

## Supplementary Reply to Panel

Paul Denton and Barry Loe, 25 July 2018

The Panel requested a reply on two matters:

1. Rule R34 (Gas, water and wastewater) what is the final outcome with regards to whether the discharge is from an enclosed space or not from an enclosed space.
2. In regards to Rule R99 (earthworks) submitters have requested a setback for earthworks. What do other regional and district plans have for a setback for earthworks.

### Question 1 – Rule R34

The extract below is from the S32AA report for Air Quality, submitted to the Panel on 15 September 2017.

Rule R34 is a permitted activity rules that controls the discharge of odour from enclosed pumping stations for gas, water and wastewater. The rule does not control sewage treatment plants or sewage treatment ponds.

A15 (S135/137)	5 Rules	Rule R34: Gas, water and wastewater <u>processes</u> - permitted activity	<p>The discharge of contaminants into air from the <u>enclosed</u> storage, conveyance and pumping of gas (<u>including natural gas</u>), water and <u>wastewater processes</u> is a permitted activity, provided the following condition is met:</p> <p>(a) the discharge shall not cause offensive or objectionable odour at the boundary of a <u>sensitive activity</u>.</p>	<p><b><u>Effectiveness and efficiency</u></b>            This amendment to Rule R34 will increase the effectiveness of this rule in the air quality management provisions. The amendment includes specific words to clarify and improve the meaning of the rule in the management of natural gas discharges and wastewater processes.  <b><u>Costs: (numerical and potential costs)</u></b>            No specific costs have been assessed for the amendment to this rule. There are unlikely to be increased costs to applicants from this amendment in the proposed Plan. The proposed amendment aligns more closely to the requirements of the operative RAQMP and therefore will not impose any increased costs from those that already exist.  <b><u>Benefits: (environmental, cultural, economic and social)</u></b>            There are potentially increased environmental, cultural and social benefits by improving the effectiveness of this provision.  <b><u>Risk of acting or not acting</u></b></p>
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There is a low risk of not acting.

**Decision about most appropriate option**

This is an important matter that requires recognition and clarification by the proposed Plan.

In my opinion the proposed amendment is the most appropriate way to achieve the purpose of the RMA and the objectives of the proposed Plan, and will have cultural, social, environmental and economic benefits, and will not reduce opportunities for economic growth or have a negative effect on employment.

**Question 2: Setback for earthworks**

The Panel requested further clarification for the recommendation in the Right of Reply for Soil Conservation dated 14 September 2017. In the s32AA report, a 5m setback is recommended for earthworks from a surface water body to protect the water body from a discharge of sediment. In the notified version of the proposed Plan there was no setback for earthworks from a water body. Therefore, earthworks could occur right up to the bank edge of a water body where sediment could enter a water body.

The following sections sets out in detail the background to setbacks and examples of where they have been included in regional and district plans.

We enclose below, the s32AA report for Rule R99 for context.

A3 (S311/023, S308/033)	5 Rules	Rule R99: Earthworks-permitted activity	<p>The use of land, and the associated discharge of <del>sediment-laden runoff</del> <b>stormwater</b> into water or onto or into land where it may enter water from <b>earthworks of up to a total contiguous area up to of 3000m<sup>2</sup> per property</b> per 12 month period is a permitted activity, provided the following conditions are met:</p> <p>(a) soil or debris from earthworks is not placed where it can enter a surface water body or the coastal marine area, and</p> <p>(b) earthworks will not create or contribute to instability or subsidence of a slope or another land surface at or beyond the boundary of the</p>
<p><b><u>Effectiveness and efficiency</u></b></p> <p>The discharge of sediment is more effective than the use of sediment laden run-off, as sediment laden run-off is a specific use of words, whereas discharge of sediment captures all discharges of sediment from the activity.</p> <p>The use of the word 'contiguous' has caused confusion and misunderstanding and has the potential to be abused within the context of the rule. The replacement words 'up to a total area of 3000m<sup>2</sup>' is more certain about the amount of earthworks able to be achieved per year per property.</p> <p>The insertion of a new clause (e) for a set-back of 5m from a surface water body for earthworks is appropriate and effective, as is will provide a buffer or margin where stream banks can be protected and further reduce</p>			

<p>property where the earthworks occurs, and (c) work areas are stabilised within six months after the completion of the earthworks. (d) any earthworks shall not, after the zone of reasonable mixing, result in any of the following effects in receiving waters:</p> <ul style="list-style-type: none"> <li>(i) the production of conspicuous oil or grease films, scums of foams, or floatable or suspended materials, or</li> <li>(ii) any conspicuous change in colour or visual clarity, or</li> <li>(iii) any emission of objectionable odour, or</li> <li>(iv) the rendering of fresh water unsuitable for consumption by animals, or</li> <li>(v) any significant adverse effect on aquatic life, and</li> </ul> <p><b>(e) earthworks shall not occur within 5m of a surface water body except for activities permitted by Rule R114 or Rule R115.</b></p> <p><u>Note</u> Rule R99 does not control any earthworks or soil disturbances covered by the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017.</p>	<p>an. potential discharge of sediment-laden runoff to a surface water body. An exemption has been added to new clause (e) to remove the consequential error with Rule R114 and R115.</p> <p>A note has been included in Rule R99 to exclude any earthworks or soil disturbances associated with the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017.</p> <p><b>Costs: (numerical and potential costs)</b></p> <p>No specific costs have been assessed for the insertion of these new words 'discharge of sediment' or 'up to a total area' of 0.3ha. There are unlikely to be increased costs to land owners or communities from this insertion.</p> <p><b>Benefits: (environmental, cultural, economic and social)</b></p> <p>There is potentially an increased environmental benefit by ensuring the discharge component of the rule is more effective and the amount of earthworks that can be undertaken is more certain and effective. There are increased environmental benefits from the insertion of set-back of 5m from surface water bodies.</p> <p><b>Risk of acting or not acting</b></p> <p>There is a moderate risk of not acting.</p> <p><b>Decision about most appropriate option</b></p> <p>This is an important matter that requires recognition by the proposed Plan and provides useful clarification for plan users. There was potential confusion about how the provisions were intended to operate and this proposed change will ensure greater effectiveness of the provisions.</p> <p>In my opinion the proposed amendment is the most appropriate way to achieve the purpose of the RMA and the objectives of the proposed Plan, will have cultural, social, environmental and economic benefits, and will not reduce opportunities for economic growth or have a negative effect on employment.</p>
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1. The recommendation of Mr Denton is to include a new clause (e) which requires that earthworks shall not occur within 5 metres of a surface water body. We understand the scope for this to be the submission by Fish and Game which sought the additional standards requiring unspecified setbacks. Our question is, what is the evidential basis for the 5 metres?

The Section 32 Report: Livestock Access, Break-feeding and Cultivation, in section 5.3 (pages 35 to 37) summarises a range of reviews of literature and studies undertaken to explore the effectiveness of vegetated areas adjacent to surface water bodies to reduce the overland flow of contaminants into the water bodies.

The overall conclusions are:

- vegetated riparian buffer areas can trap a range of contaminants, including sediment, micro-organisms, and nutrients;
- the effectiveness of the trapping and the reduction in the amount of contaminants reaching the water body is dependent on a wide range of inter-acting factors including width of and vegetation cover in the buffer, slope of the land in and landward of the buffer, soil moisture and land use practices;
- there is no 'magic' width of the buffer for optimal effectiveness, and these buffers will not trap all contaminants;
- there is evidence that a 5m-wide vegetated buffer strip is the most efficient width to remove sediment (and associated nutrients and micro-organisms), with removal efficiency not increasing for buffer strips wider than 10 m.

As the set-back distance in Rule R99 had not been included in the notified PNRP, the Section 32 Report: Soil Conservation did not include analysis of this provision, but the analysis in respect of stock access, break-feeding and cultivation is relevant to earthworks.

Most regional and district plans, and the NES-PF, contain rules relating to earthworks adjacent to surface water bodies, and these rules generally require a setback from surface water bodies, where the earthworks is a permitted activity. While there is some variation between plans as to the size of the setback, many plans require 5 metres setback from surface water bodies, as the minimum setback for permitted activity earthworks and other land disturbance activities, with the setback distance in some plans increasing in sensitive environments.

Examples are:

- WCDP – Rule 30.1.1.2 – setback distances for earthworks: 5m to 20m depending on the zone
- KCDP – Table 3A.1 – setback distance for earthworks: 20m
- Horizons One Plan – setback distance for cultivation, forestry, earthworks, vegetation clearance: 5m
- ECan LWRP – setback distances for earthworks: 5m or 10m depending on erosion susceptibility of the land
- NES-PF – setback distance 5m

2. *As a supplementary question; is the 5 metres consistent with the recommended setback for cultivation and break-feeding respectively in rules R94 and R95 which allow variable setbacks of 2 metres and 5 metres depending on the slope of the land adjoining the surface water body?*

The principal contaminant being managed under Rule R99 is sediment and the evidence indicates that a 5m wide buffer strip is the most effect at trapping large sediment particles. Rule R99 authorises earthworks that, by definition, can involve blading, ripping, removing and replacing soil. Earthworks activities can involve significant disturbance of soil, compared to cultivation which is limited to preparing land for crops or pasture, and can be undertaken in a more precise manner and to reduce potential for run-off by following the land contour. Break-feeding is also an activity that should be undertaken with a higher degree of control through use of fencing and good management practice. The recommendations for Rules R94 and R95 are to require that the buffer strips are vegetated, and not grazed, during the period that cultivation or break-feeding is being undertaken.

The single 5m setback for earthworks is not inconsistent with the variable setbacks for cultivation or livestock-feeding, due to the differences in the nature of the activities, the limitations imposed by the recommended rules, and the potential for sediment (and other contaminants from break-feeding) to be carried towards a surface water body.

3. *Regardless of the dimension of the setback where is the setback measured from, this does not appear to be clarified in the rule or any definition.*

The definition of surface water body is, *a river, lake, wetland, estuary outside of the coastal marine area, open drain or water race, and its bed.*

The setback distance is therefore, measured landward from the edge of the bed.

