

**Before the Hearings Panel
At Wellington**

Under the Resource Management Act 1991

In the matter of an application for resource consent to discharge contaminants to land, air and water associated with the proposed long term upgrade and operation of the Featherston Wastewater Treatment Plan

Applicant **South Wairarapa District Council**

**Brief of evidence of Nicola Arnesen in response to applicant's evidence
and submitter's evidence (Planning)**

Date: 10 May 2019

Qualifications and experience

- 1 My full name is Nicola Saunders Arnesen. I am a Senior Resource Advisor at Greater Wellington Regional Council (GWRC), a position I have held for the last 10 years. Prior to that I have worked at Opus Consultants, Christchurch City Council and also at GWRC for a previous time period of three years.

- 2 My qualifications and experience were set out in the section 42A report and I do not repeat those here. I also confirm the contents of my section 42A report and only note below issues where I considered it useful to provide a response to evidence provided.

Code of conduct

- 3 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note. I agree to comply with this code of conduct. Except where I am relying on evidence of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of evidence

- 4 My evidence relates to responding to the matters raised by the applicant in evidence lodged in response to my Section 42A report. For some of my responses, I rely on the evidence of the other GWRC experts.

Planning – Mr Sven Exeter

- 5 I note that the 'existing environment' section in my report (section 9.1) is a description of the environment, rather than any identification of what I was assessing the application against. In relation to the argument of existing environment, Mr Exeter discusses his opinion of how I have assessed this in his evidence, particularly at para 35. It is my understanding that when considering a replacement resource consent the existing environment does not generally include the discharge in its current form. This means that for the discharge to water, the existing environment is one in which the discharge does not occur, for example, what is occurring upstream of the discharge. I note that in the evidence of Dr Ausseil in response (dated 10 May, at 5.2) this is how he has assessed the effects and also he notes this is how Ms Hammond has done it also.

- 6 In relation to permitted baseline, the permitted baseline for a discharge to land could be as Mr Exeter points out in relation to grazing, dairy and crops on rural land. However, it is important to note here that the permitted activities only cover the grazing of stock (to acceptable stock units), as soon as these farming operations involve the collection of effluent (dairy sheds, feed pads etc.) then consent is required (RDLP¹ Rule 13 for Agricultural Effluent, and the PNRP² Rule R83). Also if there is a risk of contaminants entering water (ground or surface water) or causing adverse effects beyond the boundary then consent would be required, as the permitted activity rules (RDLP Rule 1, PNRP Rule R69) have these two factors as conditions. In relation to the application of fertiliser, it is the same issue, effects can only occur if contaminants do not enter water or cause effects beyond the boundary (PNRP Rule R82).
- 7 In relation to Mr Exeter's assessment of effects, he has stated that he is taking into account positive effects also. While I agree that positive effects are relevant for the overall decision under section 104, they are not relevant under section 104D (which requires the decision maker to look at only the adverse effects of the activity and whether they meet the threshold of minor or not). I am unclear whether Mr Exeter's conclusions on effects levels all take into account the 'holistic' approach or not (i.e. whether he treated the section 104D effects assessment differently).
- 8 Mr Exeter at para 38 raises the issue of the non-complying activity status and that the applicant was not told of this until 22 May 2018. While I do not consider it relevant, I note that GWRC informed Mott McDonalds and SWDC regarding this issue in 2017 when it was raised in the processing of the Carterton District Council Wastewater Treatment Plant consent that that application was in fact a non-complying activity under the PNRP (due to the definition of a 'new activity'). My recollection of events is that once we were aware of this, I phoned Sarah Sunich (the initial Mott MacDonald project manager for this application) and informed her that it was my opinion that this interpretation would apply to the FWWTP application also. For some months following this both Shaun Andrewartha and I stressed during meetings and phone calls to both Mott McDonald and SWDC (including at our meeting with Steve Couper in February 2018) our concerns in relation to the planning complexities of the application, and that we had serious concerns in regards to sections 104D and 107. I

¹ RDLP = Regional Discharges the Land Plan

² PNRP = Proposed Natural Resources Plan

summarised GWRC's position in an email to Mr Exeter on 22 May 2018 when he was brought on board to manage the project.

- 9 At para 43b Mr Exeter raises the changed view of Mr Hamill that from '*Stage 1B onwards (or at latest from Stage 2A) the discharge will be acceptable and not give rise to significant adverse effects on aquatic life*' (Para 89, Hamill). This quote from Mr Hamill's evidence is in relation to his views on section 107 of the RMA. His evidence on effects is not as stated by Mr Exeter. Mr Hamill states that there will still be minor effects during Stage 2A in terms of ammonia and invertebrates (see Table 4 in Hamill evidence). This seems inconsistent with Mr Exeter's conclusion that effects in Stage 2A are less than minor (para 55d, 118, 169a), which he seems to use as a lesser standard than 'minor'.
- 10 Mr Exeter's conclusion is that effects are no more than minor from Stage 2A onwards (para 55d/118), subject to cultural effects and the risk regarding viruses in groundwater. Based on the evidence of Dr Ausseil in response it is my understanding that he is still comfortable with the conclusions in the Joint Witness Statement and his view is that the effects are more than minor during Stage 2A (dated 10 May, at 7.18) due to the ammonia effects and effects on macroinvertebrates.
- 11 While Mr Exeter focusses on the effects on effects on invertebrates and the (up to) 6 week period where they may be significant (eg: para 44c) I would note here that there are also effects on ammonia toxicity during Stage 2A which cannot be overlooked in the context of effects on water quality. I refer to these effects in my Section 42A report at the end of section 9.3.5 and these effects are covered in the JWS and also in Dr Ausseil's evidence. It is my understanding that ammonia toxicity effects are more than minor and possibly chronic during Stage 1B, and more than minor during Stage 2A.
- 12 It is also unclear to me how the conclusion by Mr Exeter that effects are less than minor from Stage 2A onwards aligns with his Figure 1, which shows more than minor effects up to Stage 2B.
- 13 In reference to para 48 of Mr Exeter's evidence, where he sets out the further work done in relation to groundwater effects, it is my understanding that the Groundwater Effects Report (dated 14 December 2018) and the further report dated (26 February 2019) does not contain all the

information that was agreed upon by all the experts in the JWS. This is addressed in the response evidence of Mr Irvine and Mr Perwick.

14 I have reviewed the condition put forward at para 50 to address the health risks on groundwater from bores near the discharge to land area. As outlined in my Section 42A report I consider this effect to be a more than minor and potentially significant effect occurring on people's access to drinking water (and the evidence of Mr Perwick in response raises at para 48 the further issue of whether there is a risk to surface water take users given the connectivity of groundwater and surface water). The applicant's evidence accepts it is more than minor (McBride, para 29). It is also my opinion that this is an effect which should be avoided or mitigated, rather than 'offset' via a condition relating to providing alternative potable water supply. The offering up of an alternative water supply does not remove the more than minor/potentially significant effect of pathogens in the groundwater, that effect will remain and will potentially affect others in the future (or those not currently included in the Table 6 list). SWDC have not offered up a mitigation measure to reduce the effect on the groundwater.

15 Nonetheless, regarding the working specifics of the condition I have some concerns outlined below:

15.1 How does this condition address any new bores put down and use by future consent holders?

15.2 All new bores require resource consent from GWRC, this condition appears to place some level of onus on GWRC to place an advice note or condition on each new bore permit informing the consent holder of this issue. Further to this to, what radius would this be for bores requiring an alert? And would GWRC be expected to notify SWDC of new bores so they can make contact with the consent holder? Is SWDC offering alternative supply to new bore users?

15.3 The taking of water for reasonable domestic needs does not require consent so how would we be sure that all domestic bore users are in Table 6? Also, what about stock water, should animals also be protected from the health risk?

- 15.4 What happens if it is found that the effects extend further beyond the bores identified? How will these people be covered by this condition?
- 16 At para 53 Mr Exeter raises that Mr Simpson considers that the effects from groundwater mounding are less than minor. Based on the response evidence of Mr Perwick (para 63-67), it would appear that there is still insufficient information available for the GWRC experts to assess the effects and so it is still my opinion (as per my Section 42A report) that no conclusion on these effects can be made on this at this time.
- 17 In relation to the weighting issues (paras 80-82 of Mr Exeter's evidence) it is my opinion that weighting is only relevant to processing a consent application if the conclusions reached are different under the operative and proposed plans (see Part 15 of my section 42A report to my approach to processing these consents). The conclusions reached in my Section 42A report under each plan were not different (ie, they were both to decline) and therefore, I did not need to do a weighting exercise.
- 18 I would also note here that it is my opinion that when assessing a resource consent, you do this based on the proposed plan as it is at the date notified. What the submissions and reporting officers have said or concluded during the hearing process for the proposed plan are not relevant or determinative. The decisions on the proposed plan are due out by 31 July 2019 and therefore, any amendments or alterations will not be known until then.
- 19 At para 116 Mr Exeter raises his concerns regarding some of my conclusions, I have addressed relevant ones below:
- 19.1 116 (A) - I was not stating that there was a breach for a third of the year, I stated that there was a breach a third of the time (i.e. a third of the time the discharge is occurring there is a breach - 75 days of 186 days);
- 19.2 116 (B) – I cover this matter off in para 9 above;
- 19.3 116(C) – The issue is not if clarity is an effect or not, the issue for 107 is – will there be a conspicuous change in water clarity or not. This is what I have said in my conclusion of Stage 2A which Mr Exeter is referencing, that there will be a

'...conspicuous change in water clarity for 42 days per year...';

19.4 116(D) – I cover this matter off in para 12 above; and

19.5 116(E) - I still consider my assessment and conclusions on recreational effects to be fair and my opinion has not changed at this time. Further to this, I note in Dr Ausseil’s evidence in response at para 4.3 he considers it difficult to discount any secondary contact use (e.g. fishing, eeling, playing) in the stream. It appears that Mr McBride has not provided a commentary on the health risks to secondary contact users.

20 For the benefit of the Panel I have repeated the table in my section 42A report (at 9.3.9) where I summarise the level of effects on aquatic life and clarity change arising from the discharge to water, based on my expert advice (I have not included an assessment of the discharge to land due to the uncertainty of the level of effects from that activity, based on my expert advice). These remain as my conclusions:

Stage	Effects in summer	Effects in shoulder seasons/winter
0-2 years	Significant.	Significant.
Stage 1A (Years 2-5)	Significant.	Significant.
Stage 1B (Years 2-5)	Minor.	Aquatic Autumn - more than minor, possibly significant, for limited periods of time for 2-3 weeks Aquatic Spring - more than minor for 2-3 weeks, no significant effects. Water clarity - >33% clarity reduction 21% of time (75 days per year).
Stage 2A (Years 5-13)	Minor.	Aquatic Autumn - more than minor, but not significant effects, for limited periods of time for 2-3 weeks Aquatic Spring – more than minor for 2-3 weeks, no significant effects. Water clarity - >33% clarity reduction 11% of the time (42 days per year)
Stage 2B (Years 13+)	Less than minor	Less than minor

21 Therefore, based on this assessment (which relies on Dr Ausseil's assessment), section 107 of the RMA cannot be met until Stage 2B (or for 13 years). This is confirmed by Mr Exeter's Table 10, which shows the clarity standard is 'mostly met' during Stage 1A and 2B. As set out in

my section 42A report (part 10.3), I do not consider 13 years to be 'temporary'. In terms of exceptional circumstances, Mr Exeter seems to suggest that it is an exceptional circumstance that if this consent is not granted, a discharge with significant adverse effects will continue without significant improvements. In my view that is not an exceptional circumstance, that is the applicant's choice. It cannot be sound resource management practice to say you have to grant a 35 year consent because there is no other alternative - that is not the test in the RMA.

- 22 At para 138 Mr Exeter considers that with the exception of the risk of viruses in groundwater bores, the adverse effects from land treatment are no more than minor. Based on the evidence in response of Mr Irvine and Mr Perwick there is still insufficient information to assess the effects and so it is still my opinion (as per my Section 42A report) that no conclusion on these effects can be made on this at this time.
- 23 Para 139-141 covers the issue of groundwater mounding and that the effects are no more than minor in Mr Exeter's view. As above, based on the evidence in response of Mr Irvine and Mr Perwick there is still insufficient information to assess the effects and so it is still my opinion (as per my Section 42A report) that no conclusion on these effects can be made on this at this time.
- 24 At Para 147 Mr Exeter concludes on the effects on groundwater quality in relation to nutrients from leaching. He concludes that the leaching of nutrients from the proposed land treatment scheme is likely to be less than minor. Mr Feltham's evidence in response (see para 41) is that he considers the nutrient loss assessment provided to be reasonable.
- 25 In para 169 Mr Exeter states that (based on evidence of Mr Hamill) the effects on the ecology of Donald's Creek are '*likely to be minor from Stage 1B*' and '*likely to be less than minor from Stage 2A*'. I have addressed Mr Hamill's conclusion at para 9 and he says at '*Stage 1B onwards (or at latest from Stage 2A) the discharge will be acceptable and not give rise to significant adverse effects on aquatic life*' (Para 89, Hamill). Dr Ausseil in his response evidence concludes that having reviewed Mr Hamill's evidence he still is comfortable with the assessment and conclusions reached in the JWS and does not see any reasons to change them (dated 10 May, at 7.18). Based on this, it is my opinion that the conclusions in my Section 42A report that the effects on ecology of Donald's Creek at Stage 1B is minor (summer) and more than minor for 4-6 weeks in spring

and autumn, and at 2A is minor (summer) and more than minor for 4-6 weeks in spring and autumn (also note here my comments at para 10 re: ammonia toxicity).

26 It is my opinion that Section 104(6) is still relevant to this application. There is still information which needs to be addressed in relation to groundwater and soils, cultural effects and also in relation to the discharge to air.

27 At para 239 Mr Exeter concludes that the application (if non-complying) is contrary to one policy (P83 of the PNRP). It is my understanding that if an application is contrary to any objective or policy of the operative or proposed plans then it potentially means that an application will not pass through the policy gateway. In any event, my assessment in my section 42A report is that the discharge to water is contrary to multiple objectives and policies across both the operative and proposed plans (see summary at Part 11.3) and for that reason cannot get through the objectives and policies gateway

28 At para 277 Mr Exeter mentions the issue of term. It is my opinion that term is not a matter which can be assessed until all the effects are adequately defined, the envelope of these effects is established, and how these will be mitigated. I do not believe there is enough information and certainty for the full envelope of effects to be identified and understood for me to consider term at this stage.

Emma Hammond

29 At para 80 Ms Hammond comments on my assessment of Policy 43 of the RPS. I have considered Ms Hammond's comments and my conclusion still stands. My conclusion was that no improvements are being made for *some time*, as opposed to not at all. I am aware there are improvements after year 5 - however, the policy uses the word 'protect' which has a strong definition and meaning and I consider that more than minor effects for up to 13 years is contrary to that policy (see page 49 of the section 42A report).

30 At para 81 Ms Hammond comments on my assessment of Policy 5.2.6 of the RPS. I am assuming here she is referring to policy 5.2.6 of the Regional Freshwater Plan. I have considered Ms Hammond's comments and my conclusion still stands.

Katie Beecroft

31 At para 91 Ms Beecroft raises the Longwood Water Race, and she notes that SWDC have indicated an intention to divert the water race. SWDC have not had any discussions with GWRC with regards to the diversion of the water races and this is not included in the AEE that was notified (and so therefore has not been assessed by GWRC). This would require an additional consent from GWRC or a variation to any consent that may be granted.

32 At para 93 and 95 Ms Beecroft discusses the issue of assumptions and if treatment effects of the soil and plants have been considered by me. These are technical not planning matters. As outlined in my Section 42A report I have based all of my conclusions on groundwater and soils on PDPs report. Therefore, I cannot comment on these points, these are addressed by PDP in their evidence.

Conditions

33 A set of draft conditions will be provided by the 15th of May 2019.

Date: 10 May 2019

Nicola S Arnesen