act 1991, the Environment Court, by consent, orders that:

1. Pursuant to ss 15(1)(a), 15(1)(b), 17(3)(a), 17(3)(b), 314(1)(a)(i), 314(1)(a)(ii), 314(1)(b)(i), 314(1)(b)(ii), 314(1)(c), 314(1)(d), 314(1)(da), 314(2), 314(3), 314(4) and 314(5) of the RMA, in respect of the forest approximately 38 kilometres north of Gisborne known as "Wakaroa Forest" (legal identifiers: GS5D/386, GS4D/307, GSB/428 and GS4C/196), Aratu Forests Limited (the **Respondent**) is required to:

(a) Cease discharging woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) or sediment onto or into land where it may enter water.

(b) Cease discharging woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) beyond the boundary of Wakaroa Forest.

Risk assessment of Wakaroa Forest

(c) Engage a suitably qualified and experienced person (approved in writing by Gisborne District Council) to prepare a **Risk Assessment Methodology**, **Risk Assessment Map** and **Risk Assessment Report** for Wakaroa Forest. The purpose of this risk assessment process is to identify:

(i) all locations where woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) has accumulated in any streams, rivers or ephemeral flowpaths;

(ii) all locations where woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) is at high risk of collapse from a skid site (landing), including but not limited to locations where that woody debris is located on the edge of a skid site or immediately below a skid site, where there are tension cracks in the skid site, or where the material under the skid contains uncompacted fill, stumps or vegetation;

(iii) all locations where sediment is at high risk of collapse and entering watercourses, including ephemeral flowpaths, from skid sites or roads, including but not limited to locations where there are tension cracks, large amounts of sidecast fill on or over the edges of skids/roads, poorly compacted fill, and/or slumping; and

(iv) all locations where woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) on slopes is at high risk of being mobilised into watercourses, including ephemeral flowpaths.

(d) Provide the **Risk Assessment Methodology** to Gisborne District Council for comment by **7 March 2025**. The Risk Assessment Methodology must define the risk assessment process used, including all inputs and a decision matrix, that allows the relative risk of mobilisation of woody debris or sediment to be quantified and ranked for the purposes of prioritising remedial works to de-risk Wakaroa Forest.

(e) Provide the **Risk Assessment Map** to Gisborne District Council for comment by **17 April 2025**. The Risk Assessment Map must be prepared using the Risk Assessment Methodology to identify the at-risk skid sites, waterways, roads, and slopes, their assessed level of risk rating (namely, high risk, significant risk, moderate risk and low risk).

(f) Provide the **Risk Assessment Report** to Gisborne District Council for written approval by **16 May 2025**. The Risk Assessment Report must record:

(i) the risk assessment process used;

(ii) the skid sites, waterways, roads, and slopes identified through the risk assessment process (**at-risk sites**) and their assessed "risk ranking" for the purpose of prioritising remedial works under these orders;

(iii) options for removing the woody debris from commercial forestry at the foregoing identified locations or if removal is not possible in every instance, options for eliminating or minimising the risk of woody debris or sediment discharges at each of these identified locations; and

(iv) where options for remediating at-risk areas identified in the report include leaving woody debris in situ, the Risk Assessment Report will identify why that option is considered by the Respondent to be appropriate and what alternative risk-mitigation methods will be used.

Woody debris removal from high risk locations

(g) Remove all woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) from all high risk locations identified in the Risk Assessment Report and Risk Assessment Map and dispose that material (e.g. by burning or end-hauling) or move it to a location in Wakaroa Forest identified as a safe disposal location in the Risk Assessment Map, as soon as possible and by not later than five months after approval of the Risk Assessment Report (unless the Risk Assessment Report states that the best option for a specified high risk area is to leave material in situ and that option has been approved by Gisborne District Council for that specified high risk area).

(h) Obtain written certification from a suitably qualified independent expert approved in writing by Gisborne District Council) that the foregoing woody debris removal works in 1(g) have been completed in accordance with the Risk Assessment Report.

(i) Provide the foregoing written certification (i.e. referred to in 1(h)) to Gisborne District Council within 28 days of the work referred to in 1(g) being completed.

Skid site woody debris removal and rehabilitation at high risk locations

(j) Pull back all felled trees, slash, waste logging material and fill from the edges of skid sites and areas below skid sites that can be reached by a long-reach excavator, in the high risk locations identified in the Risk Assessment Report and Risk Assessment Map and dispose of that material or move it to a location where it cannot be remobilised, as soon

as possible and by no later than five months after approval of the Risk Assessment Report (unless the Risk Assessment Report states that the only practicable option for a specified high risk area is to leave material in situ and that option has been approved by Gisborne District Council for that specified high risk area).

(k) Obtain written certification from a suitably qualified independent expert (approved in writing by Gisborne District Council) that the foregoing works in 1(j) have been carried out in accordance with the Risk Assessment Report.

(l) Provide the foregoing certification (i.e. referred to in 1(k)) to Gisborne District Council within 28 days of the work referred to in 1(j) being completed.

Woody debris removal from remaining at-risk locations

(m) Remove all woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) from locations identified in the Risk Assessment Report and Risk Assessment Map as being significant or moderate risk locations and dispose of that material (e.g. by burning or end-hauling) or move it to a location in Wakaroa Forest identified as a safe disposal location in the Risk Assessment Map, as soon as possible and by no later than 11 months after approval of the Risk Assessment Report (unless the Risk Assessment Report states that the only practicable option for a specified remaining risk area is to leave material in situ and that option has been approved by Gisborne District Council for that specified remaining risk area).

(n) Obtain written certification from a suitably qualified independent expert (approved in writing by Gisborne District Council) that the foregoing woody debris removal works in 1(m) have been completed in accordance with the Risk Assessment Report.

(o) Provide the foregoing written certification (i.e. referred to in 1(n) to Gisborne District Council within 28 days of the work referred to in 1(m) being completed.

Skid site woody debris removal and rehabilitation at remaining at-risk locations

(p) Pull back all felled trees, slash, waste logging material and fill from the edges of skid sites and areas below skid sites that can be reached by a long-reach excavator, in the locations identified in the Risk Assessment Report and Risk Assessment Map as being significant or moderate risk locations and dispose of that material or move it to a safe disposal location where it cannot be remobilised, as soon as possible and by no later than eleven months after approval of the Risk Assessment Report unless the Risk Assessment Report states that the only practicable option for a specified remaining risk area is to leave material in situ and that option has been approved by Gisborne District Council for that specified risk area.

(q) Obtain written certification from a suitably qualified independent expert (approved in writing by Gisborne District Council) that the foregoing works in 1(p) have been carried out in accordance with the Risk Assessment Report.

(r) Provide the foregoing certification (i.e. referred to in 1(q)) to Gisborne District Council within 28 days of the work referred to in 1(p) being completed.

Water controls

(s) Install effective water and sediment controls to eliminate or minimise the risk of erosion and the mobilisation of sediment at all skids/landings and on all tracks and roads at Wakaroa Forest as soon as possible and by no later than **12 December 2025**.

(t) Ensure that the water controls installed under clause 1(s):

(i) Accord with the hydrological principles and guidelines at **Appendix A**[29] of these orders.

(ii) Include one discharge point for every 1,000m^2 of surface area.

(iii) Prevent ponding except in specified areas, e.g. sedimentation traps.

(iv) Include four discharge points for each skid site/landing provided clauses (v) to (vii) below are able to be met (and if not, record why fewer discharge points have been used).

(v) Discharge runoff via diffuse/dispersed methods wherever possible.

(vi) All discharge points should be to natural or 'hard ground'. If this is not possible, then erosion control measures will be required.

(vii) All discharges should be through a treatment device installed in natural ground.

(viii) All discharges should be flumed, ideally with ribbed pipe, with appropriate erosion control at both the inlet and outlet.

(ix) Direct water away from fill.

(x) Direct water away from skid sites/landings.

(xi) Direct water away from the edges of skid sites/landings.

(xii) Manage the accumulation of runoff so that it does not exceed the capacity and erosion resistance of drains and water tables.

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[29] Jack McConchie *Technical memorandum – Hydrological principles and guidelines for water controls* (23 October 2024).

(xiii) Include an adequate number of appropriately sized and spaced culverts and cut-offs on track/roads, in accordance with or better than the NZ Forest Owners Association Practice Guide (2020)/NZ Forest Road Engineering Manual Operators Guide 2020.

(xiv) Include secondary flow paths for situations where the capacity of any water or sediment control device may be exceeded.

(u) Obtain written certification from a suitably qualified independent expert (approved in writing by Gisborne District Council) that the works listed in 1(t) (to achieve 1(s)) have been installed as required.

(v) Provide the foregoing certification (i.e. referred to in 1(u)) to Gisborne District Council within 28 days of the work referred to in 1(s) being completed.

Woody debris catchers/slash catchers

(w) Engage a suitably qualified and experienced independent person (approved in writing by Gisborne District Council) to prepare a report and map recommending the locations and designs for a proposed network of slash catchers (the **Slash Catcher Network report**) to be installed at Wakaroa Forest in order to minimise or eliminate the residual risk of woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) mobilising beyond Wakaroa Forest so that there are no unlawful discharges of woody debris or sediment from commercial forestry.

(x) The Slash Catcher Network report must address the following matters in sufficient detail for Gisborne District Council to assess the viability of the Slash Catcher Network proposed:

(i) number and location of slash catchers;

(ii) catchment area above each slash catcher;

(iii) estimated volume of residual woody debris, with the potential to be mobilised, in the catchment above each slash catcher;

(iv) proposed concept design of each slash catcher;

(v) the volume of woody debris that can be retained behind each slash catcher;

(vi) anticipated effects on flows, erosion and river and bank stability;

(vii) potential impact if slash catcher is overtopped or bypassed and how this risk will be mitigated;

(viii) potential flood flows; and

(ix) access and maintenance, including proposed disposal areas.

(y) Provide the Slash Catcher Network report and map to Gisborne District Council and Mana Taiao Tairāwhiti by **2 May 2025** for written approval by Gisborne District Council.

(z) If Gisborne District Council approves the Slash Catcher Network set out in the Slash Catcher Network report – after seeking and receiving feedback from Mana Taio Tairāwhiti – the Respondent will lodge an application for a resource consent for the Slash Catcher Network within three months of receiving Gisborne District Council's written approval.

(aa) Install the Slash Catcher Network in accordance with the Slash Catcher Network report and map (and in accordance with any resource consent), within 12 months of resource consent being granted and in any event not later than **31 August 2026**.

(bb) Obtain written certification from a suitably qualified independent expert, who has been approved in writing by Gisborne District Council, that the slash catchers forming the Slash Catcher Network referred to above in 1(aa) have been appropriately installed according to the consent specifications and provide this certification to Gisborne District Council within 28 days of the work referred to in 1(aa) being completed.

(cc) Inspect and photograph the installed slash catchers every three months for the first three years after they have been installed, and then every six months.

(dd) In addition to (cc) above, inspect and photograph the installed slash catchers after every rain event when either 15mm/hr or 110mm/24-hours or more of rain is recorded at Gisborne District Council's Wakaroa Trig rain gauge.

(ee) Ensure that:

(i) The installed slash catchers are regularly cleared of woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) and indigenous vegetation, to maintain their capacity to effectively address the residual risk of woody debris discharges from commercial forestry at all times.

(ii) Any damage to the slash catchers is repaired in a timely manner.

(ff) Ensure a suitably qualified independent expert (who has been approved in writing by Gisborne District Council) inspects the Slash Catcher Network referred to above in 1(aa) by **31 September 2026** and every six months thereafter (until 15 December 2030) to assess whether the slash catchers are operating effectively and whether they are being appropriately cleared and maintained.

(gg) If the Slash Catcher Network report is not approved by Gisborne District Council by **1 June 2025** and/or resource consent is not granted for the

Slash Catcher Network by **1 February 2026**, then Gisborne District Council can apply (on notice to the parties) to the Court to vary these enforcement orders to require installation of an alternative Slash Catcher Network.

Monitoring and maintenance

(hh) Carry out ongoing monitoring of all skid sites and water controls and carry out any necessary maintenance and remedial work to eliminate or minimise the risk of skid sites triggering erosion, landslides and/or debris collapses, and to ensure that all water and sediment controls remain effective.

(ii) Carry out ongoing monitoring of all streams and if any further woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) is mobilised into any streams, remove that debris and remove it from Wakaroa Forest or place it in a safe disposal location identified in the Risk Assessment Map within 28 days of discovering that debris (or if removal is not possible, seek approval from Gisborne District Council to leave material in situ).

(jj) Carry out ongoing monitoring of any safe disposal locations identified in the Risk Assessment Map to ensure that material in these locations is not at risk of being mobilised or triggering erosion, landslides and/or debris collapses.

(kk) Carry out aerial and/or ground-based surveys of all of the skid sites, water controls and safe disposal locations following any rain event when either 15mm/hr or 110mm/24 hours or more of rain is recorded at Gisborne District Council's Wakaroa Trig rain gauge to identify any locations requiring remedial works to eliminate or minimise the risk of woody debris from commercial forestry and sediment mobilising to watercourses, including ephemeral streams, within or beyond Wakaroa Forest.

(ll) Carry out any necessary maintenance and remedial work to address issues identified in the inspections referred to in 1(cc) and 1(dd).

(mm) Ensure a suitably qualified and experienced independent expert (approved in writing by Gisborne District Council):

(i) inspects a representative selection comprising at least 25% of all skid sites, water and sediment controls and safe disposal locations every six months from 1 June 2025 to 1 December 2027 and then every 12 months from 1 December 2027; and

(ii) prepares a further remedial works plan for any remedial works required to address issues identified in the inspections referred to in 1(mm)(i) (which includes a timeframe for those works) and provides that plan to Gisborne District Council for approval within 28 days of the relevant inspection.

(nn) Carry out all remedial works set out in any approved further remedial works plan prepared under clause 1(mm)(ii) within the timeframe specified in that plan and provides written confirmation to Gisborne District Council's enforcement manager of completion of those remedial works, within 14 days of completion.

Reporting

(oo) In respect of orders 1(g), 1(j), 1(m), 1(p) and 1(s), provide fortnightly progress reports to Gisborne District Council's enforcement manager detailing remedial work undertaken and identifying at-risk locations where remedial works have been completed.

(pp) Provide a written inspection report to Gisborne District Council's enforcement manager within 14 days of:

(i) Each inspection by an independent expert referred to at 1(ff) above confirming that the inspection has occurred, whether the

remedial works and water controls are being appropriately maintained, and identifying whether any further remedial works or maintenance is required and if so, the timeframe within which the remedial works or maintenance should be undertaken.

(ii) Each slash catcher inspection referred to at 1(cc) and 1(dd) above confirming that the inspection has occurred and including photographs from the relevant inspection, descriptions of debris cleared, damage to the structure and any repairs undertaken.

(iii) Each slash catcher inspection by an independent expert referred to at 1(ff) above confirming that the inspection has occurred and reporting on the condition of the slash catchers at the time of inspection, and whether the slash catchers are being appropriately cleared and maintained.

(iv) Any stream inspection or debris removal from a stream referred to at 1(ii) above.

Future harvesting activities

(qq) If the Respondent intends to resume harvesting activities at Wakaroa Forest pursuant to extant resource consents, then the Respondent must:

(i) notify Gisborne District Council in writing at least four months prior to resuming any further harvesting works at Wakaroa Forest;

(ii) provide a Risk Management Plan (**RMP**) for any further harvesting at Wakaroa Forest to Gisborne District Council for approval, at least four months prior to undertaking any further harvesting activities (but before giving approval the Council will consider feedback from Mana Taiao Tairāwhiti on the proposed RMP);

(iii) the objective of the RMP is to ensure that future harvesting activities at Wakaroa Forest do not cause unlawful discharges from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) or sediment into waterbodies within Wakaroa Forest and/or beyond the boundary of Wakaroa Forest;

(iv) the RMP shall set out the measures that will be undertaken in order to achieve the above objective, including by reference (but not limited to):

(1) the extent of the area that will be harvested at any one time;

(2) the measures to address waste harvesting material;

(3) the effective management of skids to ensure that woody debris does not migrate beyond the boundaries of the skid site;

(4) the design, establishment and maintenance of appropriate water controls at skid sites and roading, including the hydrological principles and guidelines to be applied to the works. For the avoidance of doubt, the water controls shall address the matters set out in Order 1(t) above;

(5) if the Slash Catcher Network is to be utilised to manage residual risk from woody debris, consideration of the capacity of the Slash Catcher Network to fulfil that function or whether further slash catchers are required and if so, the location and design; and

(6) areas of Wakaroa Forest that will be retired from commercial forestry and actively restored with indigenous forest after they have been harvested.

(rr) Any further harvesting at Wakaroa Forest shall be undertaken in accordance with the relevant resource consents and the approved RMP; and

(ss) Any further harvesting at Wakaroa Forest shall be subject to the same monitoring and reporting requirements as set out in Orders 1(hh) to 1(pp) above.

Other orders

2. The Respondent will comply with these enforcement orders from the time they are made and continue complying with these enforcement orders unless they are varied or cancelled by the Environment Court.

3. Wherever these orders require reports or information to be provided by the Respondent to Gisborne District Council, the Respondent will also provide those reports or that information to Mana Taiao Tairāwhiti and at the same time.

4. The Respondent will be jointly and severally liable for the actual and reasonable costs incurred by Gisborne District Council in ensuring compliance with these enforcement orders.

5. The foregoing orders will apply to the personal representatives, successors, and assigns of the Respondent to the same extent as they apply to the Respondent.

6. If it later transpires that the foregoing orders do not prevent discharges of woody debris from commercial forestry (including felled trees, windthrow trees, slash, harvesting debris) or sediment into streams within Wakaroa Forest and/or do not prevent the migration of woody debris from commercial forestry beyond Wakaroa Forest, Gisborne District Council or Mana Taiao Tairāwhiti can apply to the Court to vary these orders.

7. If any of the dates provided for compliance in this enforcement order are unable to be met, then any party to these orders can apply to the Court to vary the deadline for compliance, 30 days prior to expiry of the deadline.

8. The Respondent can request Gisborne District Council to review the monitoring requirements in Orders 1(hh) to (nn) after five years of the orders coming into force and if they are no longer considered necessary, to file a consent memorandum to cancel or vary those orders.

9. The terms of these orders can later be varied by the Court on an application to the Court and/or by the filing of a consent memorandum by the parties.

M J L Dickey
Environment Judge | Kaiwhakawā o te Kōti Taiao

APPENDIX A

Technical Memorandum

To:	Gary McKenzie	**From:**	Jack McConchie
Company:	Gisborne District Council	**SLR Consulting New Zealand**	
		Date:	23 October 2024
		Project No.	820.V30038.00000

RE: Hydrological principles and guidelines for water controls

Introduction

Well conceived, designed, constructed, and maintained water and sediment controls[1] are critical to minimising risk to infrastructure and the environment. This requires expert advice from Suitably Qualified and Experienced Independent Persons during both the design and construction of the water and sediment controls.

While general hydrological principles and design outcomes can guide the design and construction of water and sediment controls, the provision of efficient and effective controls is site specific. No single suite of designs is likely to be appropriate for all sites, hence the need for expert assessment and advice at specific sites.

Three environmental considerations are required when developing optimum water and sediment controls for a site:

- Landscape factors, including the existing drainage patterns and processes;
- The interaction of any infrastructure e.g., roads, landings, skids etc. with the existing drainage patterns and processes; and
- The rainfall and runoff relationships.

Regular monitoring, particularly following larger storm events, a maintenance plan, and any remedial works are essential to ensure the water and sediment controls remain effective and that any modification of the natural drainage and runoff processes poses low risk of triggering erosion, landslides and/or debris collapses, failure of associated infrastructure, and the discharge of sediment.

Principles and Guidelines

Following some basic hydrological principles when designing and constructing water and sediment controls will help minimise risk to both infrastructure and the environment. These principles include, but are not limited to, the following:

- Employ Suitably Qualified and Experienced Independent Persons to assess all relevant locations and to design and construct the water and sediment controls. Trained and

[1] Water and sediment controls include all devices and management strategies designed to collect and dispose of stormwater safely and to minimise the discharge of sediment. These principles, while potentially appropriate, have not been developed to guide the design and construction of waterway crossings.

experienced staff save time and money through proactive construction and maintenance of water and sediment controls.

- Since each site is different, prepare site-specific water management plans. These management plans need to integrate an understanding of topography, physical characteristics, rainfall, runoff, existing drainage, and the effects of any infrastructure e.g., roads, tracks, landings, skids, cuts, and fills.
- The natural drainage pattern should be defined using a maximum 100m² grid and the latest topographic information, ideally captured using LiDAR. The aim should be to disrupt and modify the natural pattern as little as possible. Any diversions of the natural runoff processes should be as short as possible.
- Delineate any catchment discharging to a water or sediment control device.
- Characterise those environmental factors likely to affect the rainfall-runoff relationship. For heavily modified small catchments, and for all roads, landing and skids discharging to a water or sediment control device, the default runoff coefficient should be 1 i.e., all rainfall becomes runoff. In Tairāwhiti, the regolith has limited potential to store and attenuate rainfall, particularly during large rainfall events.
- For catchments that do not have the characteristics described above, the runoff coefficients should be obtained by reference to Turner (1960).
- Obtain design rainfalls using HIRDS v4[2], or any later update, for the site where water or sediment control devices will be installed. Both the rainfall intensity (over the critical duration), and total rainfall depth/volume over the event, are critical. Therefore:
    - Rainfall intensity is required for the critical duration. In small and highly modified catchments, such as those discharging to most water and sediment control devices, the critical duration is likely to be <10-mins.
    - Rainfall depth/volume may be represented by the 24-hour rainfall.
- The frequency of the design rainfall should be, as a minimum, the 5% AEP[3] (20-year ARI[4]) event for any temporary water or sediment control devices, and the 2% AEP (50-year ARI) event for all permanent water or sediment control devices.
- Ensure that the water or sediment control device can discharge or contain the maximum rainfall intensity and rainfall volume during the design event.
- Runoff needs to be discharged from drains regularly to reduce its quantity and velocity so it has insufficient energy to erode and entrain sediment.

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2 HIRDS is a High Intensity Rainfall Design System developed by NIWA and available through https://niwa.co.nz/climate-and-weather/high-intensity-rainfall-design-system-hirds

3 AEP is the Annual Exceedance Probability which is the probability of an event being equalled or exceeded in any year, usually presented as a percentage.

4 ARI is the Average Recurrence Interval between events equal to or greater than a specific magnitude.

- In areas that experience high rainfall e.g., Tairāwhiti, there should be one discharge point for every 1000m² of surface area.
- Prevent ponding except in specified areas, e.g. sedimentation traps.
- Direct water away from skid sites/landings.
- Direct water away from the edges of skid sites/landings.
- For each landing there should be from 2 and 4 discharge points, with a greater number being required in higher rainfall areas e.g., Tairāwhiti.
- As a minimum, the design of all drains, water controls, and sediment treatment devices should be consistent with guidance in the NZ Forest Road Engineering Manual (2020).
- Direct water away from fill.
- Discharge runoff via diffuse/dispersed methods wherever possible.
- All discharge points should be to natural or 'hard' ground. If this is not possible, then erosion control measures will be required.
- All discharge points should be onto slopes that disperse rather than concentrate flow. This will assist the natural attenuation of runoff.
- All discharges should be through a treatment device installed in natural ground e.g., soak hole, sediment trap, with appropriate energy dissipation e.g., rock armouring,
- All discharges should be flumed, ideally with ribbed pipe, with appropriate erosion control at both the inlet and outlet.
- Where 'socks' are used, they must be securely anchored every 2m and checked regularly for blockage or disruption.
- Include secondary flow paths in situations where the capacity of any water or sediment control device may be exceeded.
- Prepare a routine monitoring and maintenance plan. Road drainage culverts need regular maintenance, especially on new construction as the inlets can block easily.
- Check culverts, drains, and all water and sediment control devices for functionality after heavy rainfall.

References

New Zealand Forest Road Engineering Manual, 2020: New Zealand Forest Owners Association. 208p.

Ministry of Primary Industries, 2024: Slash risk management handbook. Te Uru Rākau, New Zealand Forest Service. 81p.

Turner, A.K. 1960: Rainfall losses in relation to runoff for small catchments. *Journal of the Institute of Engineers Australia (IEA)* 32(1-2): 1-6.