

**ADDERLEY HEAD**



Tabled at hearing  
12/03/2013

**BEFORE THE INDEPENDENT HEARING COMMISSIONERS**

**IN THE MATTER OF** the Resource Management Act 1991 ('the Act')

**AND**

**IN THE MATTER OF** of the proposed Canterbury Land and Water Regional Plan

**BETWEEN** **RAYONIER NEW ZEALAND LTD**  
Submitter

**AND** **CANTERBURY REGIONAL COUNCIL**  
Local Authority

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**LEGAL SUBMISSIONS ON BEHALF OF RAYONIER NEW ZEALAND LTD**

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**CSF-121599-10-431-V5**

**Adderley Head**

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## 1 INTRODUCTION

- 1.1 Rayonier New Zealand Ltd (**Rayonier**) submitted on the proposed Land and Water Regional Plan (**pLWRP**) seeking amendment to provisions affecting plantation forestry. Rayonier manages 142,000 ha of plantation forest throughout New Zealand, with 36,670 ha in the Canterbury Region.
- 1.2 Rayonier's approach has broad-based support from the plantation forestry sector, as evidenced by submissions from Blakely Pacific Limited<sup>1</sup> and the New Zealand Forestry Owners Association (**NZFOA**). In addition, evidence will be presented by Paul Gillett on behalf of SRS NZ Limited (**SRS**) in support of Rayonier's case.<sup>2</sup>
- 1.3 Rayonier supports the water quality outcomes that the pLWRP seeks to achieve, but is opposed to the way the pLWRP (as notified) proposes to achieve these outcomes. Rayonier through its submission has promoted amendment to specific rules or, in the alternative, a separate rule for forestry<sup>3</sup>, to achieve the same or similar outcomes at substantially less cost to the forestry sector.
- 1.4 In broad terms, the case for Rayonier is that pLWRP fails to provide appropriate recognition of the long-term cyclical (rotational) nature of plantation forestry; the general low level of underlying susceptibility to erosion within the Canterbury region; and the significant economic, recreational and environmental benefits provided by plantation forestry.
- 1.5 Overall, Rayonier seeks amendment to the pLWRP that allows regular forestry activities such as earthworks, vegetation clearance, harvesting and construction of crossings/culverts to occur pursuant to permitted activity standards, which require inter alia that such activities are undertaken in accordance with pre-prepared Erosion and Sediment Control Plans and Harvest Management Plans. This approach encourages best practice, acknowledges the benefits of plantation forestry, and avoids the costs to forest owners of securing multiple consents for routine forestry activities.
- 1.6 My submissions will address the following matters:
  - (a) Preliminary matters;
  - (b) Sedimentation effects of plantation forestry;

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<sup>1</sup> Blakely Pacific Limited is the second largest forestry company in Canterbury, owning 13,267 ha of plantation forest.

<sup>2</sup> SRS is a wood processing company based in Canterbury and elsewhere in New Zealand. SRS lodged a submission on the pLWRP opposing new controls over plantation forestry due to the impact that restrictions on forest owners would have on its business.

<sup>3</sup> Refer paragraph 16 of Rayonier submission.

- (c) Effects of plantation forestry on flow sensitive catchments;
- (d) Effects of plantation forestry on water bodies and riparian margins;
- (e) Storage of hazardous substances;
- (f) Effects of plantation forestry on erosion prone areas;
- (g) pLWRP provisions (including definitions);
- (h) Policy considerations; and
- (i) Section 32 analysis.

## 2 PRELIMINARY MATTERS

### Scope

- 2.1 Before addressing the substantive issues associated with Rayonier's submission, I will address the potential issue of scope, which arises in relation to some aspects of the relief Rayonier is now seeking on the pLWRP.
- 2.2 Specific details of the amendments proposed by Rayonier are attached as Appendix 2 to the evidence of Mr Nick Boyes. Some of these amendments differ from the wording of the specific relief requested in Rayonier's submission. Nonetheless, in my submission each of the amendments proposed by Mr Boyes is firmly within scope of Rayonier's original submission for the reasons discussed below.
- 2.3 The starting point for considering issues of scope is the proposed plan provisions as notified and any submissions lodged. However, the exceptions that have been recognised by the Courts are equally important. In particular, I refer to the decision of *Oyster Bay Development Ltd v Marlborough District Council*<sup>4</sup>.
- 2.4 In that decision, the Court clearly held that the amendments proposed by the requestor were within its jurisdiction to consider, provided that they did not:<sup>5</sup>
  - (a) broaden the plan change beyond the limits of what was originally requested and what is reasonable and fairly understood from the content of submission (i.e. they are refinements of detail or clarification); nor
  - (b) prejudice anyone who failed to lodge a submission on the original request.

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<sup>4</sup> C081/09.

<sup>5</sup> Ibid at para [29].

- 2.5 I submit that the same principles apply to a submitter on a proposed plan. The focus of the decision-maker should be the absence of prejudice to other parties, taking into account the originating document and submissions received.
- 2.6 Based on the above, I submit there are three broad categories under which an amendment may be acceptable:
- (a) **Category 1** – Amendment which respond to matters that are fairly raised in submissions on the proposed plan;
  - (b) **Category 2** – Amendments to terminology that do not independently alter the meaning or substantive effect of the proposed plan; and
  - (c) **Category 3** - Amendments that are proposed by the requestor and meet the general tests outlined at paragraph 2.4 above.

#### **Assessment of proposed amendments**

##### Rule 5.72

- 2.7 The specific relief that Rayonier requested in its submission regarding Rule 5.72 (stormwater discharge) has been amended in light of the Officer Report recommendations.
- 2.8 The Officer Report recognised Rayonier's concerns that the background concentration of sediment within the receiving water may be higher due to periods of heavy rainfall and therefore compliance with the limits cannot be achieved, and commented as follows:
- "where land disturbance is occurring, erosion and sediment control measures appropriate to the site should be implemented to ensure that any discharge of storm water from a site does not contain substantial suspended solids."*<sup>6</sup>
- 2.9 Rayonier now seek that a new condition (2) be included within Rule 5.72 that requires use of an Erosion and Sediment Control Plan for plantation forestry activities to ensure that good practice is followed.
- 2.10 Whilst not referred to in Rayonier's specific submission on Rule 5.72, the proposed amendment falls within scope of Rayonier's original submission which requested an alternative regulatory approach to managing forestry through a separate forestry rule similar to the approach adopted in the Horizons' One Plan.<sup>7</sup> The proposed separate rule would require inter alia that forest operators develop an erosion and

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<sup>6</sup> Officer report reference.

<sup>7</sup> Refer Clause 16 of Rayonier's submission.

sediment control plan and harvesting plan. Examples of typical plans are attached as Appendices 2 and 3 to the submission.

- 2.11 Also relevant to the issue of scope is Clause 4.2 of Rayonier's submission, which seeks that the plan incorporate:
- (a) the specific relief sought in submissions, and
  - (b) any consequential or additional amendments necessary to give effect to the intent of the submission and which support the alternative approach to managing forestry as a permitted activity.
- 2.12 Rayonier relies on the above clauses in its original submission in support of the amended relief now proposed in Mr Boyes' evidence.

Rule 5.147

- 2.13 The specific relief that Rayonier requested in its submissions regarding Rule 5.147 (vegetation clearance in riparian zones) has also been amended in light of the Officer Report recommendations.

- 2.14 The Officer Report noted:

*"...that it was not the intention to require resource consent for 'normal' farming or forestry activities, and the rules have been modified in the recommendations below to clarify this." <sup>8</sup>*

- 2.15 These modifications include amending the definition of vegetation clearance to include specific exceptions. However, despite these recommendations in the Officer Report, the relief proposed by Rayonier has not been adopted.
- 2.16 In addition to the original relief sought in its submission, Rayonier advance the following proposed amendments in response to the Officer Report:
- (a) in light of the recommendations that have been proposed, include *"clearance for the purpose of existing plantation forestry"* as a exception in the definition of vegetation clearance; or
  - (b) a new Condition 7 to Rule 5.147 that states *"vegetation clearance within plantation forests that is carried out in accordance with an Erosion and Sediment Control Plan are not required to meet with Conditions 1, 2 or 3 of Rule 5.147"*.

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<sup>8</sup> Officer report reference.

- 2.17 I submit that the above proposed amendments are within scope of Rayonier's original submission for reasons discussed above.

Rule 5.150

- 2.18 Rayonier seeks further amendments to the relief sought for Rule 5.150 (activities within LH2 area).
- 2.19 Rayonier supports the Officer Report recommendations and also seeks the addition of a new condition (4) dealing with discharges resulting from plantation forestry. The proposed amendment is the same as that proposed by Rayonier in respect of Rule 5.72A.
- 2.20 In my submission, the proposed amendment to Rule 5.150 is within scope as a consequential and/or additional amendment that will provide a consistent approach to sediment discharge throughout the plan.<sup>9</sup>
- 2.21 Overall, I submit that the proposed amendments sought by Rayonier can legitimately be described as matters of detail that respond to issues already raised in their submission and the Officer Report. The changes will not affect any new parties that were not affected by the pLWRP (as notified) or deprive any person from the opportunity to participate in the process. On this basis, I submit that the proposed amendments do not create any issues relating to scope.

**Incorporation of documents by reference**

- 2.22 The relief sought by Rayonier on the pLWRP refers to the following written material which Rayonier seeks to be included by reference in the pLWRP:
- Environmental Code of Practice for Plantation Forestry (2007);
  - Erosion and Sediment Control Plan;
  - Harvest Plan;
  - New Zealand Forest Road Engineering Manual (2012);
  - New Zealand Forest Road Engineering Manual – Operators Guide (2012);
  - Erosion Sediment Control Plan Guidelines (ESCP Guidelines (ECan 2007)); and
  - HSNO regulations.
- 2.23 Rayonier seeks the these external documents be incorporated by reference into the pLWRP pursuant to Schedule 1, Part 3, Clause 30 of the Act. To avoid the need for a plan change if these external documents are amended or modified in the future

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<sup>9</sup> Paragraph 4.2(b) of Rayonier's original submission specifically seeks any consequential or other relief required to give effect to the intention of Rayonier's primary submissions.

Rayonier also seeks inclusion of additional text in the pLWRP to the effect that any amendment to, or replacement of, the above material incorporated by reference has legal effect as part of the pLWRP.<sup>10</sup>

### **3 SEDIMENTATION EFFECTS OF PLANTATION FORESTRY - Is a separate rule for plantation forestry justified?**

#### **The effects profile of plantation forestry**

- 3.1 The evidence for Rayonier demonstrates that the effects profile for plantation forestry is quite different from that of other rural land uses. As mentioned by Dr Phillips, all commercial plantation forests will at some stage be harvested. For Radiata pine, this is usually between 25-30 years and for Douglas fir between 45-60 years.<sup>11</sup> Over the full rotation, the environmental effects of plantation forests are beneficial. However, sediment yields will rise in the harvest phase of the forest's cycle, but return to pre-harvest levels within 1-2 years.<sup>12</sup> Adverse water quality effects may occur due to sediment discharge from land disturbance and surface erosion from bare land during the harvest phase.
- 3.2 The short spike or peak in sediment discharge during the harvest phase is explicable by reason of the scale, duration, and relative intensity of activities undertaken during this period. Mr Meredith explains that clear fell harvesting in small- and medium-scale forests occurs across areas of up to 1000 – 1500 hectares.<sup>13</sup> Harvesting works involve machinery weighing up to 20 tonnes and trees weighing between 1-2 tonnes.<sup>14</sup> Significant roading works are required (7 metres total construction width<sup>15</sup>), including multiple culverts, bridges, and low-level crossings. Earthworks include establishing landings for ground- and hauler-based operations covering areas of 1800 m<sup>2</sup> and 2500 m<sup>2</sup> respectively.<sup>16</sup>
- 3.3 Typically, these land disturbances and vegetation clearance activities occur on foothills or steeper country. The prevailing slope characteristics of land used for plantation forestry can channel and concentrate rainfall, causing increased soil erosion and mobilisation of sediment, and delivery of same to streams and other waterbodies.
- 3.4 In my submission, slope characteristics coupled with the relatively intensive and extensive land disturbance activities (compared to other land rural uses) associated with the harvesting phase create potential for elevated sediment discharge. The

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<sup>10</sup> In accordance with Schedule 1, Part 3, Clause 31 of the Act.

<sup>11</sup> Refer Dr Chris Phillips' evidence at paragraph 35.

<sup>12</sup> Supra at paragraph 56.

<sup>13</sup> Refer Mr Kelvin Meredith's evidence at paragraph 45.

<sup>14</sup> Supra at paragraph 64.

<sup>15</sup> Supra at paragraph 47.

<sup>16</sup> Supra at paragraph 47.

most difficult of these discharges to directly control and manage in a practical sense are the non-point source or diffuse discharges associated with clear-fell harvest. Sediment discharges associated with infrastructure construction can be controlled and minimised via engineered solutions through erosion and sediment control techniques.

- 3.5 The Panel has received considerable evidence from Rayonier regarding good practice measures implemented by the forestry sector to minimise or mitigate sediment discharge (and other) effects.<sup>17</sup>
- 3.6 Nonetheless, the evidence for Rayonier is that there will inevitably be elevated levels of sediment discharge during the harvest phase and this accords with commonsense given the matters discussed above. Consequently, the effects profile of plantation forestry is quite different from that of other intensive rural land uses. Dr Phillips states that:<sup>18</sup>

*“Despite a spike of increased sediment generation and yield associated with the harvesting phase (every 27–30 years), total suspended sediment production and yield over the length of one forest rotation will be less than that from pastoral farmland on equivalent land use capability classes. This was demonstrated in the Pakuratahi Land Use Study near Napier (Fahey et al. 2003).”*

- 3.7 Dr Phillips explains that over a 30-year period the total sediment discharge from pastoral farmland will be 3-4 times higher than that from plantation forestry. However, during the harvesting phase sediment discharge would likely peak at levels greater than occurring on a regular (cumulative) basis from pastoral farmland.
- 3.8 These comments are supported by Dr Quinn, who notes that water quality in plantation forests is generally significantly better than in pastoral or urban catchments, but there is inevitably a period of disturbance around logging.<sup>19</sup> Studies of Coromandel streams show that, where water clarity impacts were detected (ca. half of the sites monitored over the last 2 decades), clarity typically recovered to pre-harvesting levels within 2-3 years of harvest completion.<sup>20</sup>
- 3.9 This significant difference in the effects profile of forestry is the key reason why a separate rule for forestry is required. Any rule designed to manage the cumulative effects of sediment discharge from pastoral farmland will almost certainly cause compliance issues for commercial forestry during the harvesting phase, even when good practice measures are implemented. Conversely, setting a sediment discharge rule at a level that enables full compliance by forestry during the harvest phase

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<sup>17</sup> Refer to the evidence of Dr Phillips (paras 62-73.3 and 76), and Mr Meredith (paras 51-55).

<sup>18</sup> Refer Dr Phillips' evidence at paragraph 59.

<sup>19</sup> Refer Dr Quinn's evidence at paragraph 11.

<sup>20</sup> Supra at paragraph 19.



(assuming implementation of good practice) is likely to be unduly permissive and therefore will not achieve any material improvement in sediment discharge from pastoral farmland.

#### **Forestry sector's use of good practice guidelines**

- 3.10 The forestry sector's use of good practice guidelines is different from other rural land use sectors. The corporate forestry sector, in particular, has a mature understanding of the importance and value of good practice. Dr Phillips confirms that significant improvements have occurred in the standard of forest engineering design and construction alongside the establishment of in-house Environmental Management Systems (EMS).<sup>21</sup> In addition, various land disturbance practices adopted by the sector has, in Dr Phillips' opinion, reduced both the amount of sediment entering streams as well as the overall risk of slope failure leading to sediment generation in many forest areas in New Zealand.<sup>22</sup>

#### **Long-term investment cycle of forestry**

- 3.11 As discussed by Mr Meredith<sup>23</sup>, the long investment cycle makes forestry an exceptional case when compared to other primary land-based industries. This is significant because RMA regulation (intended or otherwise) of forestry activities can influence investment decisions by the industry regarding replanting and expansion of the forestry estate.

#### **Corporate forestry is conservative regarding RMA compliance**

- 3.12 Corporate plantation forestry companies actively seek to achieve compliance with regulatory instruments. They are highly sensitive to potential non-compliances and will typically adopt a conservative approach to RMA compliance.<sup>24</sup> This means they will typically seek resource consent to authorise harvesting activities if there is uncertainty about their compliance position, rather than risk abatement or enforcement action resulting from non-compliance with planning instruments. In my submission this is not necessarily the case with other rural land users.
- 3.13 The practical effect is that unduly prescriptive or uncertain rules create substantial additional compliance costs for this particular sector given corporate forestry's preference to occupy a position of compliance with planning instruments.
- 3.14 In summary to this point, in my submission the case for amendment to the pLWRP has been firmly established. Details of specific changes to sedimentation Rules 5.72A

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<sup>21</sup> Refer Dr Phillips' evidence at paragraph 73.1.

<sup>22</sup> Supra at paragraph 73.2.

<sup>23</sup> Refer Mr Meredith's evidence at paragraph 22.

<sup>24</sup> Refer Mr Meredith's evidence at paragraph 24.

and 5.150 which recognise the effects profile of forestry are provided by Mr Boyes, who has utilised recommendations from Dr Quinn.

**4 EFFECTS OF PLANTATION FORESTRY ON FLOW SENSITIVE CATCHMENTS - Should regulation focus on low flow producing parts of catchments and the mean annual low flow?**

4.1 Rayonier is frustrated to find itself dealing with this issue again. The forestry sector, through a consortium of Canterbury forest owners known as the Joint Forestry Submitters (JFS), invested substantial resources into the pNNRP consultation process to change unworkable and highly prejudicial provisions regulating flow sensitive catchments. Rayonier was dumbfounded to find that the same provisions the forestry sector worked so hard to change have resurfaced only two years later in the pLWRP when it was notified. The forestry sector was not consulted prior to notification or even given the courtesy of informal notice of the changed position by the Canterbury Regional Council (CRC).<sup>25</sup>

4.2 The s32 report fails to provide any reasonable justification or rationale for this complete reversal of position. The situation is to my knowledge unprecedented. It represents highhanded disregard for an important sector of the Canterbury economy and leaves Rayonier in the invidious position of needing to relitigate precisely the same issue through the 1<sup>st</sup> Schedule of the Act.

4.3 It is noteworthy that the Act contemplates this type of circumstance with respect to private plan changes and provides that local authorities may reject a private plan change request on the grounds that:

*"...the substance of the request or part of the request has been considered and given effect to or rejected by the local authority or Environment Court within the past 2 years".<sup>26</sup>*

4.4 The Act does not cast the same constraint on local authorities, presumably because it was thought unnecessary. However if the standard applied to private developers were applicable to CRC, it is respectfully submitted that the pLWRP provisions regarding water yield would have been rejected instead of publicly notified.

**Case presented by Joint Forestry Submitters on PNRRP**

4.5 The notified pNNRP identified 9 catchments as flow sensitive.<sup>27</sup> Afforestation within these catchments required resource consent as a discretionary activity if plantings

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<sup>25</sup> Refer Mr Meredith's evidence at paragraphs 10-13.

<sup>26</sup> Refer Clause (4)(b) or Part 2, 1<sup>st</sup> Schedule.

<sup>27</sup> Identified in Schedule WQN 15 pNNRP.

occupied more than 5-20%<sup>28</sup> of a title. A further 50 flow sensitive catchments were identified for future regulation.<sup>29</sup>

4.6 JFS was strongly opposed to these provisions for the following reasons:

- (a) Inflexibility as to how afforestation can occur within a water yielding part of a catchment;
- (b) Scale inefficiencies associate with likely pattern of small block afforestation; and
- (c) Additional compliance costs for afforestation in circumstances where the resource consent process may not be necessary to manage any identified adverse effects on the environment.<sup>30</sup>

4.7 JFS contended that the degree of regulation proposed in the pNRRP was unnecessary and unduly penalised plantation forestry. JFS argued that a better approach, which was simpler and equally as effective, was to more precisely focus regulation on the low flow producing areas of the flow sensitive catchments. A summary of the evidence presented by JFS is provided by Mr Meredith<sup>31</sup> and a copy of the seven statements presented for JFS by well qualified expert witnesses and experienced persons from the forestry sector are attached to his evidence.<sup>32</sup>

#### **Decision of ECan Commissioners on pNRRP**

4.8 Dr Brent Cowie, chairperson of the pNRRP hearings panel, confirms in his evidence that JFS's case was largely accepted by the pNRRP Commissioners. Regulation was limited to only nine flow sensitive catchments and the rules were substantially amended to allow afforestation as a controlled activity within specific effects based parameters.

#### **Provisions of pLWRP**

4.9 The pLWRP as notified increased the number of flow sensitive catchments to about 29 catchments and reverts back to what Dr Cowie describes as the discredited regulatory approach in the NRRP as notified.<sup>33</sup> Rayonier acknowledges the amendments proposed in the Officer Report which removes the limit on afforestation per title. However on the basis of Dr Cowie's evidence and the evidence for JFS attached to Mr Meredith evidence it is submitted that further amendments are

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<sup>28</sup> Depending on the specific catchment.

<sup>29</sup> Refer Appendix WQN4.

<sup>30</sup> Refer evidence of Jeff Page at paragraph 53 attached as Appendix 10 to Mr Meredith's evidence.

<sup>31</sup> Refer evidence of Mr Meredith at paragraphs 72.1-72.9.

<sup>32</sup> Refer Appendices 4-10 of Mr Meredith's evidence.

<sup>33</sup> Refer paragraph 51 of Dr Cowie's evidence.

appropriate to establish rules that focus regulation on the low flow producing parts of catchments and the mean average annual flow, consistent with the operative NRRP.

**5 EFFECTS OF PLANTATION FORESTRY ON WATER BODIES AND RIPARIAN MARGINS –  
Can routine forestry activities be undertaken in or adjacent to water bodies and  
riparian margins without causing significant effects?**

- 5.1 For the reasons discussed below and explained in more detail through the evidence for Rayonier, it is submitted that the answer to this question “yes”.

**Temporary Culverts**

- 5.2 Culvert installation is a routine, albeit important, part of forestry infrastructure. Mr Meredith explains that the forest industry is second only to the civil earthworks industry in terms of the number of culverts installed.<sup>34</sup> The four week restriction on duration of temporary culverts is unduly stringent for forestry operators. Mr Meredith describes the software used to design culvert structures and the industry’s use of good practice guidelines.<sup>35</sup> Mr Boyes considers a longer duration is appropriate for forestry culverts provided these are installed in accordance with industry good practice and suggests amendments to Rule 5.115(7).<sup>36</sup>

**Vegetation clearance in lakes and rivers**

- 5.3 Mr Meredith explains that an understory of indigenous vegetation will often grow underneath a plantation forest crop and that some damage to this vegetation is unavoidable at the time of harvest.<sup>37</sup> Rayonier seeks amendment to Rule 5.143 to permit vegetation removal with strict parameters as per the evidence of Mr Boyes at paragraph 47.

**Vegetation clearance in riparian zones**

- 5.4 The 10% bare ground restriction in Rule 5.147 creates difficulty for forest operators when harvesting trees that were planted 30 years ago when riparian setbacks were not imposed by local authorities or Catchment Boards. Many plantations have been planted within riparian zones defined in the pLWRP and upon harvest permanent setbacks are retained. To avoid need for resource consent to remove an existing crop of trees, Mr Boyes proposes a permitted activity standard that allows harvest of such trees provided a 5m setback is established on replanting.<sup>38</sup>

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<sup>34</sup> Refer paragraph 49 of Mr Meredith’s evidence.

<sup>35</sup> Supra at paragraph 50-59.

<sup>36</sup> Refer paragraphs 43-45 of Mr Boyes’ evidence.

<sup>37</sup> Refer paragraph 74 of Mr Meredith’s evidence.

<sup>38</sup> Supra at paragraph 52.

## **Earthworks or cultivation in riparian zones**

- 5.5 The issue arising in respect of Rule 5.148 is similar to that for vegetation clearance in riparian zones above. Mr Boyes' proposes a new condition (8) to the Rule which exempts earthworks within a plantation forest provided that such works are undertaken in accordance with an Erosion and Sediment Control Plan and a Harvest Plan.<sup>39</sup>

## **6 STORAGE OF HAZARDOUS SUBSTANCES - Should compliance with HSNO regulations be sufficient for portable containers?**

### **Greater reliance on HSNO regulations**

- 6.1 Forest operators routinely use mobile fuel tanks which remain on site for more than 90 days. These are large, often more than 2,000 litres in size. Rule 5.162 as proposed would require forest operators to obtain resource consent for these tanks notwithstanding that they are regularly serviced and audited to meet HSNO requirements.
- 6.2 Rayonier seeks inter alia greater reliance on the HSNO regulations by amendment to Rule 5.162.<sup>40</sup> This would avoid duplication of regulatory process and reduce need for resource consents by forest operators.

## **7 EFFECTS OF PLANTATION FORESTRY ON EROSION PRONE AREAS - Can typical plantation forestry activities be undertaken on erosion-prone land without causing significant soil erosion?**

### **Mapping of erosion-prone areas**

- 7.1 As Dr Phillips explains, the definition of soil erosion risk zones could be improved further beyond the deletion of the low and moderate erosion hazard zones as recommended in the Officer Report.<sup>41</sup> This is because there are significant differences between the classification of erosion risk using CRC's classification and the National Environmental Standard for Plantation Forestry (NES) classification. As Dr Phillips describes, loess-mantled hill country is classified as high soil erosion risk by CRC, but it is only rated as a moderate risk by the NES.
- 7.2 Dr Phillips considers that the slope identifying the erosion risk threshold at 20 degrees is too low, and cites values of 26 degrees for loess and 24-18 degrees for tertiary soft rocks as used elsewhere around the country.

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<sup>39</sup> Supra at paragraph 59.

<sup>40</sup> Refer paragraphs 66-68 of Mr Boyes' evidence.

<sup>41</sup> Refer paragraph 77 of Mr Phillips' evidence.

- 7.3 Rayonier support the Officer Report recommendation to increase the erosion risk slope threshold from 15 degrees to 20 degrees. However Rayonier also seeks a further increase in the slope threshold, consistent with the opinion of Dr Phillips.

#### **Erosion risk and plantation forestry activities**

- 7.4 As Dr Phillips explains, in many erosion-prone areas of the world, including New Zealand, forests are planted to control erosion.<sup>42</sup> Dr Phillips also notes that in contrast to many other parts of New Zealand, within the Canterbury region most plantation forest is located in areas having relatively low susceptibility to erosion.<sup>43</sup> Only about 10% of the forest estate is located in areas mapped as "High Soil Erosion Risk" zone.<sup>44</sup>
- 7.5 Nonetheless, it is important that pLWRP rules that regulate vegetation clearance and earthworks in erosion prone areas are sufficiently targeted to achieve the plan's objectives without unduly constraining everyday forestry operations.

#### **Constraints caused by Rule 5.150**

- 7.6 Rayonier seeks that Rule 5.150 as notified be amended to allow as permitted activities (subject to appropriate performance standards) the following everyday forestry operations within erosion prone areas:
- (a) spraying of agrichemicals on slopes to assist re-establishment of plantation forest on land above 15 degrees;
  - (b) harvesting by ground-based systems, rather than limited to suspension systems;
  - (c) earthworks on erosion-prone land; and
  - (d) re-vegetation within more than 6 months after clearance.
- 7.7 Whilst the Officer Report states it was not CRC's intention to ensure that the forestry industry are required to apply for resource consents for everyday activities, unfortunately this is not reflected within Rule 5.150 as notified. However the Officer Report recommendations, if adopted, would substantially improve the proposed plan.
- 7.8 Mr Meredith and Mr Boyes' evidence explain the reasons why the notified Rule 5.150 is unworkable for the forestry industry. For example:

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<sup>42</sup> Refer paragraph 28 of Dr Phillips' evidence.

<sup>43</sup> Refer Dr Phillips at paragraph 16.

<sup>44</sup> Refer Dr Phillips at paragraph 20.2.

- (a) The application of agrichemicals is an essential tool to establish and re-establish plantation forest, and occurs after harvesting to control weeds after vegetation clearance.
- (b) Any requirement to undertake harvesting by suspension systems would require a significant departure from the method of ground-based systems currently utilised in throughout Canterbury, including within areas identified as erosion prone areas. Rayonier considers that provided that current systems are undertaken in accord with good industry practice and environmental standards the risk of significant erosion can be successfully managed and mitigated.
- (c) Infrastructure construction is required in all plantation forests, which inevitably involves some earthworks on erosion-prone land.
- (d) Any requirement to re-establish vegetation within 6 months creates difficulty for forestry operations due to the seasonal nature for planting and replanting of trees which does not necessarily coincide with the harvesting process. Sometimes the earliest that planting or replanting can occur is over 12 months after harvest.

7.9 The proposed amendments for rule 5.150 detailed in Mr Boyes evidence<sup>45</sup> address each of the above constraints so that forestry activities can be undertaken as permitted activities without causing significant soil erosion in LH2 Areas.

## **8 DEFINITIONS - Should the definitions be amended?**

- 8.1 The definition for "Ecosystem Services" in the pLWRP is currently inadequate as it only addresses freshwater bodies when the pLWRP seeks to manage land and water resources. The Officer recommendation does not address Rayonier's submission and is not in line with the IUCN definition<sup>46</sup>. Rayonier advances the proposed definition contained in Mr Boyes' evidence.<sup>47</sup>
- 8.2 Rayonier considers it is important that the definitions of an "Erosion and Sediment Control Plan" and a "Harvest Plan" proposed in its submission should be included with the pLWRP as the amendments that Rayonier seeks to various rules within the PLWRP includes reference to these documents. A definition of each term would provide clarity to users of the pLWRP about intended meaning and required content of these documents.

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<sup>45</sup> Supra at paragraph 65.

<sup>46</sup> International Union for Conservation of Nature.

<sup>47</sup> Refer paragraph 70 of Mr Boyes' evidence.

**9 POLICY CONSIDERATIONS – Are the amendments proposed by Rayonier supported by the NPS –Freshwater Management and the objectives and policies of the pLWRP**

**NPS - Freshwater Management**

- 9.1 The National Policy Statement for Freshwater Management (NPS-Freshwater) sets enforceable quality and quantity limits for water resources. The NPS-Freshwater also acknowledges that this should be done individually by each region to reflect their differences and be informed by the best available information and scientific and socio-economic knowledge.
- 9.2 As mentioned by Mr Boyes, the key issue for the forestry sector is the nature of the rules that are promoted by Regional Councils to give effect to the NPS particularly in respect of suspended sediment. It is significant that the Second Report of the Land and Water Forum acknowledges the difficulties of setting numeric values for suspended sediment due to variation caused by natural processes, differing environments, and large rainfall events.<sup>48</sup> The inherent natural variation in suspended sediment is exacerbated by the cyclical nature of plantation forestry. Over the full rotation, plantation forestry compares well with non-forested catchments. However harvesting activities will inevitably cause some increase in suspended sediment. Recognition of these circumstances through separate forestry rule in the pLWRP would in my submission be consistent with the NPS-Freshwater.
- 9.3 More recently, the Third Report of the Land and Water Forum identifies a significant range of methods and tools that are available to manage water quality limits, including inter alia good management practices (GMP).<sup>49</sup>
- 9.4 The Third Report notes that GMP can be “nested in the regulatory framework”<sup>50</sup> and specifically mentions harvest plans used in the forest industry, as follow-

*An example of GMP is a process-based suite of management tools used by a forester to create a harvest plan. The plan might document how the impacts of the harvesting operation will be managed, including which ‘on the ground’ management tools will be used and where, and then a series of practical GMPs such as method of harvesting, and erosion and sediment controls on earthworks to achieve the ‘on the ground’ implementation of the plan. An adaptive management process may be used during harvesting to modify the plan as circumstances change.<sup>51</sup>*

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<sup>48</sup> Refer paragraph 57 of Second Report.

<sup>49</sup> Refer Table 1 at page 22 and discussion of the Third Report.

<sup>50</sup> Supra at paragraph 101.

<sup>51</sup> Supra at paragraph 103.



- 9.5 It is submitted that the approach proposed by Rayonier gives effect to the Third Report by incorporating good practice into pLWRP permitted activity standards.

#### **Objectives and policies of pLWRP**

- 9.6 Relevant pLWRP objectives and policies are discussed in by Mr Boyes. In my submission each of the amendments proposed by Rayonier supports these provisions. In particular, Objective 3.23 which requires that all activities operate at "good practice" or better to protect the region's fresh water resources is better implemented through the changes proposed by Rayonier which would insert requirements for erosion and sediment control plans and harvesting plans into the pLWRP rules.

- 10 **SECTION 32 EVALUATION - Are the amendments proposed by Rayonier better than the status quo, taking into account the costs and benefits of such amendments?**

#### **Costs and benefits of notified provisions and Rayonier amendments**

- 10.1 Mr Meredith evidence will expand on the need for forestry to have a licence to operate as a permitted activity subject to clear and appropriate performance standards. In his view, if forestry follows good practice as provided for in their numerous planning documents then the limited effects of forestry will be managed appropriately. He identifies it as a way to save both cost and time to foresters and local authorities as having to obtain consents for routine forestry activities, such as harvesting and earthworks, often results in consent conditions that could be otherwise managed by good permitted activity standards.
- 10.2 Mr Meredith explains that having a permitted activity regulatory regime is important to the forestry sector; such regimes are effective in providing the appropriate level of regulation for forestry activities required under the RMA whilst at the same time avoiding costs, duplication and inefficiency of multiple resource consents for routine forestry activities.
- 10.3 Mr Gillett from SRS discusses the unintended consequences of restricting plantation forestry in Canterbury resulting from the notified pLWRP and the impact this would have on the Canterbury wood processing industry, which is highly dependent upon a constant level of wood supply from local forests.

#### **Overall evaluation**

- 10.4 In my submission, the overall evaluation as to whether the alternative rules promoted by Rayonier are 'better than' the notified provisions of the pLWRP or the amendments recommended by the reporting officer should be critically informed by the following considerations:

- (a) The Rayonier rules are informed by the best available scientific research regarding the effects of sediment and other discharges from plantation forestry on water quality within the Canterbury region and elsewhere in New Zealand. Both Dr Phillips and Dr Quinn support the approach proposed by Rayonier;
- (b) The Rayonier rules provide appropriate recognition of the long-term cyclical (rotational) nature of plantation forestry and the benefits provided by plantation forestry across the full rotation period;
- (c) The Rayonier rules respond to the potential adverse effects on water quality caused by harvesting activities by encouraging use of erosion and sediment control plans (informed by industry codes of practice) and promoting other standards to avoid or mitigate harvesting effects on water quality;
- (d) The Rayonier rules are appropriate and in accordance with s70(2) RMA, which supports the adoption of the best practicable option where this is the most efficient and effective means of preventing or minimising adverse effects on the environment;
- (e) The Rayonier rules are modelled on the Horizons' One Plan's suite of permitted rules for forestry, which has been approved by the Environment Court; and
- (f) The Rayonier rules are supported by Dr Cowie, who with his fellow Commissioners heard the fulsome case presented by JFS regarding water yield and flow sensitive catchments regulation proposed by the NRRP.

10.5 For the reasons discussed above, in my submission the case for amendment to the pLWRP as proposed by Rayonier is compelling because it is supported by cogent expert and industry evidence. The Rayonier rules meet the purpose of the RMA because they are set at a level that will ensure good quality outcomes are achieved within the Canterbury region without undue regulatory control of plantation forestry.

## 11 CONCLUSIONS

11.1 There is doubt that declining freshwater quality is one of New Zealand's most pressing environmental problems. Although plantation forestry is not a major cause, the forest industry is alive to this issue and has responded by leading good practice to manage and mitigate sediment discharge within the rural land use sector. This work is a key component of the alternative sediment discharge rules proposed by Rayonier, which if adopted, would encourage and support the implementation of good harvesting practice within the forestry sector. Overall, the amendments proposed by Rayonier respond in a positive way to the challenge of ensuring improved water quality outcomes from plantation forestry activities within the

Canterbury region. In my submission, these rules give effect to the NPS – Freshwater Management, the Forum’s Second and Third Report, and the statutory obligations of the Regional Council under the RMA. As such, in my view, they better meet the purpose of the RMA than other available alternatives.

Dated 8<sup>th</sup> of March 2013

A handwritten signature in black ink, appearing to read 'Chris Fowler', written in a cursive style.

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Chris Fowler  
Counsel for Rayonier New Zealand Ltd

