

HEARING STREAM 2 – Day 1 – Parts 1-3

**Greater Wellington Regional Council**

**HEARING STREAM 2**

**Day 1**

**Ecosystem Health and Water Quality Policies**

Date: Monday 7<sup>th</sup> of April 2025

Time: 8.45am – 9.00am

Hearing Stream: Two

Venue: Greater Wellington Regional Council Chambers  
100 Cuba Street, Te Aro, Wellington

Hearing Panel: Dhilum Nightingale (Chair)  
Sharon McGarry (Deputy Chair)  
Gillian Wratt  
Sarah Stevenson  
Puawai Kake

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[Hearing Stream 2 – Day 1 – Part 1]

*[Due to technology issues the hearing recordings did not begin until post morning break – 11.00am]*

Melidonis: Those in Plan Change 1 are [03.07] to Te Whanganui-a-Tara and Te Awarua-o-Porirua WIPs. That's the work that was done through WIP development. They were informed by science and modelling.

[04.18] tidal and sub-tidal areas. This is to recognise differences in the physical, chemical and ecological contributions of these two environments.

The specific attributes for which objectives were set are described in paragraph 48 of my primary evidence. I will just touch on those now today as an introduction.

Estuarine sedimentation rates were of particular concern to the Whaitua Committee at the time. For this attribute I understand from the Whaitua documentation that the processes for setting the sedimentation rate targets

Porirua Harbour was to consider a sedimentation rate of 2mm per year as the rate above which adverse ecological effects may occur on estuarine benthic organisms.

[00.05.07]

Also, what sediment accretion rate could be achieved?

This was according to the WIP scenario modelling in the Pāuatahanui inlet under an extremely conservative water sensitive scenario of 4,000 hectares of retirement, full stock exclusion as well as riparian planting.

This rate was reduced to 1mm per year on the Onepoto arm because modelling indicated that it could be achieved with retirement under the water sensitive scenario and that it aligned with the 1mm long-term target from the Te Awarua-o-Porirua Harbour and catchment strategy action plan.

To conclude the following objectives were included in this WIP to reduce the sedimentation rate in both arms of the harbour and to maintain muddiness in inter-tidal areas; to maintain estuarine, zinc and copper at current levels; and to maintain macroalgae in the harbour at current levels, which requires sediment nutrient inputs to remain the same or to be reduced.

When looking at Te Whanganui-a-Tara objectives included to prevent decline in the state of estuaries and coast in the short-term to maintain current state into the next generation; to improve the state of estuaries and coasts in the longer term as detailed in the WIP attribute tables. The restoration of estuarine environments is expected to take multiple generations and that was acknowledged in the WIP.

Then also to improve the sedimentation rate in Mākara Estuary within a generation – as you can see on my slide there I've presented the two tables included in Plan Change 1.

When looking at the assessment of current state, as detailed in paragraph 61 of my primary evidence, assessment criteria or general indicator thresholds were used to monitor and report on the ecological health of coastal areas and these were derived by Salt Ecology from the New Zealand Estuarine Trophic Index or the ETI and proposed national assessment criteria that were recently published by the Ministry for the Environment.

Where the data exists the current state of the tributaries in Table 8.1 and 9.1 of Plan Change 1 were benchmarked against these assessment criteria. However, in some cases data were not sufficient to determine current state and this was evident from Makara Estuary, Wainuiomata and Te Awarua-o-Porirua and Te Whanganui-a-Tara open coast – as shown in Table 4 of my evidence.

In some cases attributes at some sites listed in Plan Change 1 coastal objective tables were found to be not applicable, and this included estuarine and health measures applied to open coast – and I will talk more about that on Wednesday.

It is explained in paragraph 63 of my primary evidence that there are several streams of technical evidence that contribute to this assessment. Mr Blythe's evidence provides technical information on the models used to inform the

Whaitua processes. Mr Blyth will be detailing that and any direct questions on that towards him.

As Dr Greer mentioned there were three scenarios that were assessed, so I won't go into detail there, but will just mention that there were business as usual improved and water sensitive scenarios. The most conservative one was the one that I refer to in my technical evidence.

The plan objectives were said to maintain from a measured ecological baseline, not to maintain within a broad band as in the WIP – which is important to note, and this is to prevent degradation of healthy ecosystems.

Also it's explained in paragraphs 66-69 of my primary evidence that Dr Greer outlined the extent which the proposed regularly provisions of Plan Change 1 will achieve the freshwater target attribute states or tasks and coastal objectives for the Whaitua.

The aforementioned three scenarios form part of the collaborative modelling project to help inform the attribute selection and results suggest the post-regulatory provisions of Plan Change 1 require outcomes and actions that are likely to achieve all of the assessed Te Awarua-o-Porirua coastal ecological objectives, but not so for Te Whanganui-a-Tara where Makara was not expected to be achieved. They are unlikely to be met through the proposed provisions alone.

[00.10.20]

In terms of coastal attributes, as detailed in paragraph 93 of my primary evidence, the sedimentation rate, muddiness and sediment metal components – so that's speaking to the zinc and copper attached to sediments – these are of limited relevance in Te Awarua-o-Porirua open coast and Te Whanganui-a-Tara open coast as well, also known as Wai Tai – because obviously there will not be sediments in all those environments. It might be varying types of sediment or particular sized distribution. So, assessing fine sediments is not always applicable.

Sediment mud content and sediment metals are relevant attributes to measure in the Wellington Harbour and some estuaries.

This is also because open coastal areas are generally dynamic environments that readily mix and disperse land-based freshwater inputs and are also naturally influenced by sediment movement which limits the informal diversity or the diversity of the macro formula that you might find in the sediments.

Also Wellington Harbour is a deep sub-tidal dominated estuary. It is known as a DSDE – it's a long residence time estuary and it's naturally a depositional environment that supports macro-invertebrates that are moderately tolerant to fine sediments.

Also measuring sediment mud content and sediment metals can provide an indication of ecosystem health of this environment if the sediments are present. The muddiness metric should be updated to a percentage of intertidal area with greater than 25 percent mud content, rather than 50 percent to align with the

most recent revision of the map [12.28]. That's new guidance that has come into effect since the development of the WIP.

Sediment metal concentrations, so zinc and copper attributes, are of limited relevance in potentially some areas where there are limited amounts of roads and infrastructure and inputs of those contaminants.

Finally, macroalgae and phytoplankton was on topic. Macroalgae attributors of limited relevance in the open coast and Wellington Harbour, but is useful to measure in most estuaries; and this is because it can be an indicator of water column or sediment nutrient input, giving us an indication of nuisance macroalgae or seaweeds that may become **entwined** [13.32] in sediment or attached to rocks; whereas phytoplankton is more looking at water column and nutrients, macroalgae can also give an indication of sediment measures.

Both phytoplankton and macroalgae can be measured as an indicator, however, they're not both always applicable in these specific environments.

Where phytoplankton becomes applicable is in areas that are subject to [14.07] source discharges or river mouth closures and so there is limited tidal exchange or water exchange in those areas.

Marine benthic invertebrates is a useful indicator of ecological health in harbours, estuaries and open coastal environments where cumulative stresses are well understood. So, when there are multiple stresses that aren't measured or well understood then it's not always clear what the invertebrate data is telling us, and whether it's a seasonal response or if it's indicative of a combination of stresses on the system.

There ends my context setting for my ecological coastal evidence. Kia ora.

Any questions Commissioner?

[00.15.00]

Chair:

Thank you very much. In Table 8.1, and I have got the officer's rebuttal versions, could you just explain to me muddiness? The unit there, I'm just not quite sure I understand the "greater than 50 percent mud". Is this an indicator of estuarine health? I will let you explain.

Melidonis:

In Table 8.1 you can see a range of different attributes that could appear to maybe indicate a similar thing, but we would look at a range of these to understand the health of the environment. When we talk about muddiness, we will look at the percentage and a real extent of the mudflats. For example, if we are looking at Porirua Estuary we will measure the percentage of mud that is greater than 50 percent over the extent of the mudflats, whereas the percentage of sample is looking at a specific site – so it's a measure from a sample that's taken and sent to the lab and analysed in the laboratory, which then returns the information telling us how many fine sediments of mud and clay as a percentage of the sample, versus coarser sediments.

We wouldn't just look at one of these measures to assess the muddiness of an area or an estuary in this case; we would look at the percentage of the sample at a number of different sites. We would look at the extent of the mudflats basically

- 174 and then we would also look at sedimentation rate, which is also related but a  
 175 different measure – so that’s millimetres per year, the depth from the surface,  
 176 down to a plate. In our situation that’s the methodology we use to measure  
 177 sedimentation rate.  
 178
- 179 Chair: So you’re wanting to have more mud and less sediment in the sample, or in what  
 180 you’re measuring? I guess I’m just not sure about how the muddiness parameter  
 181 relates to sediment loading.  
 182
- 183 Melidonis: It gives us an indication – some of these measures look at for example percentage  
 184 of fine sediment in the sample. The top of the sediment collected from an estuary  
 185 or site. It's an indication of a more recent measure or deposition as with the  
 186 percentage of mud across the mudflats. Once that has been shifted, once it's been  
 187 washed away through a weather event, tide or water movement occurring over  
 188 the site, then it can be washed into a deeper area. It also gives perspective on the  
 189 time period over which these are measured. We would then look at... I see here  
 190 it says, “later [18.52] the table” but we would look usually for sedimentation rate  
 191 over a five year mean to even out the impact of depositional events or high  
 192 rainfall events, as Dr Greer was discussing earlier.  
 193
- 194 In combination they give a much clearer picture of the state of the environmental  
 195 health at a site.  
 196
- 197 Chair: Just one last question on that. So then if you have no data, if there is no data in  
 198 the current state for muddiness, am I reading this right – so the target is to  
 199 maintain and how do you know what you’re maintaining if there’s lack of  
 200 information on current state?  
 201
- 202 Melidonis: Yes I agree. It's difficult to understand if there’s no benchmark. Obviously, the  
 203 version you’re looking at Table 8.1 is from Dr O’Callahan’s evidence, and it is  
 204 not necessarily reflective of what I have included in my evidence.  
 205 [00.20.08]  
 206 I do agree that it is difficult to comment whether it's been improved or  
 207 maintained if you don’t have that initial data.  
 208
- 209 Chair: Thank you. Sorry, that was probably unfair to take you to the planning evidence,  
 210 but it might be a question we come back to Ms O’Callahan about, just to check  
 211 that your science is accurately reflected in here. We’ll come back to that. I think  
 212 it's a question for Ms O’Callahan. Thank you.
- 213 Melidonis: Kia ora.  
 214
- 215 McGarry: Just on that question from Commissioner Nightingale about the muddiness,  
 216 you’re already talking about fine particles there and the issue really is the  
 217 resuspension of those particles as well, back in the water column, affecting the  
 218 health of the ecosystem, isn’t it? So you’re trying to avoid those very fine  
 219 particles (1) being deposited and smother things – that’s an issue is it,  
 220 smothering? And, then another issue is that resuspension of them and moving to  
 221 other parts of the marine environment. Is that correct?  
 222
- 223 Melidonis: Thank you for your question Commissioner. Yes, that’s correct. There are  
 224 effects on different species dependent on where the fine sediment is situated; so  
 225 in the water column it might affect fish more than benthic invertebrates, but then

226 when it settles it will definitely have an effect on some of the more sensitive  
 227 benthic macroinvertebrates in the system.  
 228  
 229 What we don't measure is the turbidity in the coastal environment, because there  
 230 is so much wave action and activity that might increase turbidity at times, but  
 231 that's not always necessarily reflective of inputs, river run or land derived inputs.  
 232  
 233 McGarry: So muddiness is a measure really of those fine sediments, and you're not wanting  
 234 them because they are a problem in the marine environment, in terms of  
 235 smothering, resuspension and moving around – understanding they will  
 236 eventually flush into the deeper parts of the system?  
 237  
 238 Melidonis: Yes. Dependent on the system of course. Mudflats are no-end as such, because  
 239 naturally they are to some extent muddy. It's measuring systems that are of  
 240 concern in terms of excessive inputs into a system where we can measure and  
 241 we can see an impact on the ecological state.  
 242  
 243 McGarry: Just in that same vein in terms of the sedimentation, the real difference between  
 244 notified and what we are seeing now is now we are taking into account the  
 245 natural sedimentation rate, adding that into the equation. So we are looking at  
 246 the contribution on top of the natural rate. That's sort of the key difference isn't  
 247 it, between where we were?  
 248  
 249 In terms of the information the Council has on the sedimentation, I'm interested  
 250 in your paragraph 21 where you talk about what is monitored. I just wonder if  
 251 you could provide us with a little bit more information about you've said it's  
 252 annually, and I'm wondering how long the sedimentation rate has been  
 253 measured for and at what locations in particular.  
 254  
 255 Melidonis: Thank you for your question Commissioner.  
 256  
 257 We have some technical documents that summarise this information and also a  
 258 web report on our website, our Greater Wellington website that summarises this  
 259 information visually quite nicely, so you can view it over time.  
 260  
 261 The monitoring is area dependent and location dependent, but we do have almost  
 262 two decades or twenty years of data in Te Awarua-o-Porirua.  
 263 McGarry: Related to that is there any dredging activity in Porirua? I know there is in  
 264 Wellington. Is there any dredging activity in Porirua?  
 265  
 266 Melidonis: There is dredging activity but it is more associated with the marina. Mana  
 267 Marina is the marina at the entrance to the two inlets, or Onepoto arm or  
 268 Pāuatahanui inlet in the Porirua Harbour. There is occasional dredging there to  
 269 facilitate vessels, mainly yachts moving in and out of the marina. There was  
 270 recent dredging this year in order to move some sediment from that area.  
 271 [00.25.00]  
 272 There is a channel that is about six metres deep leading into the estuary, so there  
 273 is occasional very infrequent maintenance dredging in that area, but nothing up  
 274 in the two inlets or the arms of the estuary just right at the interface of the more  
 275 open coast environment.  
 276

- 277 McGarry: Would those types of activities be picked up by any of your state of the  
278 environment sedimentation plates?  
279
- 280 Melidonis: They remove all the material so we wouldn't expect any of that to be  
281 redistributed around the estuary. But, indeed there is a mobile subtidal sand-  
282 dune, if you would call it that, that would move across the area more towards  
283 the Onepoto arm side of the estuary. We do not monitor what affect dredging  
284 may have on that, but we do have long-term data at sites close-by and we have  
285 not to date observed any affect.  
286
- 287 McGarry: You talked about a combination of stressors. Maybe you could tell us what those  
288 stressors are, the culmination of stressors.  
289
- 290 Melidonis: Just talking about an estuarine system again, because it's a more confined system  
291 and quite a good example in this case, since we are talking about Te Awarua-o-  
292 Porirua largely as one of the Whaitua.  
293
- 294 Some of the stressors might be the obvious ones we've been speaking about –  
295 sedimentation, or sediment load coming down from land-based sources and then  
296 extending that to land use.  
297
- 298 We also did briefly touch on in Dr Greer's talking session about climate change  
299 – so climate related factors that we don't necessarily measure as a regional  
300 council; so water temperature and the like and PH and different measures related  
301 to water quality.  
302
- 303 There would also be activities on the different water bodies or around the  
304 different water bodies; so maybe boat movement and the like.  
305
- 306 McGarry: Just one last one, and it's really about your plate monitoring, your sediment plate.  
307
- 308 If there's a large event that comes through during that period would that send  
309 you off to see what that has done in the system, or do you just annually go out  
310 on a date regardless of that sort of background effect?  
311
- 312 Melidonis: We have in the past conducted targeted investigations we call them, to look at  
313 sites of concern. We may go out and measure after an event – so a high rainfall  
314 event for example, but that's not routine monitoring. We are looking to  
315 potentially move to more responsive monitoring, to get more information of how  
316 long that sediment remains in the intertidal before it gets moved or shifted to the  
317 subtidal and then some of it moving out of the system of course.  
318
- 319 We mostly look annually. We visit our sites annually.  
320
- 321 Wratt: Looking at the slide that was up, you note scientific applicable attributes include  
322 phytoplankton in the open coast etc. and marine benthic invertebrates, but I  
323 notice in Tables 8.1 and 9.1, that 9.1 doesn't include those attributes, which is  
324 for Te Awarua-o-Porirua; and then in the Te Whanganui-a-Tara they've been  
325 removed. Can you just explain that?  
326
- 327 Melidonis: In Plan Change 1 benthic marine invertebrate diversity was included for Te  
328 Whanganui-a-Tara but not for Te Awarua-o-Porirua and that was reflective of

329 what was produced by the WIPs through the Whaitua Process; and that filtered  
 330 through to the Plan Change 1 tables.

331 [00.30.12]

332 Now Dr O’Callahan’s evidence is showing, as you said, benthic marine  
 333 invertebrate diversity being removed in its entirety from the plan.

334

335 Wratt: So phytoplankton are removed as well?

336

337 Melidonis: Yes.

338

339 Wratt: You identified them as scientifically applicable attributes.

340

341 Melidonis: I think I will probably leave that to Ms O’Callahan to answer, but just to say that  
 342 in a lot of instances there was no baseline state or current state data available  
 343 from which to set a benchmark, or current state in order to understand if that  
 344 parameter was to be maintained or improved. But I will leave it to Ms  
 345 O’Callahan to embellish on that.

346

347 Wratt: My question then from a scientific perspective, and I appreciate there’s no  
 348 baseline state, that’s already been discussed to a degree, it’s how you actually  
 349 implement something when you haven’t got that baseline state, but I guess the  
 350 assumption then is that the attributes that are there, the macroalgae, copper  
 351 sediments, zinc sediments, muddiness and sedimentation rate, which are the  
 352 same in both are sufficient attributes.

353

354 Melidonis: When assessing the applicability of the coastal attributes when writing my  
 355 evidence, because of this issue it would have been easier to address the different  
 356 estuaries under a narrative rather than including them as a specific column in the  
 357 table because of this issue of insufficient data.

358

359 Chair: We are at time. Dr Melidonis thank you very much. We look forward to talking  
 360 with you further on Wednesday.

361

362 Apologies, this is probably quite a simple question, but for effectively a lay  
 363 person who is just really trying to get their head around this complex science,  
 364 the crest model as I understand it, which I think that also Mr Oldman discusses  
 365 in his evidence, do you have a reasonable level of confidence that if land use  
 366 changes are made that will reduce or minimise sediment from land use activities  
 367 – housing developments and so on; and that that is going to result in  
 368 improvements in the coastal marine environment, in terms of sedimentation  
 369 which does seem to be the really big issue that is impacting on water quality?

370

371 Melidonis: The way the crest model was set up, and as you mentioned Mr Oldman will go  
 372 into further detail later in the week, but the purpose was for it to reflect what we  
 373 might expect under different scenarios. So, acknowledging it as a model and it’s  
 374 not reality, it should give us a good indication of where sediment is suspended  
 375 sediment and then deposited sediment is likely to end up in the harbour under  
 376 different land use management scenarios, yes.

377

378 Chair: We are moving now to Mr Sharp, talking about the Whaitua Programme.

379 [00.35.00]

380 Kia ora. Welcome.

381  
382 Sharp: Kia ora. Tēnā koutou katoa. Ko Tim Sharp tōku ingoa. Kei te Te Pane Matua  
383 Taiao ahau e mahi ana. He kaiwhakahaere manaaki wai i Te Whanganui-a-Tara  
384 ahau.

385  
386 I am Greater Wellington's Catchment Manager for Wellington and the Hutt  
387 Valley. Formerly I was Council's Whaitua Programme Manager between mid-  
388 2018 to early-2023. I oversaw the conclusion of the Whaitua Te Awarua-o-  
389 Porirua process in 2018/19, and I was the Manager of the Whaitua Te  
390 Whanganui-a-Tara process throughout.

391  
392  
393 My role today is to help with your understanding of the Whaitua Programme  
394 underpinning Plan Change 1. I am not aware that there are others scheduled to  
395 discuss the Whaitua Programme and to query it. This is an opportunity –  
396 although there are mana whenua participants from the Whaitua process  
397 scheduled for later in the week, and Mr van Berkel as well who is a committee  
398 member in Te Whanganui-a-Tara.

399  
400 As far as rebuttal evidence, there was only one specific reference to the Whaitua  
401 Process from the Porirua City Council with respect to requirements of s32. As  
402 you aware there is a significant queries about the feasibility and achievability of  
403 the objectives and targets derived from the Whaitua processes and the WIPs, so  
404 I will focus on that.

405  
406 As far as context, Council's implementation of the NPS-FM or the requirements  
407 of the NPS-FM since it was introduced in 2011, there has been a requirement  
408 for councils to work closely with tangata whenua and the community. I have got  
409 a few examples here from the 2020 version.

410  
411 It has strengthened through each amendment and the requirement is that tangata  
412 whenua and community are involved at every step of the way to determine their  
413 aspirations. I'd probably more correctly call them 'expectations' to use their  
414 knowledge, including mātauranga and community knowledge, and importantly  
415 to develop plans to get there. So it's not just about a values-based outcome setting  
416 exercise: it's the four components.

417  
418 Greater Wellington established the Whaitua Programme early in its application  
419 of the NPS-FM to involve mana whenua. I will switch to mana whenua now,  
420 because that is the preferred term of tangata whenua in Greater Wellington,  
421 whom have established rohe here. There are six mana whenua in Greater  
422 Wellington and two that have direct interest in Plan Change 1 – Ngāti Toa  
423 Rangatira and Taranaki Whānau; also involving community councillors from  
424 Regional Council and Territorial Authorities.

425  
426 There are different approaches to collaborative decision-making and Greater  
427 Wellington with its six mana whenua partners working together on the Regional  
428 Council's regional planning committee, Te Upoko Taiao, agreed the terms of  
429 reference for the Whaitua model.

430  
431 The terms of reference states that the regulatory proposals developed will be  
432 incorporated into the Regional Plan through a plan change process.

So as you are aware the foundations for this plan change are the two Whaitua processes for Te Awarua-o-Porirua and Te Whanganui-a-Tara.

Whaitua committees were established within the wider context of implementation by Councils using similar approaches. Some examples I have listed on the slide here, but all councils were using some form of community engagement method with elements of collaboration often informed by the International Association of Public Participation, IAP2 methods, which ranges in a spectrum from engagement with the community which is inform, through to involve, collaborate and empower.

Like many other councils, the Whaitua Programme was in the collaborate to empower end of the spectrum.

Many CRIs, Landcare, Cawthron, NIWA were also involved at the time in designing processes for community engagement, particularly in freshwater, as a result of the land and water forums work.

The committees in the Whaitua Programme were supported by the provision of information from all sources and often requested more information. I have just got a note there, that Wellington Water was an advisor to the committees but not a member – having conflict of interest.

[00.40.00]

The products in the Whaitua processes were Whaitua Implementation Programmes, or WIPs. Canterbury's similar programme their zone committees developed Zone Implementation Programmes or ZIPs. These contained many recommendations for councils, regional councils and other territorial authorities, and other agencies, and indeed for all of the community to pick up.

For both these Whaitua mana whenua were full members and signatories of the WIPs, while also developing their standalone statements and all WIPs to be implemented together. So for the two Whaitua we have four guiding documents.

These documents were presented and received by councils with various resolutions made in council meetings. In Greater Wellington there's a quote there from the Terms of Reference, which states that if Council is not prepared to accept any of the regulatory proposals that they should be referred back to the committee for further consideration.

There was definitely a bit of to and fro over a year or so prior to the conclusion of the programme. Ultimately Council received the WIPs in full and so did the Territorial Authorities.

I have a quote there from the Upper Hutt City Council's resolution.

With respect to objective setting relevant for this hearing, both Whaitua committees adopted tikanga or kaua as an expression of te mana o te wai; so we have the principle that all waterways are important based on whakapapa and historical connections; all have some importance to communities for many values, whether ecological, for mahinga kai, for amenity, for recreation. That all

waterways were important. That was a really important tikanga that they landed on, so as not to leave any communities behind, if you like, or any awa.

Regardless of how degraded they were and are, a principle of restoring them, albeit over a long period of time, was and still is the goal.

The urban parts of these Whaitua are actually where the most easily accessible streams are. They're easy seen daily. They're easily interacted with. They were and are still important mahinga kai and they are the most degraded.

So, the ambition or the expectation to restore them is high.

The Te Whanganui-a-Tara committee for example had a goal of stopping degradation in ten years – holding the line so they don't get worse; along with significant improvements over a generation and then continue improvement towards healthy waterways or waioira in a hundred years.

I'm not sure that PC1 will get us there, but that is the goal of the community, mana whenua and councils in these cities.

The committees were well informed by a large project team. They were well aware of the state and trends of the waterways and that it would not be easy. But, with respect to the use of best information in making decisions, and I know it came up earlier in a question from Commissioner McGarry, about the MFE's guidance on using best information and whether that meant the precautionary approach applied, it does mean that; that in fact the MFE's guidance, and I quote, "This clause speaks to aspects of the precautionary principle and requires action even where there may be uncertainty about data or the outcomes that will be achieved. Councils must interpret uncertain information in the way that will best give effect to this National Policy Statement. This means that information must be interpreted in a way that provides first for the health and wellbeing of the waterbody. This can mean you build a more conservative buffer into your target attribute states to ensure the health and wellbeing of the waterbody."

Any improvement trends I think identified have been discussed quickly today and should be assessed in relation to a trend towards waioira, which is healthy mahinga kai and actually distinct from swimming. I don't think the streams in a lot of our urban settings are being considered for swimming, but they are for mahinga kai.

While setting outcomes these committees were very cognisant of the challenge. They recognised that multiple interventions would be needed, with strong leadership and participation over many years. They set objectives and the national objective framework targets attributes stated with this in mind.

[00.45.00]

They assess the current state – and just a high-level bullet point list of the method there. The current state and what was causing the current state. The committee worked up a list of a hundred issues initially. They rationalised these down to twenty and they have sought to develop solutions to all of them.

534 They considered how could current or baseline state be shifted and who would  
 535 need to do it? What would it take? How long would it take? What state could  
 536 they get to and in what timeframes?

537  
 538 The targets or future state were not set until current state was agreed and future-  
 539 assessed for feasibility.

540  
 541 I recognise that's since the conclusion of Whaitua processes – they've been a  
 542 number of years and a lot of further work has been done, and that the objectives  
 543 and targets have been moderated based primarily on feasibility. Just to be clear,  
 544 that does not mean the ambition or the expectation of the communities and mana  
 545 whenua has changed. It goes without saying that if the provisions through the  
 546 Regional Plan are weakened, more work outside what can be controlled through  
 547 regulatory provisions will need to be done.

548  
 549 So the further the PC1 gets us, as intended by the NPS-FMs precautionary  
 550 approach, the better.

551  
 552 That is the end of my summary. I look forward to your questions.

553  
 554 Chair: Thank you very much. I will start. I've just got one.

555  
 556 There has been quite a bit of discussion in some submissions about the 2040  
 557 timeframe for achieving the objectives. From my reading of the implementation  
 558 and the WIP documents, they seem very clear that 2040 is the timeframe that the  
 559 committees were recommending, and they recognise it would be challenging to  
 560 get there. That was very much the recommendation that came out of all the years  
 561 of the engagement process.

562  
 563 Somewhere between delivery of the WIPs and maybe PC1 there might have been  
 564 a proposal that 2060 is actually more realistic. Did that every come back to the  
 565 WIPs, do you know?

566  
 567 Sharp: Thank you for your question Commissioner Nightingale. No, that didn't come  
 568 back. That was considered later through the development of the notified PC1.  
 569 The timeframes were considered by the committees - not 2060 specifically. I  
 570 think there was the recognition that achieving any future state is uncertain and  
 571 that the further away it is it's perhaps more realistic to achieve but no less certain,  
 572 and that having 2040 was reasonable, and also considered feasible based on the  
 573 advice from me and project team. The members of the committee themselves  
 574 weren't experts in a lot of the topics. They relied on the advice from Council  
 575 officers, consultants, Wellington Water, etc.

576  
 577 Chair: Just a follow-up to that.

578  
 579 I think Te Awarua-o-Porirua was delivered in 2019 and Te Whanganui-a-Tara  
 580 in 2021. Not a significant period of time but five or six years, or five years.

581  
 582 The goal of achieving these targets by 2040 was that set, bearing in mind that to  
 583 go through the PC1 process would take five, six or seven years?

584  
 585 Sharp: I'd say perhaps not. Twenty-fourty was a date in the NPS-FM that was taken into

586 [00.50.00] account. It seemed a reasonably long time away – 20 years or two decades.  
 587  
 588 The committee did talk about a generation and perhaps a generation is 25 years.  
 589 I'm not suggesting we go out to 2050, but I guess that's all part of the  
 590 consideration.  
 591  
 592 Wratt: Thank you for a great outline of the WIP processes. Thank you. Appreciate that.  
 593  
 594 In paragraphs 25 and 26 of your evidence you talk about why you went for the  
 595 community model as opposed to the stakeholder model. I think that's what it  
 596 explained.  
 597  
 598 In the previous hearing we did have a bit of pushback from some of the  
 599 infrastructure companies I think, or organisations in terms of feeling that they  
 600 hadn't had sufficient opportunity to engage in the WIP processes.  
 601  
 602 You do talk about the opportunity for presentations to your WIP committees.  
 603 Can you just comment a little on that context and what infrastructure I guess, or  
 604 sector groups? Because that's really where I think we are seeing the pushback  
 605 on the timeframes and the targets that come from the WIP process and then into  
 606 PC1.  
 607  
 608 Sharp: Members of the development community and infrastructure community were  
 609 approached directly, or I contacted them directly in the establishment of the  
 610 Whaitua Te Whanganui-a-Tara, seeing their interest in being on the committee,  
 611 and advertising and promotion of participating was quite extensive through  
 612 social media and radio. I don't think it went as far as television, but we did a fair  
 613 bit of awareness raising of the opportunity and we received 48 applications (this  
 614 is for Te Whanganui-a-Tara) from the community resulting in seven positions.  
 615 We didn't receive any applications from the developer community sector.  
 616  
 617 So there was that opportunity. There was also, as you've mentioned, opportunity  
 618 to present to the committees offered, and also just the committee members  
 619 themselves being tasked with taking a broad citizen approach and attempting to  
 620 provide for outcomes that would meet all the community, and that would be  
 621 achievable and support the valleys of the community, including developing and  
 622 housing.  
 623  
 624 They did have that as a guiding principle. I have noted in my evidence that it's  
 625 not always easy for some people to do, and advices and what they might want  
 626 to achieve, but on those committees they were having counsellors there. With  
 627 Te Whanganui-a-Tara the Wellington City councillor was the chair of the  
 628 infrastructure committee who'd had a history in oil and gas and was very  
 629 familiar with pipes. He mentioned if these pipes had oil and gas in them they  
 630 would be fixed a lot sooner.  
 631  
 632 So I think those sectors' views were included and considered. Of course the  
 633 criticism will be there, that they weren't considered enough. But my view is that  
 634 they were considered.  
 635

636 If it was just a values-based, “What do we want for our waterways exercise?” it  
 637 wouldn’t take three to four years. It would just be, “We want [54.15] everywhere  
 638 tomorrow,” and we’ll do that in a day.  
 639

640 Once your current state was understood and the challenges of getting there, and  
 641 they really did want to land something that was not going to be too silly. It was  
 642 achievable.  
 643

644 Wratt: The other players in here are the Territorial Authorities. Do you have any  
 645 comment that one of the chairs was in fact currently Wellington City Council?  
 646

647 Sharp: Not anymore. At the time the representative was the chair of the infrastructure  
 648 committee.  
 649

650 Wratt: So that’s another group where there is quite a bit of pushback. Any comment on  
 651 their engagement?  
 652 [00.55.00]

653 Sharp: They attended every meeting. They had staff on the project team. They had  
 654 ample opportunities to question and bring concerns through.  
 655

656 Notwithstanding that the full [55.17] of due diligence through RMA s32  
 657 requirements was always going to be needed to be done. That’s I think what we  
 658 are seeing. I do believe some of the pushback or the suggestion that it’s gone too  
 659 far and they’ve been caught blindsided is really unreasonable, given their  
 660 involvement. In fact Wellington City Council was involved in Te Awarua-o-  
 661 Porirua as well as Te Whanganui-a-Tara.  
 662

663 Stevenson: Just following on from the engagement related questions, we’ve heard from  
 664 particularly Bob Anker from the Upper Hutt Rural Communities that the smaller  
 665 rural landowners weren’t adequately engaged. Could you comment just for  
 666 completeness on how the owners of four to twenty hectare blocks were engaged  
 667 through the WIP process?  
 668

669 Sharp: Thank you for that question, Commissioner Stevenson. I will keep my response  
 670 to Te Whanganui-a-Tara because I only joined Te Awarua-o-Porirua right  
 671 towards the end.  
 672

673 In Te Whanganui-a-Tara the co-chair worked for the Ministry of Primary  
 674 Industries and was really well-connected with Federated Farmers and the  
 675 farming community. Louis Askin did a fantastic job of bringing forward rural  
 676 interests and did an amazing job of connecting as best you could with rural  
 677 communities and understanding their concerns.  
 678

679 We had a hall meeting at the Mangaroa Hall. I’m not sure of the date, but a year  
 680 or so into the process. It was quite well-attended. I am not sure if Mr Anker was  
 681 there. Many of the Mangaroa community were and concerns around their  
 682 opportunities to develop and use their land were raised.  
 683

684 I think the provision was it ended up being developed to support the objectives  
 685 in the rural setting.  
 686

687 They were pretty well thought through – notwithstanding I think we were always  
 688 going to get criticism that we could have done more, particularly if that’s going  
 689 to result and impact on someone’s livelihood.  
 690

691 **Kake:** Just a few quick questions. The first one you might have answered with respect  
 692 to a timeframe to determine a generation from mana whenua. You mentioned  
 693 maybe 25 years. Did they come up with one perhaps? Yes? No? I can ask them  
 694 later on in the week anyway.  
 695

696 **Sharp:** Thank you, Commissioner Kake. I think 25 was mentioned. Maybe in Te  
 697 Mahere Wai. I think the reference is to a generation.  
 698

699 **Kake:** In the statement from Ngāti Toa it says that they stepped away from the Whaitua  
 700 Community process in 2018. I just want to get some clarification and some  
 701 confirmation with respect to how information was shared with them throughout  
 702 the Whaitua committee process with them, assuming that they have been  
 703 involved throughout the drafting. And, the other mana whenua representatives  
 704 were obviously offered the same opportunity with respect to the same  
 705 information being received?  
 706

707 **Sharp:** The Ngāti Toa Rangatira were on the Te Awarua-o-Porirua Whaitua Committee  
 708 for three years. They stepped aside in the last nine months or so, giving the  
 709 reasoning that they were concerned about having to be asked to agree in a  
 710 consensus model to setting sea state water quality, as if that’s a final state – but  
 711 that was the ambition.  
 712 **[01.00.17]**

713 That was their concern at the time. They wanted to step-aside and develop their  
 714 own statement, as a pou to say, “We want waiora.” At that time in 2018 the  
 715 conversation wasn’t advanced enough or mature enough for us with them to  
 716 work that through. Obviously Ngāti Toa are also in Te Whanganui-a-Tara and  
 717 we spent a good year discussing with them about a slightly different approach  
 718 into Te Whanganui-a-Tara.  
 719

720 I’m not too sure if I’m answering your question. Hopefully.  
 721

722 Your question was about how well they were involved throughout to  
 723 conclusion?  
 724

725 **Kake:** Yes.  
 726

727 **Sharp:** A lot of the drafting of the WIP had already been done when they stepped aside.  
 728 They are actually a signatory to the Porirua WIP. It was just simply that there  
 729 wasn’t provision at the time to look further than setting a (c) state.  
 730

731 The understanding was given the current state and what could be achieved, that  
 732 (c) state was all that could be achieved by 2040, and Ngāti Toa thought, “We  
 733 can’t sign off on that.”  
 734

735 **Kake:** Just a couple of quick questions on top of that then.  
 736

- 737 As an operational matter, and taking into account your previous role as a  
 738 catchment manager, data and information shared with mana whenua to inform  
 739 monitoring results, was that done?  
 740
- 741 Sharp: Not as part of my role, no.  
 742
- 743 Kake: Additional then, through the Whaitua process did mana whenua express any  
 744 desires to undertake their own monitoring, establishing their own methods with  
 745 respect with mātauranga Māori, knowing how to observe, smell, see with respect  
 746 to their own observations?  
 747
- 748 Sharp: Thank you for your question. Yes, absolutely Te Mahere Wai actually presents  
 749 Te Oranga Wai as a framework for mātauranga monitoring and establishing  
 750 baselines – establishing future states and targets. It's partially developed and the  
 751 recommendation in Te Mahere Wai is that it be further developed by mana  
 752 whenua.  
 753
- 754 Kake: No further questions, thank you.  
 755
- 756 McGarry: Thanks very much for your statement. It was helpful to summarise.  
 757  
 758 I am just interested in the question-line of Commissioner Nightingale, which is  
 759 really the erosion of time that's happened through the process, and how that  
 760 might have affected the timeframes that the WIP was looking at. I guess it sort  
 761 of struck me while I was wading my way through all the material that we are at  
 762 a point now of 2025 and the goal was 2000 and that quite nicely falls into three  
 763 25 years.  
 764  
 765 I think my question is, do you think the 2040... I mean, we have a lot of  
 766 submitters saying 2060, but I can't really see much basis for that, other than just  
 767 sort of thinking that's quite a long way to push it out probably as far as we can  
 768 get; but is there some validity in the argument of the 25 year period being the  
 769 generational base, or 20-25, that in fact the first step, if you looked at it as three  
 770 steps to get there, there the next target would actually be plus 25 years and we'd  
 771 be looking at 2050 rather than looking at '40 and '60. I'm interested in your  
 772 response on that.  
 773
- 774 Sharp: I've been thinking about that myself actually. I think there's some elegance in  
 775 that. I think it would be good to ask mana whenua during the week, particularly  
 776 given their concerns through Porirua 2040 being too far away, and only getting  
 777 to (c). If it's 2050 and the state is (and I understand through the s42A work that  
 778 it might need to be (d) in places) if it's (d) by 2050 then I'm not too sure how  
 779 palatable that will be.  
 780
- 781 McGarry: Just in terms of the WIP though, when you asked the question you said that the  
 782 NPS-FM that's where that 2040 date came from. But, then in the discussions  
 783 through that process the focus you think was on that generational 20-25 year  
 784 timeframe.  
 785
- 786 Sharp: Yes Commissioner McGarry, that's right. I guess with Porirua the WIP being  
 787 completed in late 2018 some of those dates were probably thought about and  
 788 agreed in 2017, so 2040 was still longer than twenty years. Te Whanganui-a-

Tara similarly I guess thinking of a date of 2043 seemed... as I said earlier, setting timeframes for these things is inherently uncertain. Before it goes through the rigger of s32 and the RMA planning process, 2040 seemed a round number.

Honestly, nothing probably more sophisticated than that.

The question was asked earlier of whether 2060 was considered. It wasn't so much whether it was 2040 or 2060 by the committee. There was definitely discussion and a lot of thought put into when do we want to achieve some generational shifts and some significant shifts towards waiora and that 2100 waiora vision of course that's where the committees want to get to, the communities want to get to and the councillors. We probably all want to get to. But it's pretty unhelpful as far as some guide and drawing some lines in the sand and establishing new provisions that will get us there. So we have to have those closer dates.

One of the other guiding principles was stopping the decline within ten years, recognising that there were declining trends. I have learnt today that perhaps some of the trends aren't declining so much, but at the time through the work we were doing, the understanding was there was significant degradation and that a lot of work still needed to be done, just to stop that.

So sort of had those three guiding principles: hold the line short-term; generational shift; and then significant improvement over the hundred years. That was recognised in some of the current state of some of the urban waterbodies that are significantly degraded.

McGarry: I guess the other question, and I think you were here this morning and you heard my question to Dr Greer, about this assumption that things are continuing to decline. I think that's kind of just the world we live in isn't it – more pressure and more decline of resources. Would it be fair to say that the WIPs didn't have any information to suggest what we are now looking at, which looks like no strong evidence of either decline or an improvement? Would it be fair to say that the assumption of the WIPs were that there was just going to be an ongoing decline over time without action?

Sharp: Yes, I think that's absolutely true. There was the information presented by the science team, was that across the board there was declining water quality on most attributes.

Of huge concern, particularly to mana whenua, is E.coli and wastewater. At the time through those Whaitua processes all we were really aware of was significant wastewater issues. During the Te Whanganui-a-Tara process there was the major burst of a pipe in Willis Street. I think it was right on Christmas Day or Boxing Day. There wasn't too much suggestion that things were doing okay.

So interestingly enough that has changed in the last couple of years.

Greer: Just to clarify: E-coli is the one attribute that is still consistently degrading.

841 Chair: We are at time but I did want to ask:  
 842 [01.10.00]  
 843 An economic assessment with Te Awarua-o-Porirua WIP (and I appreciate you  
 844 came in perhaps towards the end of that programme) the report says that the  
 845 committee did consider a range of alternatives and did consider economic issues.  
 846 Do you know if both this WIP and Te Whanganui-a-Tara whether the economic  
 847 benefits of achieving the target attribute states by 2040 whether that information  
 848 or that expert advice were able to assess that? I know that the s32 Report talks  
 849 about the difficulty of doing that, and that the costs are so large that it can sway  
 850 the assessment very easily. Do you know how much analysis or consideration  
 851 went into really trying to value and quantify the economic benefits?  
 852  
 853 Sharp: A really great question thank you Commissioner Nightingale.  
 854  
 855 My answer is not a lot. A non-market valuation is inherently difficult and often  
 856 subjective. Is very difficult to quantify things like mauri and amenity value.  
 857  
 858 There wasn't to my understanding, and certainly in Te Whanganui-a-Tara there  
 859 wasn't, and my understanding in the Te Awarua-o-Porirua Whaitua there wasn't  
 860 significant work really done at all into the value of restoring waterways and  
 861 bringing back those values.  
 862 I think it was more assumed or assessed the impact, the costs of not having those  
 863 values provided for, and the significant impact on communities and mana  
 864 whenua of having these degradable waterbodies in their back yards.  
 865  
 866 I think that was the guiding almost direction, or the reason that the NPS-FM was  
 867 developed in the first place, was that general recognition across the country that  
 868 our waterways were not representative of our mana as a country.  
 869  
 870 There has been some non-market valuation of values done of course across  
 871 different parts of the country, but it wasn't done specifically in our Whaitua.  
 872  
 873 Chair: It just doesn't sort of seem right. You've got this national direction saying that  
 874 it sets up the process for setting these outcomes and the attribute states; and then  
 875 you sort of get to the end of it, this pointy end where we're looking at the  
 876 planning provisions, and then saying, "Actually, it's just going to be too  
 877 expensive."  
 878  
 879 That's something that we're obviously going to be thinking quite a bit about.  
 880  
 881 I don't know if you've got a response to that. It might be a bit hard to respond  
 882 to. I guess I'm just sharing that it's very difficult.  
 883  
 884 Sharp: I agree. Perhaps it is a philosophical discussion or consideration, and something  
 885 for you to consider as a panel. There was a lot of talk about national bottom-  
 886 lines and they were agreed unilaterally by all sectors. It was quite a few years or  
 887 decades of discussion amongst parties to where things landed in the NPS-FM.  
 888 Whilst maybe not being considered bottom-lines had to be set, they were  
 889 bottom-lines for human health and for ecological health. I do feel like they were  
 890 debated and negotiated at length over many years.  
 891

Of course, feasibility and affordability will come into it, but I do think there was a general agreement in Aotearoa that economic benefits or economic opportunities had swayed the ledger too far for too long.

[01.15.00]

Chair:

Thank you. I think that also brings in that conversation we had this morning about part two, and while the NPS-FM gives expression to part two in terms of freshwater, that analysis has been done in terms of the national bottom-line. So sort of unpicking it all through a s32 analysis now is perhaps not what is envisaged by the statutory framework.

I know we are over, but I actually did also want to ask: the non-regulatory recommendations and the WIPs, there are some things in there, for instance that the relevant Three Waters Agency will report back on some things. There's various recommendations in there that done rely on plan provisions for implementation. Some of them seem quite significant just looking at them, around repairing and replacing assets in the network.

Can you talk about the process for I guess closing the loop on that; so reporting back, transparency and accountability? Sorry, that's probably quite a big question to end on when we are over time. Apologies.

Sharp:

Thank you for the question Commissioner Nightingale. It is a big one to land on.

The Regional Council has a Whaitua Implementation reporting programme. We report six monthly to our Council. Our most recent reports were in November last year. We worked with the TAs in Wellington Water and others to quite methodically provide a commentary on each and every recommendation across all the documents. Some were in the realm of 450 recommendations that were commented on.

I don't know what the split between non-regulatory and regulatory provisions is. I assume it's half. You're right – there's a lot of non-regulatory recommendations that both committees took it on themselves to provide some guidance recommendations on all the things that they were aware of, that were affecting water quality. Hence, why it's such a substantial tomb of recommendations.

Regional Council does have a programme in place of reporting quite methodically. We check in with Territorial Authorities on their progress. Significant investment through LTPs has gone into Three Waters in recent times – particularly for drinking water. I think the wastewater funding will need to increase and subsequent LTPs, particularly for Plan Change 1. It lands where it is.

Chair:

A final quick following on from that.

I appreciate you've said drinking water, but in terms of these provisions catching up with deferred maintenance and upgrades and all of that thing, and all of the work that's required to the infrastructure in terms of stormwater and wastewater, so that we have the best information before us when we are considering our recommendations on these provisions, is it possible to ask for I guess an update? For instance, if TAs or Wellington Water have made commitments in terms of

944 network upgrades (and I'm sorry, I haven't gone through all of the non-  
 945 regulatory recommendations in the WIPs in detail) to the extent that there are  
 946 commitments and there are things in place in terms of network improvements,  
 947 infrastructure upgrades, do you think that there's a way that we can have that  
 948 information? Because if we are responding to submitters that say, "It's too  
 949 expensive. Can't be done in time. Not feasible. We need till 2060," it would be  
 950 helpful I think to know that actually there are commitments that have been made  
 951 to carry out some network upgrades and the timeframe for that.

952 [01.20.02]  
 953 Sharp: That's a really good point Commissioner Nightingale.

954  
 955 You may be able to get that information from the Territorial Authorities, or  
 956 Wellington Water would probably be the place to ask, "What is the current level  
 957 of funding that they get? How far do they think it's going to get them?"

958  
 959 Anecdotally I'm aware that it's not going to get them anywhere near what the  
 960 targets in Plan Change 1 are – the current level of funding. There are definitely  
 961 wastewater discharge network programmes in place and some stormwater  
 962 treatment under way. It would be a good question to ask, "What's the current  
 963 level of funding likely to get us?"

964  
 965 Chair: Yes, I think they have given us some of that information. I am particularly  
 966 interested in terms of the commitments that they might have signed up  
 967 through the WIP to implementing the non-regulatory recommendations in the  
 968 WIP.

969  
 970 Sharp: A lot of what you might deem the non-regulatory recommendations perhaps  
 971 would be required to achieve the regulatory provisions. It might be a network  
 972 improvement programme, maybe non-reg, is to achieve a regulatory direction.  
 973 It's probably not as black and white as that.

974  
 975 With respect to your comment about their commitments or signing up to what's  
 976 on the WIPs, it appears that there's less certainty about what they are signed up  
 977 to.

978  
 979 Again, none of those things were dreamt up by community members. They were  
 980 all guided by Wellington Water. It wasn't like the committees were able to say,  
 981 "We could do a network improvement plan, or these grade pipes could be  
 982 improved to a standard by this date," without that direction from Wellington  
 983 Water.

984  
 985 Stevenson: Along the same lines, over and above what was committed to through the WIP  
 986 and non-regulatory contexts, I'm interested in what maintenance and renewals  
 987 were already in place to meet current requirements, and then building on that  
 988 how much of the compliance costs could be attributed to Plan Change 1?  
 989 Because it could well be the case - and apologies, this is probably something for  
 990 Wellington Water and TAs and I will note it, but I am interested in your  
 991 background.

992  
 993 Sharp: No, I can't really answer that. There were definitely programmes in place.  
 994 Wellington Water has a stormwater management strategy as part of

995 requirements under the Natural Resources Plan. I think that question would have  
 996 to be asked of Wellington Water.  
 997  
 998 Chair: Thank you very much. Sorry to keep you over. We will now adjourn and be back  
 999 at 1.15pm – so a 45 minute break. Thank you.  
 1000  
 1001 [Adjournment – End of recording 01.24.05]  
 1002 [Resumes Hearing Stream 2 – Day 1 - Part 2]  
 1003  
 1004 Chair: Kia ora Ms O’Callahan. Back to you taking us through the first seven issues in  
 1005 your Objective s42A report.  
 1006  
 1007 O’Callahan: Yes, thank you.  
 1008  
 1009 I realise that we launched straight from me to Dr Greer before in the  
 1010 introduction. I’m just checking that there were no questions of me through that  
 1011 introductory stuff, otherwise I will launch into Issue 1.  
 1012 Issue 1 is pretty straight forward – that’s Issue 1 on the s42A report for the  
 1013 objectives. It’s simply related to categorisation of the objectors to the freshwater  
 1014 versus the Schedule 1 process. There had been a general submission received  
 1015 from Winstone Aggregates suggesting some provisions were not appropriately  
 1016 allocated in terms of the applicable process. You will have this submission in all  
 1017 of the hearing streams, because it was assigned to all of them.  
 1018  
 1019 I have looked at that and I addressed it in my s42A and the evidence from that  
 1020 submitter confirms that they agree with my s42A report, that all allocations are  
 1021 appropriate for the objectors’ topic.  
 1022  
 1023 Any questions on that issue?  
 1024  
 1025 Chair: Not on that issue but I did recall there was a question I had on something you  
 1026 talked about this morning. Can I just check with you – I think it was in the legal  
 1027 submissions that the target attribute states are objectives and of course this is  
 1028 important in terms of the s32 assessment. Is that also your view Ms O’Callahan?  
 1029 So whether it be a narrative or a numeric – do you think that they are objectives?  
 1030  
 1031 O’Callahan: Yes.  
 1032  
 1033 Chair: The reason I am asking this is Clause 3.11 of the NPS-FM we have that there,  
 1034 and sub-clause 1 says “In order to achieve the environmental outcomes included  
 1035 as objectives every regional council must set a target attribute state and identify  
 1036 the site.”  
 1037  
 1038 Of course this sits as part of the NOF under the implementation provisions of  
 1039 the NPS-FM. I don’t think I’m disagreeing with you, but I guess I just wanted  
 1040 to confirm your view that they are objectives.  
 1041  
 1042 O’Callahan: Yes, I mean the way they have been drafted in PC1 they are objectives. Is the  
 1043 question do they need to be objectives under the NPS? Is that the question you’re  
 1044 asking?  
 1045 [00.05.00]

- 1046 Chair: Maybe not that they need to be objectives, but the notified version of PC1 and  
 1047 your recommendations do classify them as objectives. Is that because they sit in  
 1048 tables and that the provisions cross-refer to the tables which include the target  
 1049 attribute states?  
 1050
- 1051 O'Callahan: Yes, that's right.  
 1052
- 1053 Chair: I see looking at it that the headings of the tables vary a bit. In some instances  
 1054 they are referred to as objectives and in other instances they're referred to as  
 1055 target attribute states, which again I don't think that matters, but it obviously  
 1056 becomes relevant because I imagine there's going to be a lot of focus that comes  
 1057 to the s32 assessment and obviously the different requirements of objectives as  
 1058 opposed to provisions that give effect to objectives.  
 1059  
 1060 That's fine. Your evidence is clear. Thank you.  
 1061
- 1062 O'Callahan: Just to clarify, they are setting the outcomes that are sought for the plan change.  
 1063 In my view they're clearly objectives. They language perhaps with the table  
 1064 headings are different because the coastal objectives are not target attribute  
 1065 states. That's a defined term in the NPS and that doesn't apply to the coast.  
 1066  
 1067 The plan change has used the coastal objectives, the coastal water objectives;  
 1068 but they all are part of the objectives. They set the outcome that's sought in  
 1069 numeric terms.  
 1070
- 1071 McGarry: Can you think of instances Ms O'Callahan where other plans might say that this  
 1072 objective doesn't apply here? So this sort of omitting an objection by a note in  
 1073 this way? Is that something you've been familiar with elsewhere?  
 1074
- 1075 O'Callahan: The challenge for this plan is it doesn't have any other types of content that  
 1076 would normally be used to perhaps set the scene or have an explanatory text, or  
 1077 issue statement, or a long term goal. This was a simple means of trying to express  
 1078 something that was in the plan.  
 1079  
 1080 I think the issue is that that timeframe is unrealistic and the outcomes are  
 1081 potentially unrealistic at a consenting level. Whether the community continues  
 1082 with the waiora goal after they have got to the 2040 or the generational goal, that  
 1083 has to be reviewed at that time. I didn't want the focus in consenting to be on  
 1084 waiora. The focus absolutely needs to be on meeting the first step in the key  
 1085 objectives, which as you will hear, are not easy. That's what the focus should be  
 1086 on for consenting.  
 1087  
 1088 If there's another way to achieve it, I'm happy to consider that. Happy to put in  
 1089 other types of provisions that aren't described as objectives. But, I don't really  
 1090 think it's necessary if the plan drafting is clear that it's intended to be a long-term  
 1091 vision, rather than a statutory provision that needs to be applied to resource  
 1092 consents, which is where the submitters were concerned about. I thought it was  
 1093 a tidy way of resolving that issue.  
 1094
- 1095 McGarry: The wording of the note. I'm wondering if it's just the second sentence that's the  
 1096 real issue, and whether that could be reworded another way.  
 1097

[00.10.10]

1098 What you're saying is you're not expecting a consent by consent basis that  
 1099 you're going to achieve this goal.  
 1100  
 1101 O'Callahan: Correct.  
 1102  
 1103 McGarry: But, it does remind me of te mana o te wai with the law change, where they've  
 1104 said this doesn't apply on a consent by consent basis. I guess most people  
 1105 wouldn't be saying, "We're turning something down because it's not consistent  
 1106 with..." You would be looking for some contribution of the needle moving in  
 1107 the right direction in a general sense.  
 1108  
 1109 I'm just wondering if there was wording that we could say, "It does apply," but  
 1110 just making it more visible that obviously on a consent by consent basis you're  
 1111 not going to achieve that objective.  
 1112 O'Callahan: That's exactly what the note says in the first sentence – that what's needed to  
 1113 achieve progressive implementation is what is set out in the other objectives.  
 1114  
 1115 McGarry: I might come back to you on that one. I'm just wondering if it's the second  
 1116 sentence. I've got no problem really with the first sentence. It's just clarifying  
 1117 isn't it, and how it works as you've said the mechanism. Because you would still  
 1118 not want to be contrary to that objective would you – you wouldn't want to be  
 1119 going in the completely opposite direction; but I guess you would be contrary to  
 1120 the other objectives is what your answer would be.  
 1121  
 1122 O'Callahan: Yes, that's exactly what would be the case. You'd fail on the other objectives.  
 1123  
 1124 Chair: I was just having a quick look in the decisions version of the RPS to see if there  
 1125 was any direction around the long-term freshwater provisions in there. But, I  
 1126 think Objective TAP and the one for Te Whanganui-a-Tara they're expressed as  
 1127 objectives and obviously the Regional Plan has to give effect to those and they  
 1128 are beyond challenge, but I can't see immediately any requirement that the  
 1129 Regional Plan includes a specific provision that gives effect to those long-term  
 1130 visions. They're relevant obviously at the RPS level as well to consenting.  
 1131  
 1132 O'Callahan: As far as I am aware the ones in the RPS would apply to consenting.  
 1133  
 1134 Chair: Just one final point then on the target attributes, factors and objectives, would  
 1135 that also apply to the timeframes and they would also be seen as an objective?  
 1136  
 1137 O'Callahan: Yes, that's my understanding.  
 1138  
 1139 Chair: I don't know if this is the right time to ask this, but I am interested in this issue  
 1140 of interim target attribute states and the NPS-FM sets mandatory requirements  
 1141 around interim target attribute states at clause 3.11. We can come back to this at  
 1142 another point if that's more appropriate, but to what extent does it matter if a  
 1143 shorter timeframe before 2100, if that's set in the Regional Plan does it matter if  
 1144 it's actually categorised as an interim target attribute state, or does that not matter  
 1145 and it just forms part of there's another timeframe and say if that's 2040, or  
 1146 2050, that just becomes part of an objective which all the provisions are trying  
 1147 to achieve; and does it not matter that it's sort of formally captured as an interim  
 1148 target attribute state?  
 1149 [00.15.00]

- 1150 O'Callahan: The section in the NPS is 3.11 subclause (6) and it says if you've got long-term  
1151 timeframes for achieving the target attribute states then you need to have ten  
1152 yearly interims. So they don't define what a long-term is, but I don't consider  
1153 strictly that the 2040 date is really necessarily a long-term objective in the  
1154 context of other plans that I'm aware of under that NPS. The Waikato one I've  
1155 had a small involvement in and they had 80 for meeting their target attribute  
1156 states is my understanding. Don't quote me on it. In that case I'm not sure how  
1157 they dealt with the interim requirement.  
1158
- 1159 There was a concern in this one that the period was longer than ten years and  
1160 therefore I've suggested what I understand to be a key goal, is the going  
1161 backwards. You've heard from Dr Greer today that that's generally looking  
1162 good for ecosystem health metrics but poor for human health.  
1163
- 1164 That seemed like a useful factor to put in and to avoid any argument about  
1165 whether the interim requirement of the NPS was satisfied or not.  
1166
- 1167 So, I think there would be numerous ways in which you could communicate that  
1168 requirement. You could put different numerics and a whole new table. You could  
1169 have different dates by a different percentage of completion. There's an endless  
1170 number of ways in which you could communicate interim requirements.  
1171
- 1172 McGarry: What I'm taking from you, is using the term "interim" would be ten years, using  
1173 the NPS-FM? If there was say a 25 or a 30 year that wouldn't sit that comfortably  
1174 with that ten years, is that what I'm picking up?  
1175
- 1176 O'Callahan: Twenty-five year increments wouldn't sit comfortably with that, no, because the  
1177 NPS directs ten yearly.  
1178
- 1179 McGarry: Those interims of ten years, they haven't changed in the NPS-FM? The WIPs  
1180 were aware of that 10 year being an interim?  
1181
- 1182 O'Callahan: I'm sorry, I'd have to look back at the previous versions of the NPS for that. I  
1183 am not aware of that.  
1184
- 1185 McGarry: It's difficult for us to know what was in their mind in terms of what they were  
1186 thinking was interim, and obviously for you difficult.  
1187
- 1188 O'Callahan: I don't think it was on their minds because they didn't set any interim targets.  
1189
- 1190 Wratt: Is that saying that the 2040 dates are long term? Because there's nothing there  
1191 that actually defines what a long-term is.  
1192
- 1193 O'Callahan: No there's not.  
1194
- 1195 Wratt: Timeframes are long-term. Can we state that from our perspective long-term is  
1196 beyond? We've got quite specific targets – TAs for 2040, or if they were to go  
1197 out to 2050. But, we're really looking at long-term being beyond those initial...  
1198
- 1199 O'Callahan: I don't know how to define it, because it doesn't define it. Dr Greer might know  
1200 a bit about the consideration of interim time-limits. He's just whispered in my  
1201 ear before so let's hear from him.

- 1202  
1203 Greer: I was just saying that the Te Whanganui-a-Tara WIP has three-time steps I  
1204 believe for their targets. They have an immediate stop-gap which reflects Mr  
1205 Sharp's no further degradation and that is straight maintain. Then they have the  
1206 2040 ones which require improvement in some attributes. But they do actually  
1207 have a pathway through to waiora that involves three-time steps, and they are in  
1208 the tables in that document.
- 1209 [00.20.00]  
1210 Chair: Just to round that off, I think then it seems that it's entirely up to the Council  
1211 supported by your planning evidence as to if they want to have environmental  
1212 outcomes as objectives, including timeframes set at whatever points they think  
1213 appropriate, in order to appease the 2100 vision; and so for instance, if they  
1214 wanted they could have an objective that needs to be achieved by 2040, and  
1215 perhaps again 2055, again 2080. But, that level of direction is not provided by  
1216 the NPS-FM. What is provided is the requirement to set target attribute states  
1217 and timeframes that are going to achieve your long-term vision?  
1218
- 1219 O'Callahan: No, I don't think the NPS for the plan is about the long-term vision necessarily;  
1220 it's about you're setting targets to address the environmental outcomes. So the  
1221 Council has defined those predominantly in Objective WH.02 and P.02, and  
1222 they've just defined that as a time **bound** [22.08] situation.  
1223  
1224 Strictly the long-term vision objective, WH.1 and P.01 they don't need to be in  
1225 Regional Plan because they're already in the Regional Policy Statement. I'm not  
1226 sure if I noted that in my report or not, but that is another option that I would be  
1227 comfortable with, in terms of this Plan Change – that they were moved.  
1228 However, my view is that they didn't necessarily need to be removed; as long  
1229 as they weren't being applied to resource consent situations. The focus for the  
1230 plan is the 2040 environmental outcomes, in the 2040 narrative – sorry, in the  
1231 2040 numeric targets.  
1232
- 1233 McGarry: Just picking up on what you just said then. So could another method be to cross-  
1234 reference those objectives in the RPS?  
1235
- 1236 O'Callahan: I hear what you're saying. You're saying there's no harm in them sitting here if  
1237 they don't apply for consents. Likewise, I don't know where you would cross-  
1238 reference them, in what provision. I don't think you would need a cross-  
1239 reference because the RPS would be applied, and that exists in any case, at this  
1240 stage.  
1241
- 1242 McGarry: Just on this erosion of time that's come through a few of the council's statements  
1243 of evidence; that they thought the intension was that there would be 20 or 25  
1244 years to achieve and that's been eroded by the time it's taken to get to this point.  
1245 I just wonder if you've got any view on that and whether there is a need to  
1246 calibrate based on the length of the process?  
1247
- 1248 O'Callahan: I think that argument doesn't really hold much weight to me. I guess the  
1249 evidence prepared for this hearing has been based on current time, but the  
1250 Councils, or certainly the Territorial Authorities were certainly party to the work  
1251 processes and those targets then set for some time now, knowing that they would  
1252 be coming into a plan change. So there's been a clear indication of where it needs  
1253 to go to for some time now.

[00.25.10]

McGarry: I guess your response suggests that they would have started taking action on something they knew was coming, even though the direction is not there yet. I think they're saying they expected that was the kind of time you would have, from when things were firm.

O'Callahan: Yes, that's what I'm saying; that they've been party and as I understand it from Mr Sharp's evidence they've signed up to those Whaitua Implementation Programme commitments.

Chair: I will let you continue with your presentation.

O'Callahan: I am now addressing Issue 2, which covers the general comments and submissions assigned to the objectives topic. We're going into the issues now. Just to clarify, my approach taken for the slides right through here is to summarise the changes that I have recommended to PC1 as a result of submissions.

In my slides I have used black text to indicate recommendations that have been addressed in my s42A. In that particular slide you will see some blue text on the slide and that's to indicate that recommendation has come from my rebuttal statement.

I have focused on those where I have made changes in this presentation, but there are however submissions that I recommend the Panel rejects or requests changes sought. I haven't specifically covered these in my presentation, but I of course am able to answer and respond to any questions that you have.

The changes from the general comment submissions have been implemented through a range of different provisions, which I will also cover in relation to specific issues as well.

The first one is the note that Commissioner McGarry has been questioning me about, which is to clarify that in relation to WH.01 and P.01 that applicants with consents don't need to demonstrate they align with that as the other objectors achieve the progress towards waiora that PC1 seeks.

The next one results from a statement tabled by Mr van Berkel. I initially misunderstood what he was seeking and he was helpful to clarify that it was the lack of implementation of the waiora concept, and essentially a freshwater action plan to get to waiora over the period to 2100.

I reviewed the RPS and the PC1 methods and there did appear to be a gap there, so I have drafted a new method to add to the method section of Plan Change 1 for a long-term freshwater action plan. I set a timeframe for commencing that work, which is after the implementation and freshwater action plans have been dealt with for the immediate period; so that the longer term isn't a distraction from the immediate pressing objectives.

The next one is Objectives WH.02 and P.02. There's some drafting amendments for those.

[00.30.00]

1306 There were submissions suggesting that the values identified for the Whaitua  
 1307 should be included in the planning document. My reading of the NPS  
 1308 requirements around that is they don't have to be in the planning document, in  
 1309 the Regional Plan. I am aware that some councils have included them in the plan,  
 1310 on either their notified plan or their consultation material. So, while I haven't  
 1311 recommended including them, I have prepared an appendix that summarised  
 1312 what the mandatory and must be considered values are for these Whaitua.

1313  
 1314 There were of course other values identified through the Whaitua and Te Mahere  
 1315 Wai type processes; but what I have done in understanding what those values  
 1316 are and presenting them to the Panel in that appendix is to try and better link the  
 1317 environmental outcomes to those values. So just tidying up some of the wording  
 1318 to reference them.

1319  
 1320 I have removed a reference to "measurable" in those environmental outcome  
 1321 objectives, because it created uncertainty when the measurable aspect is dealt  
 1322 with in the other objectives that contain the target attribute states. That's WH.09  
 1323 and P.06.

1324  
 1325 Then including a direct link to those objectives, where that level of improvement  
 1326 is expected. Then I have added a recognition of the kayaking and rafting values  
 1327 which came through strongly in the submissions that those values do exist in Te  
 1328 Whanganui-a-Tara.

1329  
 1330 Did you want to take some questions now?

1331  
 1332 Chair: What would you prefer Ms O'Callahan, that we have questions throughout?

1333  
 1334 O'Callahan: Throughout is fine.

1335  
 1336 Chair: That's okay? We don't want to interrupt your flow.

1337  
 1338 The new method that you're proposing, the 2036 timeframe, has that come from  
 1339 relief someone has sought?

1340  
 1341 O'Callahan: The relief that the submitter Mr van Berkel sought was probably much sooner  
 1342 than that. I thought. We've got what's required for the progressive  
 1343 implementation, for this first step. Most of those target attribute states should be  
 1344 met by 2040.

1345  
 1346 The answer to your question is, I've just suggested a date to the Panel. I think  
 1347 it's important to focus on the plans for getting to 2040 first and foremost. You  
 1348 don't want to get to 2040 to then come up with a plan after that, because you'll  
 1349 lose that momentum.

1350  
 1351 I just sort of thought if they have a plan in place, or out for consultation – sorry,  
 1352 I can't remember the wording that I used there, what was it?

1353  
 1354 Chair: Peered and published.

1355  
 1356 O'Callahan: Peered and published, yeah. To have it in place by then, so that you've got the  
 1357 plan and then you might need to do some more plan changes to put in if there's

1358 more regulatory actions needed, or you might get to that point and decide that  
 1359 you've got nowhere near where you needed to get to in the first step. So you  
 1360 might need to do something different.  
 1361  
 1362 I guess it's then some time after there to implement any regulatory actions or  
 1363 allow for funding, or whatever else is needed; a period of time before we finish  
 1364 off this current phase, which is predominantly to 2040.  
 1365  
 1366 Chair: My only other comment on the method that you're proposing is, I think this is  
 1367 the only time that the words "long-term visions" are used in proposed Change  
 1368 1.  
 1369 [00.35.20]  
 1370 That's obviously the term that's used in the RPS. Whether that needs to be  
 1371 referred to as "long-term visions" here, because they are expressed similarly but  
 1372 in a different way as the long-term visions in the RPS. Happy to leave that.  
 1373  
 1374 O'Callahan: I think I've just used it in the heading, is that right? And, in (c).  
 1375  
 1376 Chair: It's in (c). That's okay. We don't need a response on that now. Commissioner  
 1377 McGarry's on the last paragraph as well.  
 1378  
 1379 The other question I had and have just been looking at is, I understand what  
 1380 you're saying in response to was it Forest & Bird's relief. A submitter wanted  
 1381 the words "degraded" rather than "deteriorated" in that WH.01. You've talked  
 1382 in your evidence about how there could be some unintentional consequences if  
 1383 you're using it to define terms on the NPS-FM. I just want to check that you  
 1384 don't see the same problems arising using the term degraded in WH.02?  
 1385  
 1386 So "degraded" is okay there, but there are problems in your view if you use  
 1387 degraded in WH.01?  
 1388  
 1389 O'Callahan: Yes, that's because WH.01 covers the coastal water and degraded is defined in  
 1390 the NPS-FM that relates to freshwater. WH.02 and P.02 only deal with  
 1391 freshwater.  
 1392  
 1393 Chair: Yes, because it's natural wetlands which is not coastal.  
 1394  
 1395 O'Callahan: That's right.  
 1396  
 1397 McGarry: Just while we are here talking about the wording of this objective, in terms of  
 1398 the second bullet point, "where practicable" and I think there were some  
 1399 submitters that there was the difference between where possible or where  
 1400 practicable, and I just wondered there if there is a difference in your view  
 1401 between those two terms; because one to me suggests practicalities and starts  
 1402 bringing in costs and feasibility and those things, whereas "where possible" to  
 1403 me is more physically possible and where it can be achieved it should be  
 1404 achieved.  
 1405  
 1406 I just wanted to hear if you have a view on those two terms?  
 1407  
 1408 O'Callahan: Are you talking about its use in WH.01?

- 1409 McGarry: I think I've picked up a submitter to two that are comfortable with "where  
1410 practicable" or "where possible". So I guess I'm suggesting to you that "where  
1411 possible" is perhaps a little more limiting in terms of not allowing for keeping  
1412 the cool and feasible operational issues but more location based where possible.  
1413
- 1414 O'Callahan: I think generally I prefer the term "where practicable". I think in this context  
1415 natural character. We're talking about the Te Whanganui-a-Tara, if you're  
1416 thinking about where we are at the moment – we're in Wellington. The streams  
1417 here are piped. It's a matter for the Panel to consider whether you prefer  
1418 "possible" or "practicable"  
1419 [00.40.00]
- 1420 Here it would be possible to daylight streams presumably, but there's a hell of a  
1421 lot of infrastructure, buildings and people's properties and everything sitting on  
1422 that. It would be quite difficult and it's probably a question for mana whenua  
1423 perhaps in terms of exactly what they're envisaging in that regard, to get to  
1424 natural quality, rhythms, range of flows, hydrology and character and probably  
1425 or presumably looking natural as well. It's a big goal.  
1426
- 1427 McGarry: I guess your response there to me, if you were needing to daylight a stream then  
1428 it's not possible really is it to plan the riparian margins; or in an area where there  
1429 may not be enough room to plan then it's not possible, but I would have thought  
1430 as a land owner it was quite a low bar or a low threshold to just have a reason  
1431 where it's not practicable. It might be that you've got a fence there.  
1432
- 1433 I'm getting back to some of the modelling assumed – that where shading could  
1434 be provided it would be provided.  
1435
- 1436 O'Callahan: That's the challenge with this being the long-term objective and me saying it's  
1437 not intended to be implemented through this plan change. What's intended to be  
1438 implemented through this period is the 2040 targets.  
1439
- 1440 It's very hard to write a vision with the level of specificity that you then be  
1441 thinking at a consent by consent basis and how is this going to impact. We're  
1442 trying to define quite a bit of detail here a very long time out, where it's meant  
1443 to be achieved by a night-in. I think that's quite tricky.  
1444
- 1445 McGarry: In a similar vein, in terms of the last bullet point that you have added to the same  
1446 objective, you've used the words "not compromised" at the end of that. I guess  
1447 I'm thinking, what does "not compromised" mean? Is there a reason you have  
1448 specifically chosen that word, rather than "not degraded", or "maintained"? I'm  
1449 just wondering.  
1450
- 1451 O'Callahan: Yes, I think there is a reason but I'm just wanting to check that it's right before  
1452 I tell you. I think it's used in the RPS but let me just check.  
1453
- 1454 I was following some wording in the long-term vision objective in the RPS,  
1455 which this one is called Objective TWD and that uses the same language of "not  
1456 compromised".  
1457
- 1458 In my view it means something similar to their hierarchy in te mana o te wai –  
1459 so the other priorities come first.  
1460 [00.45.00]

- 1461 McGarry: Just one and just really an error I see in Objective WH.02 on your Appendix 2  
 1462 to your rebuttal. You've taken (c) out and I assume you meant to take the whole  
 1463 of (c). There is just the word "improved" still there.  
 1464
- 1465 O'Callahan: Yes, I think that's correct.  
 1466
- 1467 McGarry: So strike that out? That's all gone.  
 1468
- 1469 O'Callahan: Yes.  
 1470
- 1471 Kake: I just wanted to pick up on what you said before. There's a couple of questions,  
 1472 just so I'm clear in my mind with respect to Objective WH.01 and the listing of  
 1473 the freshwater bodies I suppose – so rivers, lakes, natural wetlands. You  
 1474 mentioned something about water in pipes. I'm conscious of definitions I  
 1475 suppose and the ability to take the example of daylight a stream. Freshwater  
 1476 bodies, I suppose, and from maybe a mana whenua perspective this might be  
 1477 better for them to respond to, but is it limiting in the objective stating these  
 1478 particular bodies of water, rather than using the term "freshwater bodies" as a  
 1479 whole?  
 1480
- 1481 O'Callahan: In one perspective yes it is probably limiting, but in terms of practical application  
 1482 it isn't because the pipes end up in the coastal marine area. The problem with  
 1483 freshwater bodies is it's not a defined term.  
 1484
- 1485 Kake: Something for us to consider. Perhaps we can ask mana whenua later this week  
 1486 as well and others.  
 1487
- 1488 O'Callahan: The application of the albeit controversial note might mean that's not such a  
 1489 problem, because that's the intention. Probably in effect I've both tidied up the  
 1490 language that was uncertain for people in consenting situations or concerning;  
 1491 but also if the note survives then perhaps an undefined term is not such a concern  
 1492 in such a long-term objective.  
 1493
- 1494 Kake: I think that kind of leads to the next question I'm conscious of which is that  
 1495 schedule again, Schedule B, and Objective WH.02(e) where it is struck out, and  
 1496 some of those **huanga** [Māori 48.18] some of those values aren't necessarily  
 1497 reflected I suppose. I am not seeing them in the TAs I suppose as well, in terms  
 1498 of those things that can be...  
 1499
- 1500 O'Callahan: The target attribute states?  
 1501
- 1502 Kake: Yes. I just want to go back to, and I'm jumping around, but Appendix 6 is really  
 1503 useful – your s42A, where the values set out in the NPS-FM, the ones that have  
 1504 to be considered; and then the broader values that are defined under Te Mahere  
 1505 Wai and some of those are reflected in Schedule B. So it's just understanding,  
 1506 and I can take from your Appendix 6 here, just as an example, that Tauranga  
 1507 [49.08] Transport sites that are significant to mana whenua in the **Waitai** [49.15]  
 1508 Special Unit for Te Whanganui-a-Tara, that's the only site where that value is  
 1509 recognised. Is that correct? Is that how we should be interpreting that Appendix  
 1510 6 as well?  
 1511
- 1512 I don't know if my question made sense then.

[00.50.00]

O'Callahan:

There's a couple of things in that question. Essentially what I have recommended in response to another submission is the adding of the word for transport/boating [Māori 50.21] waka for Te Whanganui-a-Tara because that occurs in Te Awa Kairangi. That is the area that was noted in the submissions.

The way the values came through in the WIP work didn't pick that up, so I could rightly update that table in Appendix 6 to tick that for Te Awa Kairangi as well.

Then your question was about Schedule B areas. My approach on that was that I just didn't think Schedule B was all that helpful in terms of this particular issue for a couple of reasons. Mana whenua are clear that they want bathing quality or safe connection everywhere for the freshwater; so suggesting that some of the areas are more important in that regard and some of those things in Schedule B are not related to water quality.

Then there was this desire through submitters, particularly Wellington Water, to have some indication of where priorities were for improvement to assist with that. Having that in there as muddling that and I have recommended some drafting, in a first cut really – it's not intended to be the final word on what is priorities – but that's the wording I've put into WH.09 and WH.06 – in 09 it's at clause (d); and trying to say, "What's the most important? Is it the human health or is it the ecosystem health?" My starter for ten on that was that the human health was the priority, because that enables the connection to water and responds to the mana whenua interests.

So that was why when we're talking about wastewater and stormwater, it was trying to say the wastewater is the priority, and the first priority where there's primary contact let's try and focus on the rivers and in Porirua there are no frequently used bathing sites in the river environment, so we've started with the harbour.

Then the general E.coli targets everywhere in the rivers, and then the copper and zinc for the ecosystem health.

Kake:

I might wait until later in the week if there are additional questions, because it is a line of questioning I think I've got from mana whenua as well, just with respect to that comment around prioritisation is really quite an important one. Thank you.

Chair:

I think we're almost finished with our questions on this part. Can I just ask you Ms O'Callahan, in reference to your rebuttal evidence, if you've got that handy on page-13, Forest & Bird have sought including additional detail from Appendix 1B of the NPS-FM into the concept of natural form and character. You don't support the wording that they're seeking.

Can I just check that I understand your reasoning for that? You say in your rebuttal evidence at page-13 under row three that you don't support including this detail because the scope of PC1, specifically the policies and rules set out to achieve the numeric objectives, does not manage all these aspects of natural form and character.

[00.55.00]

- 1564 Can I just check, did you also consider narrative as well as numeric? Are there  
 1565 narrative objectives relating to some of these other issues in Appendix 1B  
 1566 natural form and character, such as because it's a culturally significant species  
 1567 or pluvial processes, geomorphological processes? Did you only consider it in  
 1568 relation to numeric objectives?  
 1569
- 1570 O'Callahan: I addressed this in my s42A report as well. There are existing objectors in the  
 1571 NRP, so O.18 and O.19 I address this at paragraph 3.14 of my s42A.  
 1572
- 1573 My understanding of what the submitters were seeking was a natural character  
 1574 index metric. Whether it's narrative or whether it's numeric the PC1 provisions  
 1575 that implement the objectors don't address these issues.  
 1576
- 1577 Shall I just finish off the last couple of points on the general comments?  
 1578
- 1579 There's a note there that it was the general submissions that led to the  
 1580 recommendation for less stringent suspended fine sediment tests for Mangaroa,  
 1581 which was the colour-corrected issue that was discussed earlier with Dr Greer.  
 1582 Then here is where I note that I included an interim objectors to 2030 to align it  
 1583 with ten yearly timeframes from the NPS. I have also noted there in blue from  
 1584 my rebuttal I have included interim steps in that same objective in respect of the  
 1585 few tests that have been pushed out to longer timeframes.  
 1586
- 1587 The next issue is Issue 3 which covers definitions and the key amendment in  
 1588 response there was to suggest changed drafting for primary contact sites.  
 1589 Previously it referred to a map. The definition that has now been included is the  
 1590 definition from the NPS. The NPS definition refers to something being in a  
 1591 regional plan. I think I have just taken that language out but otherwise kept the  
 1592 content of what they are.  
 1593
- 1594 Then there's a consequential amendment to Schedule H2 which is a schedule of  
 1595 something very similar to the primary contact sites; and Method 34, so that they  
 1596 become not applicable within these Whaitua because the primary contact site  
 1597 fulfils a similar purpose.  
 1598
- 1599 Chair: Just on primary contact sites, Mr van Berkel sought that a site be included – the  
 1600 Whakatikei River at the Hutt confluence. In Table 8 point 4 has that river at  
 1601 Riverstone. I could have looked it up but I haven't yet, but do you know if those  
 1602 quite far apart and if understanding the condition monitoring at Riverstone,  
 1603 which is a primary contact site, could actually give you a reasonable perspective  
 1604 of what's going on at the Hutt confluence?  
 1605
- 1606 [01.00.15]  
 1607 O'Callahan: I don't know the answer to that. I could just ask Dr Greer if he's understanding.  
 1608 Chair: Maybe while Dr Greer is looking at that, with these primary contact sites new  
 1609 ones can't be added unless they're added through a plan change, is that right?  
 1610 You can't go, "Right, there's a whole lot more people that are now using this  
 1611 particular waterbody or particular area because there's a new jetty or something  
 1612 like that." Could you then have mandatory monitoring of ecosystem health say  
 1613 at that site, or would that require a plan change?  
 1614
- 1614 O'Callahan: There's no requirement for a plan change for the Council to start monitoring in  
 1615 accordance with [01.01.17] requirements at any time. But, in terms of setting

- 1616 target attribute states to either maintain or improve then that would require a  
 1617 plan change to have that in a statutory sense in the same way as these ones.  
 1618
- 1619 Greer: On the Whakatikei River at Riverstone that site is effectively at the confluence  
 1620 with the Hutt River, but it is not a primary contact site in Table 8.3, so the  
 1621 monitoring it receives is different from the monitoring that a primary contact  
 1622 site gets, which is weekly over summer with signposting and reporting of public  
 1623 health risk.  
 1624
- 1625 Also, on primary contact sites Dr Claire **Conwell** [01.02.06] documented how  
 1626 the primary contact sites were developed in a technical report that's on the  
 1627 website. She notes that Greater Wellington do review and update their  
 1628 monitoring network when there is increased usage at a site.  
 1629
- 1630 Chair: So it's not a primary contact site but the target attribute states at did you say  
 1631 Table 8.3, are monitored for the particular attributes that are identified there, but  
 1632 it's not a primary contact site?  
 1633
- 1634 Greer: Correct. That site is monitored for the Table 9 E.coli attribute in the NPS-FM,  
 1635 while the primary contact sites are monitored for the attributes in Table 22. Both  
 1636 of those tables have separate independent monitoring requirements, different  
 1637 attribute states and different national bottom lines.  
 1638
- 1639 Wratt: Can I just explore that a little bit in terms of the NPS-FM requirement that  
 1640 primary contact sites, eighty percent have to be the target state by 2040? So the  
 1641 sites that that would apply to are the ones in Table 8.3? Correct?  
 1642
- 1643 Greer: I understood the NPS required 90 percent of rivers to be swimmable by 2030. If  
 1644 it references primary contact sites then it's just the ones in Table 8.3 and not the  
 1645 sites in Table 8.4 and 9.2.  
 1646
- 1647 Wratt: So it would be possible – and I'm not saying we would, but just a question – to  
 1648 add for example the Riverstone site which Mr van Berkel has asked for that  
 1649 Table 8.3?  
 1650
- 1651 Greer: It would but the current state of that site is not known in relation to the attribute  
 1652 state framework that applies to the sites in Table 8.3 which are monitored weekly  
 1653 over summer and have increased surveillance monitoring if certain thresholds  
 1654 are exceeded. That's significantly different than the state of the environment  
 1655 monitoring that's taken at the Whakatikei River at the Riverstone site. So there  
 1656 would be no baseline state and there would be no real way to understand what  
 1657 level the target attribute states should be set at other than a narrative to maintain.  
 1658 [01.05.10]  
 1659 It would also impose significant additional monitoring burden on the Council.  
 1660
- 1661 Wratt: The E.coli, those aren't related to baseline states are they? That's a set E.coli  
 1662 measure that's required?  
 1663
- 1664 Greer: You can't set the target attribute state less than the baseline states. To understand  
 1665 where the target should be set you would have to know that. The options  
 1666 available would be to set it at the more stringent of maintain, or the national

bottom line. We wouldn't be able to say whether it should be set at a, b or c, because we haven't done that weekly monitoring.

Interestingly the Whakatikei River does get regularly high E.coli recordings over the summer period, and it's not as simple as saying it's in a largely natural state – it must be in an (a) state because it frequently gets values over 540 even during dry weather, which would throw a significant amount of uncertainty over that.

O'Callahan: Issue 4 covers WH.01 and we've had some discussion about this in the context of the general submissions. I have made a number of drafting amendments which I have summarised here.

We have previously talked about the replacement of the freshwater bodies with the defined terms from the RMA and the NRP.

We've previously talked about deleting the note. I've added a note but I have also deleted the word "note" whereby the bullets become part of the objective.

I've clarified that riparian margins be planted where practicable. I've clarified that the āhua natural character be restored where it has deteriorated, rather than necessarily everywhere.

I have deleted the reference to "range of places as mana whenua may undertake customary practices throughout the catchment, that are the social and environmental use benefits."

A further practicality qualifier was added with the natural character restoration bullet, response to the submitter evidence and a reference to where the species are natural present has been tagged to the species present and abundance provision.

The next one is Issue 5 and that covers similar content. This is the long-term objective for Porirua. It's expressed a bit differently. The drafting has been informed by the Council's engagement with mana whenua or the mana whenua WIP documents. The key things are there. The changes there are again the deletion of the language note and some drafting around the waiora to better align with the resource management outcome.

Seeking natural state where possible, rather than everywhere – so I have used "possible" there.

I think that language may have come through the submissions, that it's responding to.

"Ripples" has been replaced with "ripples, runs and pools".

The social and environmental use benefits and then amending the harbour sedimentation outcome from seeking a natural state or a natural state where practicable to reduce to a more natural level.

Chair: The wording you have recommended to Objective P.01, harbour sedimentation is reduced to a more natural level.

[01.10.00]

It's good we have Dr Melidonis here. I can't recall now, but I think it's your evidence Dr Melidonis that talks about, and you might not have used natural levels, but just how the sedimentation that occurs naturally.

I guess I'm just wondering if knowing whether this objective, this bullet point is achieved or not is it too subjective?

O'Callahan: Sorry, can I just maybe answer that one, because this is the waiora, it's not achieved by the objective of this plan. Just reminding you of that, of the provisions of the plan.

Chair: Okay.

O'Callahan: The aspect that Dr Melidonis is advised on is what should be the goal for 2040.

Chair: Okay. In that sense Ms O'Callahan would it necessarily matter if there's argument as to what a natural level of harbour sedimentation is – if it's a part of the waiora 2100 state?

O'Callahan: That's right, yes. We've defined what's been sought for this immediate period, which has got a numeric target in Table 8.1, sorry 9.1.

Chair: The numeric target I understand that. It was just the understanding of natural level, but in the context of the waiora state. I think that makes sense. Thank you.

McGarry: The wording that you just touched on before Ms O'Callahan, "where naturally present in those environments" I just wonder if that would be better if it was where "naturally occurring" because they might not be present anymore because of other aspects.

O'Callahan: I'd agree that that would be probably preferable wording.

McGarry: It would just be "where naturally occurring", with the word "they" in there. "Where they naturally occur" - note where naturally occurring.

Chair: Objective WH.010 – the interim targets within Te Whanganui-a-Tara these are coastal and freshwater?

O'Callahan: No they're not, they're for target attribute states. They relate specifically to the NPS.

Chair: Freshwater.

O'Callahan: Yeah.

McGarry: I'm just wondering with the wording of "where naturally found occurring." I will leave it with you but I am not sure "occurring" is right. I'm just trying to avoid that they don't need to be present at this time. They could be absent. I'm not sure whether you can think on that, whether it's naturally occurring, or where naturally found maybe.

- 1771 O'Callahan: I understand the issue. I think it's reasonably clear either or, but I will spend  
 1772 some time and check with the scientists how they would describe it is probably  
 1773 the best approach.
- 1774 [01.15.00]
- 1775 Chair: Just back on the new interim targets in WH.010 – “note a deteriorating trend is  
 1776 sought by 2030 unless due to a naturally occurring process.” That is defined in  
 1777 the NPS-FM.
- 1778
- 1779 I'm just thinking about the implementation of that first interim target, “to note a  
 1780 deteriorating trend by 2030 unless due to a naturally occurring process.” Are the  
 1781 attributes where you'd get deterioration due to a natural occurring process  
 1782 suspended sediment, or are there others?
- 1783
- 1784 O'Callahan: I would have to take some advice from a scientist on that. I will just draw your  
 1785 attention to the note. Again, this one is not intended to be a distraction from the  
 1786 core targets of the 2040. From my perspective it's exactly what you heard from  
 1787 Dr Greer this morning, that they're trending in the right direction – but not the  
 1788 E.coli. He was talking about ecosystem health when he was talking about that.  
 1789 E.coli isn't relevant to ecosystem health, it's relevant to human health.
- 1790
- 1791 That's the level of intent that is being sought, is some reporting for the benefit  
 1792 of the community and mana whenua, and have we stopped that negative trend?  
 1793 It will be different for different attributes if there's a natural factor or not, and I  
 1794 am not sure that we would have to... he (Dr Greer) is going to say something by  
 1795 the looks of it. Hopefully it's quick because we're running out of time.
- 1796
- 1797 Greer: All ecological and water quality attributes natural vary over time due to naturally  
 1798 occurring processes. It will all be dictated by some form or other, by climate  
 1799 especially.
- 1800
- 1801 Wratt: While we are just on that note, and there was discussion earlier of the wording  
 1802 of the note in Objective P.01 and WH.01. Is there any reason why you couldn't  
 1803 put something similar into the wording of those two objectives – so the second  
 1804 sentence in the note for WH.010, “where it can be demonstrated that target  
 1805 attribute states will be met within the timeframes prescribed in that target?”
- 1806
- 1807 If you look at the second sentence in Objective P.01 for example which says,  
 1808 “resource consent applications do not need to demonstrate the proposed  
 1809 activities in line with this objective.” If you added to that “provided” or whatever  
 1810 it says. “Where it can be demonstrated that target attribute states will be met.”
- 1811
- 1812 I guess your comment earlier Ms O'Callahan was that that's covered in the first  
 1813 sentence, which I get it is to a degree. It would just give it more specific.
- 1814
- 1815 O'Callahan: You could do that. I think it's clear with either wording. I just think it is quite a  
 1816 different situation to try and apply an objective that's sought to be met in 2100.  
 1817 The consents will never be granted to that timeframe – while I'm still working  
 1818 anyway.
- 1819
- 1820 Wratt: Agreed.
- 1821

- 1822 O'Callahan: Whereas the interim time limit is very soon and I wanted more wording around  
 1823 that, because I didn't want it to be a reason to drive short consent terms, because  
 1824 that's not going to help us.  
 1825  
 1826 There's just a bit of extra wording there.  
 1827 [01.20.00]  
 1828 Chair: That second half of that note in WH.010 "consent applicants do not need to  
 1829 demonstrate their activities align with this objective" – that's the entire parts A  
 1830 and B of that objective isn't it? It's not just A?  
 1831  
 1832 O'Callahan: No, it is just A.  
 1833  
 1834 Chair: So B is relevant to the assessment of the consent applications?  
 1835  
 1836 O'Callahan: Correct, because that's dealing with the situation where the timeframe has been  
 1837 pushed out to a longer period of time. So we need an interim limit and I think  
 1838 the consent applicants should be considering that. That comes to the risk of  
 1839 delayed action, if you don't have a focus for consent applicants to meet an  
 1840 interim target there. It's the same effect as what I have recommended in the  
 1841 coastal table for the coastal attributes for enterococcus that have been pushed  
 1842 out. It's just written in a different way.  
 1843  
 1844 In Table 9.1 for example, I have a 50 percent improvement towards meeting 500  
 1845 which is the target. I've set the timeframe there of 2040. I haven't changed the  
 1846 timeframe – I don't think I have. So halfway there. This is halfway there by 2040  
 1847 for freshwater as well.  
 1848  
 1849 Chair: For a processing officer would they then need to look at the possible extent of  
 1850 the impact of an activity on a target attribute state? I guess I'm wondering how  
 1851 you would assess consistency with this objective and the context of a particular  
 1852 consent application, and one that would perhaps have very little impact on the  
 1853 receiving environment and then something that's much larger in scale and could  
 1854 potentially have a far bigger impact on the receiving environment. I guess it's  
 1855 case by case isn't it.  
 1856  
 1857 O'Callahan: Are you talking about clause (b) of that objective?  
 1858  
 1859 Chair: Yes.  
 1860  
 1861 O'Callahan: I think that's only going to apply to the network consents in reality, because  
 1862 they're the ones that are going to struggle to meet the targets, which is why I  
 1863 recommended pushing out the timeframe; which is why then this applies to those  
 1864 ones. So they only apply to E.coli in a couple of FMUs and metals in one FMU,  
 1865 [01.23.25].  
 1866  
 1867 Chair: So where there's an improve requirement in Table 8.3 or 8.4?  
 1868  
 1869 O'Callahan: Yeah, that's been set at either 2050 or 2060. Where it's been set at 2040 it doesn't  
 1870 apply.  
 1871  
 1872 I think I have got one more objective to cover in this section. We have traversed  
 1873 it, which is WH.02 and P.02. This is the environmental outcome one.

1874  
 1875 We have talked about the environmental linking with the values. We've talked  
 1876 about the natural form and character will improve as a result of the ecosystem  
 1877 health improvements. That's kind of the extent of that reference.  
 1878  
 1879 We've tidied up the conflict clauses (e), (d) and (f) which are things that I'm  
 1880 going to suggest are priorities around language, and it's focused around values  
 1881 of significance to mana whenua primarily.  
 1882 [01.25.05]  
 1883 I have changed "food gathering" to "fishing" because mahinga kai and food  
 1884 gathering seemed a duplicate. I've added in the social environmental use and  
 1885 just tidying up some language in the rebuttal around the "where degraded". Then  
 1886 the health needs of people clause has been added to P.02 as well in response to  
 1887 the Wellington Water evidence and the concern about source protection for  
 1888 drinking water.  
 1889  
 1890 Chair: That then takes us to the end of Issue 7.  
 1891  
 1892 O'Callahan: We are actually scheduled to talk about Issue 7 after the afternoon tea break, so  
 1893 if you have any questions that might be good to do that then.  
 1894  
 1895 Chair: Okay I'll wait till then.  
 1896  
 1897 McGarry: I was comparing some the language used and I'm looking in both the long-term  
 1898 objectives 01 and P.01. If you look at the beginning of WH.01 it uses coastal  
 1899 marine area and then it goes on to focus on coastal waters in the third bullet  
 1900 point. Then just comparing and contrasting Objective P.01, again the kind of  
 1901 lead-in sentence has coastal marine area, and then focuses on coastal waters.  
 1902  
 1903 Is the language deliberate – coastal marine area in the beginning of those to cover  
 1904 both the deposition as well as the water quality? I just find it interesting that it  
 1905 uses coastal marine area and then it focuses in on coastal water.  
 1906  
 1907 O'Callahan: So you're looking at WH.01 which used "coastal marine area". Does this one  
 1908 use "coastal water" as well, or are you talking about that's in WH.02?  
 1909  
 1910 McGarry: They both do. Then it goes on to the third bullet point to "coastal waters" in  
 1911 particular. I guess my question is, when you read the rest of the lead-in and the  
 1912 health of rivers, lakes, near margins, wetlands and groundwater, they all seem to  
 1913 be very water focused and then it comes out to the coastal marine area. But,  
 1914 when you read what it means... it has got the habitat aspects, so my question  
 1915 really is that deliberate, the language?  
 1916  
 1917 O'Callahan: I might have to come back to you on that one. I'm not a hundred percent sure. I  
 1918 might just want to take a bit of time to look at that.  
 1919  
 1920 McGarry: It's a similar question for PO.01 as well – it's starts off on the general coastal  
 1921 marine area, and then again it homes in on freshwater and coastal water  
 1922 environments.  
 1923  
 1924 O'Callahan: I'll come back to you on that one, hopefully after the break.  
 1925

1926 Chair: The health needs of people that we're recommending be added into P.02, this is  
 1927 the defined term in the operative regional plan. I just remember there was a lot  
 1928 of discussion during the RPS hearings about it.  
 1929 [01.30.00]  
 1930 I'm not sure if the two definitions are the same or not, but do I have it right that  
 1931 there was a submitter I think seeking that the objective in the operative regional  
 1932 plans specific to the health needs of people continues to apply to Te Whanganui-  
 1933 a-Tara and Te Awarua-o-Porirua? Is it Objective 5?  
 1934  
 1935 O'Callahan: Yes, I think Wellington Water sought that.  
 1936  
 1937 Chair: Yes, that's right.  
 1938  
 1939 O'Callahan: I think this is in response to that ongoing request.  
 1940  
 1941 Chair: Do you have a view on whether the objective should continue to apply to these  
 1942 Whaitua?  
 1943  
 1944 O'Callahan: Yes, I have a view. My view is that it shouldn't. Wellington Water also seek that  
 1945 it be redrafted to have amendments to it, which in my view are beyond scope of  
 1946 the Plan Change 1, because it would have impacts region-wide. I think that's the  
 1947 one that doesn't sit well with the hierarchy of obligations in te mana o te wai –  
 1948 but let me just check that. Objective 5 isn't it?  
 1949  
 1950 What we have got here – O5 seeks sufficient water with suitable quality and is  
 1951 available for the health needs of people and the reasonable needs of livestock. I  
 1952 don't think Wellington Water is particularly interested in the reasonable needs  
 1953 of livestock but they are interested in the health needs of people. This was in  
 1954 WH.02 because that's where the region's drinking supply is from. So it's already  
 1955 in that Whaitua in my view.  
 1956  
 1957 Putting it into P.02 just recognises that some people are probably taking  
 1958 domestic rural takes in Porirua; so putting it in there that then is aligned with the  
 1959 second priority of te mana o te wai.  
 1960  
 1961 Then the reasonable needs of livestock, again it's not what their submission is  
 1962 about. They were seeking other amendments to it as well.  
 1963  
 1964 The reasonable needs of livestock are in Objective 05, but I'm just trying to work  
 1965 out if that's probably covered by the social and economic use benefits.  
 1966  
 1967 Wratt: WH.02 and P.02 – in Objective P.02 there's a couple of clauses at the end around  
 1968 saying that freshwater environmental outcomes must be contribute to the  
 1969 maintenance and improvement of the health and wellbeing of estuaries, harbours  
 1970 and open coastal areas, and protection restoration sites within significant values.  
 1971 [01.35.08]  
 1972 There's nothing equivalent to that in WH.02. I may have missed somewhere but  
 1973 is there a reason for that? It's clauses (i) and (j) in P.02.  
 1974  
 1975 O'Callahan: I haven't specifically considered those clauses because there haven't been  
 1976 submissions on them. I'm happy to mull it over.  
 1977

1978 Wratt: So does that put it out of scope for us? Is this a freshwater provision?  
1979  
1980 O'Callahan: This is a freshwater provision. You've raised it so you're able to address it is my  
1981 understanding.  
1982  
1983 Perhaps I will just try and work through it and work out if there is a reason.  
1984  
1985 Wratt: There are certainly more estuaries in the Porirua Whaitua but there are estuaries  
1986 in Te Whanganui-a-Tara as well.  
1987  
1988 O'Callahan: I do know that my understanding is the Porirua provisions in particular had quite  
1989 a bit of input from mana whenua during drafting, so that may be a reason, but as  
1990 I say, I will get across it and report back.  
1991  
1992 McGarry: Just on that same thing, something has happened there though hasn't it, there  
1993 were four meetings. "The freshwater environmental outcomes must contribute  
1994 to that," is that meant to be a clause running from (h)? Something is wrong there  
1995 anyway, that needs to be corrected.  
1996  
1997 O'Callahan: I think it's deliberate like that, that the objective starts with the chapeaux at the  
1998 top and then this is essentially...  
1999  
2000 McGarry: It doesn't run on from (h)?  
2001  
2002 O'Callahan: That's where it's been set out in the notified version. Again I will have a chance  
2003 to consider that over the afternoon break and I'll come back to you.  
2004  
2005 Stevenson: Just on the last paragraph that we were just discussing on P.02, notwithstanding  
2006 the capitalisation of "the freshwater environmental outcomes potentially," under  
2007 (j) could you possibly consider whether the word "within" should just read  
2008 "with"?  
2009  
2010 So it would read, "protection and restoration of sites with significant values," as  
2011 opposed to "within significant values."  
2012  
2013 A small point, but seen as you're considering it.  
2014  
2015 O'Callahan: Sure.  
2016  
2017 Chair: Sorry to go back, but the natural form and character point, you've recommended,  
2018 and this was in WH.01 and also WH.02, and I think it will be in the Porirua  
2019 provisions as well, it's just the term "natural form and character". There's no  
2020 definition of that, but there is a definition of natural character in the operative  
2021 regional plan. The NPS-FM refers to the natural form and character, but that has  
2022 a definition.  
2023  
2024 My question is just whether it might be useful to retain basically "naturally form  
2025 and natural character," and retain the definition of natural character in the  
2026 regional plan.  
2027 [01.40.00]

2028 One of the reasons I say that is because that definition refers to natural processes  
 2029 that contribute to these freshwater and coastal environments, and that might pick  
 2030 up some of those characteristics that Forest & Bird have sought in their relief.  
 2031  
 2032 So just whether instead of having an undefined term of natural form and  
 2033 character, whether there is any benefit in having natural form undefined and  
 2034 natural character referring to the defined term.  
 2035  
 2036 O'Callahan: So you're suggesting having "natural character" and then "natural form"? I think  
 2037 the submitter asked for "natural form and character" because it's the wording  
 2038 that's in the NPS. So I think that's yet another permutation. I'm pretty sure I've  
 2039 said in my rebuttal that I think they mean the same thing. I was happy with  
 2040 "natural character" as well.  
 2041  
 2042 Chair: I was just exploring there that it's useful to draw on the defined term.  
 2043  
 2044 O'Callahan: I think if you're doing that you would just leave it as it is, "natural character"  
 2045 and not make the changes; because then people will be trying to work out what  
 2046 the difference between natural character is and natural form.  
 2047  
 2048 I think they're the same thing. It's just in the context of the NPS-FM they use  
 2049 natural form and character, so I've gone perhaps we should use natural form and  
 2050 character because this is an NPS plan change.  
 2051  
 2052 I think equally relevant is what was there to start with, which was either the te  
 2053 reo term, or natural character, or both. I think if we just try and use every term  
 2054 possible that's not going to help, because then people really will go to town  
 2055 trying to work it out.  
 2056  
 2057 Kake: Just a question for you around clarification under the Objective P.01 – second  
 2058 bullet point where it says, "mauri is restored" and then some new wording that  
 2059 has come through rebuttal – "mauri is restored and harbour sedimentation is  
 2060 reduced to a more natural level." You have struck out "waters are in a natural  
 2061 state where possible."  
 2062  
 2063 This is similar to the question I had earlier with respect to just calling out harbour  
 2064 sedimentation. Mauri in itself should be restored in a number of waterbodies that  
 2065 might have been more natural prior to issues and effects.  
 2066  
 2067 The inclusion of harbour sedimentation, I'm just conscious that that is quite  
 2068 limiting with respect to enhancing mauri in the harbour.  
 2069  
 2070 If you need more time - I know we're conscious of timing and a break. I'm happy  
 2071 to come back after the break.  
 2072  
 2073 O'Callahan: I just need to go back and see where this wording came from. I'll come back to  
 2074 you.  
 2075  
 2076 Chair: Thank you. We will adjourn and be back at 3.30pm. Thank you.  
 2077  
 2078 [Adjournment – 01.44.20]  
 2079 [Resumes Hearing Stream 2 – Day 1 - Part 3]

2080  
 2081 O'Callahan: [02.52] because there's reference to the margins; so similarly the ecosystems  
 2082 that have been seg'd to be protected and enhanced through the waiora objective.  
 2083 As I understand it, they're broader than just the things living in the water.  
 2084 There's probably things and other birds in the other ecosystems in and around  
 2085 there.  
 2086  
 2087 So I would suggest that the panel change that to "coastal marine area have  
 2088 healthy functioning ecosystems."  
 2089  
 2090 The last one around social and economic use benefits I think probably leaving it  
 2091 just as "coastal waters" is probably preferred there.  
 2092  
 2093 McGarry: It's interesting that last bullet point though too isn't it, because the freshwater is  
 2094 ecosystems, which makes me wonder whether that should be coastal  
 2095 ecosystems?  
 2096  
 2097 O'Callahan: I think it could be.  
 2098  
 2099 McGarry: Instead of "is not" "are not".  
 2100  
 2101 O'Callahan: I probably just maybe need to think about that one. I was focused on the  
 2102 ecosystem one. Because an issue is that the whole concept of this clause,  
 2103 stemming from te mana o te wai, coastal waters is quite narrow, and the te mana  
 2104 o te wai concept doesn't really fit within the NZCPS.  
 2105  
 2106 McGarry: Or, the reverse of that is whether freshwater should be just freshwater and not  
 2107 ecosystems, or is that the wording for te mana o te wai?  
 2108 [00.05.00]  
 2109  
 2110 O'Callahan: That was probably the wording from the RPS. My preference would be to leave  
 2111 it as it is.  
 2112  
 2113 McGarry: There's a similar issue with P.01.  
 2114  
 2115 O'Callahan: Not in terms of...  
 2116  
 2117 McGarry: In the third bullet point it says "coastal water environments".  
 2118  
 2119 O'Callahan: We need to leave it as "coastal water environments" because coastal  
 2120 environment includes the landward side and is beyond the jurisdiction of the  
 2121 Regional Council [06.11].  
 2122  
 2123 McGarry: Okay, it is deliberate. Thank you.  
 2124  
 2125 O'Callahan: Then the last issue was P.02 – you asked a series of question around the drafting  
 2126 of P.02.  
 2127  
 2128 I've looked into this. The drafting of the clause that just starts "the freshwater  
 2129 environmental outcomes must contribute to the..." that is deliberate. It's really  
 2130 part of the chapeaux. If you read the chapeaux: such that by 2040 you've got to  
 2131 achieve (a) to (h). What I have missed is an "and" at the end of my new (h) –

2132 that did used to be there wherever this finished last time. So there's "and the  
 2133 freshwater environmental outcomes must contribute to the health and wellbeing  
 2134 of the coast."  
 2135  
 2136 This is quite important for Porirua because the coast is the area that is degraded  
 2137 predominantly in this Whaitua.  
 2138  
 2139 It doesn't fit under the chapeaux at the top, but it fits in with that need to  
 2140 contribute to the coast. I actually think that the second clause (j) is probably  
 2141 redundant because it's not clear what significant values it talking about, and there  
 2142 are a whole lot of schedules in the plan.  
 2143  
 2144 Really, we're not trying to focus on any in particular. The improvement sought  
 2145 is to the health of the harbours generally.  
 2146  
 2147 So I would suggest deleting that because it's quite ambiguous which values it's  
 2148 talking about and we'd probably have to start referencing schedules to be clear,  
 2149 and they're already covered in other provisions in the plan, so it's not necessary  
 2150 to do that.  
 2151 So that's my suggestion, is to put the "and" at the end of (h) and delete (j), and  
 2152 delete the "and" and the end of (i).  
 2153  
 2154 That's all those points.  
 2155  
 2156 Wratt: It was also whether the freshwater environmental outcomes in (i) should go into  
 2157 WH.02 as well.  
 2158  
 2159 O'Callahan: No, because the freshwater outcomes are not in Te Whanganui-a-Tara. They're  
 2160 not predominantly aimed at trying to improve the coastal harbour in the same  
 2161 way as it is in Porirua.  
 2162  
 2163 Wratt: There are still estuaries, harbours and open coastal areas in Te Whanganui-a-  
 2164 Tara that the freshwater environmental outcomes could impact on?  
 2165  
 2166 O'Callahan: My understanding is this objective was drafted with input from Ngāti Toa and  
 2167 this was an aspect that they requested for this particular Whaitua.  
 2168  
 2169 Wratt: I understand that.  
 2170 [00.10.00]  
 2171 O'Callahan: Generally, the issues for Wellington is the enterococcus and is the human health  
 2172 rather than ecosystem health issue. Sedimentation issues and the impact of those  
 2173 on the ecosystem health is not present in...  
 2174  
 2175 Wratt: It's not present at all or it just is not as significant an issue as in Porirua?  
 2176  
 2177 O'Callahan: My understanding is it's potentially an issue in Makara but it's certainly not an  
 2178 issue for Te Whanganui-a-Tara, that I'm aware of. By all means if you want me  
 2179 to consider some drafting for a particular aspect of Te Whanganui-a-Tara I'm  
 2180 happy to.  
 2181  
 2182 Wratt: I guess we can consider that, as to whether we think there's... Dr Greer have  
 2183 you got any views as to whether there is an issue at all in Te Whanganui-a-Tara?

2184  
 2185 Greer: Not to the same extent as in over the predominant improvements required for Te  
 2186 Whanganui-a-Tara as a whole, as a reduction in sedimentation rate in Makara,  
 2187 which is probably less than what's required by the freshwater target attribute  
 2188 states as it stands.  
 2189  
 2190 Then they required an improvement in enterococcus at various parts of the  
 2191 harbour, which is predominantly driven by direct coast discharges rather than  
 2192 the freshwater environment.  
 2193  
 2194 McGarry: Just to wrap up, so we wouldn't need a clause or a number on that, it would just  
 2195 be one sentence then – "The freshwater environment outcomes must contribute  
 2196 to the maintenance..." etc. is that correct?  
 2197  
 2198 O'Callahan: Yes.  
 2199  
 2200 Stevenson: On Objective WH.01, the third bullet point, the recommendation and the last  
 2201 wording "where naturally present in those environments" is changed to "where  
 2202 they would naturally have occurred".  
 2203  
 2204 Simply a question for Dr Greer. Is there enough data or information to identify  
 2205 where threatened species and taonga species would naturally have occurred?  
 2206  
 2207 Greer: It would be a challenge for some species. There are reference state models for  
 2208 invertebrates and fish that can be used to identify where they would have  
 2209 occurred. There is also freshwater fish database records going back to 1900 and  
 2210 starting in earnest in the 1960's, so it's not an insurmountable task.  
 2211  
 2212 Also, in terms of fish, the migratory nature of most fish species means that they  
 2213 would have naturally occurred almost everywhere where the typography  
 2214 matches their requirements. So [13.32] will be I guess the highest interest  
 2215 threatened species in Te Whanganui-a-Tara. They would have been all through  
 2216 the hill streams when they were forested, but not in the low-land areas.  
 2217  
 2218 Probably proving it beyond a doubt that they would have naturally occurred, if  
 2219 you ended up in a consent hearing, would have been difficult; but not to just  
 2220 basically predict rough enough.  
 2221  
 2222 O'Callahan: I will move onto Issue 13. We're jumping ahead here. We're departing from the  
 2223 order of issues in the s42A report as we are going to jump to the last issue, to the  
 2224 last objectives. We are dealing with Issue 13 now of the s42A report and we're  
 2225 dealing with the key freshwater TAS objectives for Te Whanganui-a-Tara and  
 2226 Porirua.  
 2227 [00.15.00]  
 2228 I will kick off with the drafting changes and then we've got a series of freshwater  
 2229 scientists that you will hear from today and tomorrow.  
 2230  
 2231 The idea is we get to the end of me today. Let's see if we can do that. Then Dr  
 2232 Greer starts tomorrow.  
 2233  
 2234 Similar to what I have talked about before in terms of the chapeaux's to reference  
 2235 either "natural character" or "natural form and character" and NPS wording, I'm

relaxed about it changing to “natural form and character”. I am also relaxed about it being natural character. Certainly EDS and Forest & Bird I think were the ones that were keen to have the NPS language. I don’t think it’s a material change.

Then I’ve got changes to clauses (a), (c) and (d). So, (a) and (c) are really just trying to explain clearly how Table 8.4 applies. We are trying to say that where it’s not met, target attribute state, the state of that attribute is to be improved throughout all of the FMU, so that the timeframe target is met within the timeframe indicated.

I have just changed the rivers and river reaches to throughout. I think it’s more simple to understand, rather than trying to understand what’s a river and what’s a river reach specifically. In some situations I think that terminology is retained. I have retained it in (c) because there is a requirement that the NPS sits on the Council to not let any water in a river get deteriorated; so you might have an upper river reach where it’s in better quality than the target attribute state. So that’s just to clarify that that objective requires that be maintained at that better state.

Then the wording in blue is really in response to a rebuttal concern that that’s not been done off a single consent monitoring kind of record, and that’s based on long-term data which is the natural fluctuations, recording errors and anomalies that might happen from day-to-day. So we’re dealing with those long-term trends when we are applying that particular clause of the objective.

Then clause (d) is where I mentioned before, and to some level this relates to I think (d) was a pseudo prioritisation clause in the past. It didn’t really work as such, because it didn’t really talk to the target attribute states. It would have been quite complex to apply those in practice. It would have required a rather large exercise to work out how they relate to part FMUs and stuff, so not particularly easy to implement, and actually not really aligned with what I think and understand mana whenua to be seeking, which is improvement everywhere.

Then (d) is the prioritisation clause that I have suggested in response to Wellington Water seeking guidance around prioritisation in the objectives. I note that in their planning evidence they thought this shouldn’t be in the objectives, but it was actually what they asked for in their submissions.

I think it is helpful in the objectives and it’s difficult to apply it elsewhere in terms of the current structure of the plan if we are trying to prioritise between the human health and the ecosystem health drivers because the policies and rules, once you get down to that level, they’re activity specific. So I think it’s useful in the objectives, but there might be other ways that submitters think about it, and if that needs to be responded to differently.

[00.20.05]

In this one, the prioritisation is for load reductions to firstly achieve that target attribute sites were primary contact sites. On the basis that seemed logical to me, that these are the areas that people are most likely to be swimming in, in freshwater. I understand that the freshwater bathing is higher risk than the coastal stuff I think, in terms of how long... no, I don’t know what I’m talking about there, sorry, ignore that.

Anyway, the freshwater ones are the ones that are key under the plan change, in terms of the NPS implementation, and then the wider ones for the E.coli targets, so the 8.4 come next, and then the copper and zinc, if they're looking at trying to divvy up those funds; but obviously all need to be met by the timeframes.

Then in the Porirua chapter they're slightly different because we don't have those freshwater bathing sites, or contact sites. We start with the coastal locations because I understand they're important for human contact in Porirua. The human contact is in on the coast there. So we started with those enterococcus ones and the freshwater environments that are needed to improve for the coastal areas, and then the broader FMU ones and then the copper and the zinc. So that's the prioritisation sub-clauses.

Then just summarising the table changes at 8.4 and 9.2. I have included where Dr Greer suggests changes for scientific reasons other than where these make the targets more stringent and require wholesale land use change that's not anticipated by the PC1 provisions for provided for by them – in other words, that they wouldn't be able to be achieved.

That's based on his evidence in terms of the discussion when he talks about those in his evidence.

I have adjusted the metal and E.coli targets to be less stringent where they are unlikely to be unachievable by 2040. That was first informed by Dr Greer's Table 22, and has been subsequently reconsidered in places, but I will come to that.

Addition of current state data, where I have been able to obtain this from the science team. Obviously there's a significant number of submissions around the insufficient data from the targets, so a lot of work with the science team to try and look at ways to understand that better and ideally having information in there. I think 'existing state' is the term they use in the footnote. No, 'current state' sorry. I have put footnotes on all the target attribute states generally that they're the baseline state, except where indicated, and then when I have put a 'current state' in I've put the asterisk on that, so there as at 30 June.

There is discussion in my report and Dr Greer's around two attribute states I have recommended by removed. The first is the fish community health attribute. That is not a mandatory or an NPS measure. That came from a WIP recommendation. The measure for that was based on expert opinion. It was lacking certainty and open to quite a bit of challenge in the submissions and didn't seem to be adding particular value in the ecosystem metabolism [24.51] attributes. Similarly there's no established way of banding or measuring that, grading it, and my understanding of Dr Greer's advice (and he will talk about this no doubt) is that it's not an end point, or a particularly necessary mid-point kind of measure to be checking in on ecosystem health.

[00.25.20]

My view is the plan is more likely to be effective in its administration and implementation, particularly for consent processes if we are not asking for things that can't be assessed to be assessed and are really unnecessary to assess in terms of understanding the effects.

The key amendments made in my rebuttal evidence were extending the timeframe for the dissolved copper and zinc TAS for the Waiwhetū Stream. I think that one is extended to 2050.

Extended timeframes for the E.coli for the five FMUs listed there, which are the key big urban FMUs – one in Porirua and the others are in Te Whanganui-a-Tara. There's a mixture of timeframes for that lot – some are 2060 I think.

This recommendation is in response to the evidence from the Territorial Authorities and was enabled through developing the economic evidence to a further level of understanding at the more fine grain level of the part FMU. Mr Walker will be cover this in his evidence tomorrow afternoon. The reason for that is the achievability and affordability issues appear to be still quite challenging even with the reduced targets to national bottom line for those particular part FMUs.

There was a request in response to Porirua City in terms of three part FMUs that in my s42A hadn't been moved to the national bottom line, the minimum required improvement – sorry, it's got slightly different language in that part of the NPS. We've been calling them minimum required improvements, which is one state better than existing.

As a result of the further review of that, two of them have been dropped and one of them, which is a rural catchment... sorry, the two that have been moved back to national bottom line are not actually influenced to any great extent by the municipal wastewater discharges or pipe leaks or anything. It's actually the rural provisions and the rural provisions wouldn't achieve the target that was in the notified version of PC1 and would require wholesale land use change as in destocking for most of the catchment.

They've dropped at [29.35] and Taupō but it's been kept at (c) state... that one is expected to be achievable.

So that's those ones and then I have got other notes here on the next slide.

[01.30.02]

Then I've got the rebuttal changes. There's some further advice Dr Valois on the currently unmonitored TAS. As a result of that I've recommended removing the "dissolve oxygen" from the ones that she's indicated the Council is not intending to monitor, as it's not going to be adding value. Also the parphyte and biomass ones in the streams that really just don't grow parphyte and biomass. Like Waiwhetū they have been recommended to come out now.

Based on her evidence I also suggested removing some copper and zinc TAS for the rural and forested part FMUs. The advice from Dr Valois was that they weren't intending to monitor those urban contaminants for those rural and forested FMUs.

I now consider this is not a suitable outcome from a plan implementation perspective, so I have reversed what I had recommended in my rebuttal, and that's the highlighted edits in the table for I think Te Whanganui-a-Tara.

You will see in the table there's some yellow highlighting for Orongorongo on the metal ones at the bottom of the table, Te Awa Kairangi rural streams, and Wainuiomata rural and Porangahau Catchment and Mākara. Those ones I have reversed, and so those remain at a [32.21] state – or that's the target.

Still a little bit of consideration needing to be understanding whether or not they're reasonable, but presumably in the absence of urban development they should be at (a) state. There is no reason for there being metal in some of those catchments.

The reason for that is that obviously by definition greenfield development goes into rural areas generally – hopefully not forested areas; and so if we don't have the objectives there and require the Council to start monitoring those then it's going to be reasonably difficult to manage the prospect of either planned or unplanned urban development. So I think that is the preferable outcome.

I'm not sure what we can satisfy people about whether they're achievable, but in terms of the councils who have raised these concerns, and I think it's predominantly the TAs and maybe Wellington Water, about these insufficient data, are probably not a current problem, because they probably are at (a) state and it's just not monitored.

You might be able to take that up a bit more tomorrow with Dr Greer. Obviously I can just assume that the reason the Council is not interested in monitoring them is because they're not going to find anything interesting there. I think the plan is going to be more effective if they are there.

That's the updated table.

McGarry: Just on that, you've highlighted in yellow. The highlights in yellow are where you have reversed?

O'Callahan: Yes.

McGarry: So if we turn over. You've pointed out two of them to us, but then on the other side again we've got the Wainuiomata and the...

O'Callahan: I mentioned the Porangahau and Wainuiomata.

McGarry: You did. So that's what the yellow denotes? You've changed it.

O'Callahan: I will just check if there's any in Porirua.

There's none of those in Porirua, but on the Porirua page (and I foreshadowed this in my rebuttal statement) I have added the numerics to support the change to those two rural catchments that have gone from (c) to (d).

[00.35.00]

So when I wrote my rebuttal evidence I didn't have the input from Dr Greer to put the actual numerics for (d) state, for those particular FMUs, so I've added those in now.

That's all I have got here. We can move onto questions.

McGarry: I've just got a wording one on those objectives, those new prioritisations. Just looking at (e) 1 and 2. You've used the term "fully satisfied". Is that the language of the existing plan, which I've just met?

O'Callahan: Sorry, I haven't actually outlined this change in my presentation. Let me just cover that off first of all.

Clause (e) – the purpose again of clause (e) it's a little bit like the other notes that I've been questioned on. There's a lot of submissions come through and people are trying to work out how to apply these to their individual consent applications. Really that's not the intention of the NPS. Normal applying of objectives and policies is not really how this is intended to work. These are state of the environment and environment-wide outcomes that everyone needs to contribute to. You can't take one consent application and say, "Do you meet these objectives?" because it's going to take more than one consent application in theory to meet them all.

That's what this has been trying to right.

Basically it's really just saying where there's policies and rules that are specific to your activity and you meet those, then the intent is that the target attribute states are intended to be met. I will give you an example.

In Plan Change 1 there's rules that require a performance standard for stormwater treatment for new urban development. It says, "treat ninety percent of the area to this particular standard equivalent to a rain guard and bio retention thing," and it also says if you're greenfield that it will have a financial contribution.

Basically what I'm trying to say is, if you go through your assessment and you meet all of those policies that are quite specific to what the achievement is, and it's been worked out that that happens, then you'll be making your proportional contribution to what is needed to meet this.

So, where the specific policies are relevant to your activities then you don't need to worry about trying to do an assessment against all of these objectives.

Where they're not satisfied, where there are specific policies but they are not as satisfied, then we want to understand them in terms of how you're going to make your contribution to the target attribute state. Where there's nothing and you've just got a bespoke activity, much like probably but I don't know if it will be addressed through the provisions or not, but there's a number of submissions from quarries for example on this plan change. There are no specific provisions that we are intending to deal with quarries in this plan change, so in that situation you would assess the objectives.

That's what has been attempted to be drafted here, to try and make it simple. Particularly for that urban development kind of situation the focus should be on trying to meet the prescriptive provisions rather than trying to do an assessment each time of whether you meet however many hundred objectives and might be depending on scale of your development.

2496  
 2497 With that context hopefully we can answer the working questions that you might  
 2498 have picked up.  
 2499 McGarry: That's helpful thank you. You talked about where those are met.  
 2500 [00.40.00]  
 2501 I just wonder if that was better wording them "fully satisfied". So where the  
 2502 specific policies and rules are met or fully met, it could be if that's what you  
 2503 want, or not met in the next one.  
 2504  
 2505 When you talked me through that that's the wording you used, "where they're  
 2506 met".  
 2507  
 2508 O'Callahan: I just thought it was less ambiguous having "fully satisfied". It's not a case of  
 2509 generally met, partially met or met. I think it's met and someone else doesn't  
 2510 think it met. I think it's just trying to be absolutely clear that if there's some  
 2511 debate in that then you would do this assessment.  
 2512  
 2513 McGarry: If these are all conjunctive up to the end of (d), does (d) need an "and" on the  
 2514 end of clause 2?  
 2515  
 2516 O'Callahan: Yes, I think it does.  
 2517  
 2518 McGarry: Then when we get down to (e) these are all 'ors'?  
 2519  
 2520 O'Callahan: Yes. Thank you.  
 2521  
 2522 Kake: Just on clause (e), I'm just wondering if some of the wording with respect to  
 2523 monitoring. Where it says, "by the Council on behalf of mana whenua," I am  
 2524 just wondering if it might be better to say "in partnership with mana whenua".  
 2525  
 2526 O'Callahan: That's probably not needed at all really. It's probably just by the Council.  
 2527  
 2528 Kake: This again might be a question for mana whenua later in the week, but I suppose  
 2529 going through the scenario that you just provided with respect to an assessment  
 2530 under a s.104, acknowledging I suppose what's come through the WIPS and Te  
 2531 Mahere Wai, some of the monitoring aspirations mana whenua would like to  
 2532 undertake themselves; acknowledging again some non-regulatory methods that  
 2533 are coming through. Some of the monitoring may not be best done by Council  
 2534 on their own.  
 2535  
 2536 O'Callahan: Sure, okay. Partnership will be fine. I am just not sure – the purpose of it is to  
 2537 say that these are state of the environment monitoring. There might be a better  
 2538 way of expressing it. I think the concern is that we're not suggesting that consent  
 2539 applicants need to do this monitoring.  
 2540  
 2541 McGarry: So what you're really saying there is the obligation is on the Council to do it.  
 2542 How they do that could be in a partnership or it could be giving it to somebody  
 2543 else to do on their behalf. But the obligation is the Council.  
 2544  
 2545 O'Callahan: Yes. That's consistent with what's in the NPS and in s35 of the Act. The Council  
 2546 is the one that's obliged to monitor these under the... as opposed to the consent  
 2547 applicants.

2548  
 2549 Wratt: Table 9(2) Ms O’Callahan, the E.coli TAS, they’ve been reduced from (b)s and  
 2550 (c)s down to (d)s in several of the sites. I appreciate there’s no primary contact  
 2551 sites in Porirua Whaitua.  
 2552 [00.45.12]  
 2553 O’Callahan: That’s correct.  
 2554  
 2555 Wratt: But, there is still Appendix 3 of the National Policy Statement which requires  
 2556 that the national target is to increase portions expected by rivers and lakes that  
 2557 are suitable for primary contact, that is are in the blue, green and yellow  
 2558 categories, which I understand is (a), (b) and (c) to at least 80 percent by 2030  
 2559 and ninety percent no later than 2040.  
 2560  
 2561 It then notes that rivers are **force** [45.39] order or greater – is that what that refers  
 2562 to.  
 2563  
 2564 Is that consistent with TAS states as (d) across Taupō, [Māori 45.53]?  
 2565  
 2566 O’Callahan: Bear with me and I’ll just try and find that.  
 2567  
 2568 Wratt: They are improvements. They’re from state (e) to state (d) but they are still...  
 2569  
 2570 O’Callahan: You’re on Appendix 3, so that’s just for primary contact sites, is that right?  
 2571  
 2572 Wratt: It says for primary contact, but then it says the national target is to increase  
 2573 portions of specified rivers and lakes suitable for primary contact. So it doesn’t  
 2574 specify primary contact sites.  
 2575  
 2576 O’Callahan: I think I will have to hand over to Dr Greer on this, but my understanding is that  
 2577 there aren’t any.  
 2578  
 2579 Wratt: There’s no primary contact sites, I accept that.  
 2580  
 2581 O’Callahan: Yeah, but there’s also not that many rivers either. There’s a lot of piped.  
 2582  
 2583 Wratt: There’s no streams that people still have contact with? That they still potentially  
 2584 have contact with? Maybe they don’t come under that specified rivers and lakes,  
 2585 which is force order or greater.  
 2586  
 2587 Greer: They will. There will be plenty of force order and greater rivers in Porirua and  
 2588 in the [47.10] catchment in particular.  
 2589  
 2590 My understanding of those swim-ability targets are derived from the 2017 NPS,  
 2591 which is that the measure or the way to achieve them is for every river to improve  
 2592 and attribute date and it shifts. So (e) to (d) is not inconsistent with that because  
 2593 then the (d)s got to the (c)s and every river becomes more swimmable; but not  
 2594 every river is swimmable. There are still impacted rivers that are not.  
 2595  
 2596 Wratt: That still wouldn’t take eighty percent to the blue, green and yellow categories,  
 2597 which is what it says it should be.  
 2598

- 2599 Greer: At a national level, my understanding of the process, and I attended the  
 2600 workshops on this, was that if every river improved one state that is what would  
 2601 get you to that target at a national scale. Importantly the requirement to improve  
 2602 one state at the most impacted site in the catchment will shift some reaches from  
 2603 (d) to (c) and make them swimmable upstream as well. All the reaches upstream  
 2604 will also become more swimmable. It was just the most impacted reach that  
 2605 won't with that change.  
 2606
- 2607 Wratt: I don't quite see how that connects with...
- 2608
- 2609 Greer: Our sites in Wellington are the most impacted sites in the catchment. The  
 2610 modelling that this was done to is not eighty percent of sites meeting the targets;  
 2611 it's eighty percent of the river network in itself. So there's a lot less impacted  
 2612 sites in these Whaitua.  
 2613
- 2614 Potentially the biggest bang for buck is moving streams from the (d) to the (c)  
 2615 state. That makes you unswimmable to swimmable. But there will be reaches  
 2616 upstream of these that make that transition under this and thereby contribute to  
 2617 those targets being met; but not every monitoring site is going to be swimmable.  
 2618 In fact, probably across New Zealand's SOE network they will massively overly  
 2619 represent the ones that will remain unswimmable, because they're set there to  
 2620 detect the impacts of intensive human land use for the most part.  
 2621
- 2622 Wratt: I guess if I could just take a specific example on Table 9.2. At Taupō that's at  
 2623 the Plimmerton Domain, so what that would imply is that if it's a (d) at the  
 2624 Plimmerton Domain then upstream of that there will be a lot of the Taupō  
 2625 River/Stream that is better than (d).  
 2626 [00.50.00]
- 2627 Greer: Yes. Actually, in the Taupō Stream catchment – Greater Wellington  
 2628 unfortunately have not produced the modelling E.coli results on their website,  
 2629 but they do produce modelled E.coli results for everything upstream of their  
 2630 SOE sites. Currently the Taupō Stream, or the Horokiri as an example, it's (c) at  
 2631 the bottom of its main stem and (d) at the top. So there's a shifting of the attribute  
 2632 states. An improvement at the bottom you get a commensurate improvement in  
 2633 the upstream reaches. It shifts the entirety of the main stem of the Horokiri into  
 2634 the swimmable category, except for the very lower reaches.  
 2635
- 2636 It still results in a big increase in swimability at the catchment scale, even if you  
 2637 can't see it at the sites.  
 2638
- 2639 Wratt: Thank you. I think I've got that. Thanks for the explanation.  
 2640
- 2641 Chair: Ms O'Callahan, Objective WH.09, I'm just querying the words "water quantity"  
 2642 in the chapeaux. I understand that the PC1 provisions are not addressing  
 2643 allocation issues for Te Whanganui-a-Tara – they are only for Te Awarua-o-  
 2644 Porirua. Is "water quantity" appropriate there?  
 2645
- 2646 O'Callahan: I haven't specifically considered that, but the objectives do cover water quantity  
 2647 matters really, because we've got objectives on ground water. Ground water can  
 2648 impact these objectives. Water allocation – if you take too much water out then  
 2649 you'll affect the MCI for example. That's my understanding.  
 2650

2651 The intention of the plan change is to set the objectives. There are quite  
 2652 comprehensive provisions in the operative plan for water allocation. In this area  
 2653 obviously there's a big municipal take, concern and interest and that's heavily  
 2654 monitored is my understanding.

2655  
 2656 But there is some more work to be done to assess whether they need to be  
 2657 changed or not to achieve the objectives. I don't know the outcome of that and  
 2658 whether or not the provision policies and rules need to be changed. I'm not sure.  
 2659 If you're interested in that then I would have to ask some Council officers to see  
 2660 where that work is at.

2661  
 2662 Chair: I think our explanation is fine. I don't recall there being any relief. I understand  
 2663 that in the context of ground water.

2664  
 2665 In Table 8.3, primary contact site objectives and rivers, particularly Te  
 2666 Whanganui-a-Tara, can I just check I understand? Say for the Pakuratahi River  
 2667 where there's a baseline now compared to the notified version, is that because  
 2668 there is now data that's available and that's also why instead of putting in a  
 2669 "maintain" or "improve" you're able to be more specific about the numeric  
 2670 target?

2671  
 2672 I just want to check that I understand these revisions.

2673 [00.55.00]  
 2674 O'Callahan: I'm happy to answer it, but this will be addressed in a subsequent issue.

2675  
 2676 What's been put in here is current state information. There wasn't baseline state,  
 2677 because Dr Greer explained there's certain requirements. I think they had to have  
 2678 five years monitoring at 2017, or something like that. Anyway, if the data wasn't  
 2679 there at 2017 we could never do a baseline state. So there's obviously been some  
 2680 more recent monitoring. We've got a number there so we now know that there's  
 2681 some issues there.

2682  
 2683 This is a largely rural campsite area. There's some localised issues in his  
 2684 evidence. He talks about some source tracing to work out what's going on there.

2685  
 2686 So I haven't changed the target there. I have just said that the state at the moment  
 2687 is poor and the target was set at 540. It stayed at 540. I think that's what I'm  
 2688 showing there. I think that's how it was said.

2689  
 2690 Chair: Thank you. I guess I just wanted to understand why the deletion of the words  
 2691 "maintain at or improve to less than a record of 540."

2692  
 2693 O'Callahan: I don't think they were adding anything. There's a target there of 540 that needs  
 2694 an improvement to get there.

2695  
 2696 Chair: Okay, so deleting those words is sort of inconsequential?

2697  
 2698 O'Callahan: Yeah, because it's in sub-clause (a) of Objective WH.08 and the maintain or  
 2699 improve to get there.

2700  
 2701 Chair: Just staying with that table, Akatarawa River, the line below, where there is a  
 2702 numeric baseline but the target attribute state, is it numeric, it's maintained and

2703 that's again because the primary contact site the results have got 'fair' here. The  
 2704 results are fair and that's expected to stay at fair?  
 2705

2706 O'Callahan: What we have got here is 540 is the target for swimability. We've got something  
 2707 that's actually better than that at the moment, so we want the "better than  
 2708 maintained". So it's at 420 at the moment and if we set that at 540 then we'll be  
 2709 allowing a little bit of degradation.  
 2710

2711 McGarry: I am just looking at your paragraph 289 in your s42A report under this issue.  
 2712 You've said there on the case of [58.34] oxygen which is absent for all part  
 2713 FMUs still, you understand some data has been recently obtained and is yet to  
 2714 be processed. Then you've said, "I suggest an update on this matter could be for  
 2715 the hearings panel to discuss."  
 2716

2717 We've got Dr Greer here, so I am just wondering if there is any data available  
 2718 for us. Is there any update on that point?  
 2719

2720 O'Callahan: That's addressed in the rebuttal evidence of Dr Valois. Dr Greer might be able  
 2721 to comment on what that says off the top of his head, but I know there's the  
 2722 commitments for what they're going to monitor and what they haven't.  
 2723

2724 Did they find any data? There was some we thought was being processed. Or,  
 2725 was that not the case?  
 2726

2727 Greer: I actually think I have to take responsibility for that one. I believe I  
 2728 misinterpreted what Dr Valois told me in a meeting. She mentioned that they  
 2729 had started monitoring and they had lost a significant number of probes, but  
 2730 they'd actually started in the Kapiti Whaitua and not the PC1 area. I became  
 2731 aware of that afterwards.  
 2732

2733 Dr Valois has noted that they've done a prioritisation exercise based off the one-  
 2734 off daily monitoring that they collect to identify where they need to monitor over  
 2735 the next four years I believe, but none of that monitoring is planned to be  
 2736 conducted in accordance with the NPS-FM requirements of full summer  
 2737 monitoring every year. It's a one-off, or I believe a short number of weeks, which  
 2738 is effectively all that can be done in Wellington given the flash-flows we have  
 2739 around here.  
 2740

2740 [01.00.20]  
 2741 McGarry: If I just note there, nothing further at the moment. That's it. Thank you.  
 2742

2743 Chair: I've got some more questions on Table 8.4 and the specific target attribute states  
 2744 but is that better for tomorrow? I think it's probably the science. I could ask the  
 2745 question and you could let me know if it's better to ask it tomorrow.  
 2746

2747 O'Callahan: The issue is that...  
 2748 Chair: You don't have the expert here?  
 2749

2750 O'Callahan: We have the main expert here. The issue is that you're going to hear a lot from  
 2751 scientists and then you might want to circle back to planning. If you've got  
 2752 questions on the science then I should at least have an understanding of it, but if  
 2753 you've got questions on the recommendations that I've made in weighing up

2754 science and economic evidence and other factors, then that's probably the stuff  
 2755 we need to get across now primarily.  
 2756

2757 Chair: Table 8.4 dissolved inorganic nitrogen. My question is for Wellington urban the  
 2758 baseline is 0.035 and that's got a TAS of maintain. My understanding of Dr  
 2759 Snelder's view is that the nutrient outcome for dissolved inorganic nitrogen  
 2760 should be reduced in the Wellington part FMU to 1.0mg.  
 2761  
 2762 Is this getting into something we might need Dr Snell here for?  
 2763

2764 Greer: Actually that recommendation was principally from my assessment of the  
 2765 submissions. It was requested by EDS, Forest & Bird and the Vic Canoe Club.  
 2766 I think he was agreeing with the point that I made in his evidence. I do plan to  
 2767 discuss that in my presentation tomorrow, but I just want to confirm the baseline  
 2768 state is 1.29 there, not 0.035.  
 2769  
 2770 I think that's a pretty sciencey assessment, so if you want to wait until tomorrow,  
 2771 then let Mary continue. I think that would be a good idea.  
 2772

2773 O'Callahan: Is that one of the ones that I didn't adopt your recommendation?  
 2774

2775 Greer: You adopted it.  
 2776

2777 O'Callahan: No I didn't. I didn't change anything. Do you remember? It was going to make  
 2778 it more [01.04.18].  
 2779

2780 Greer: That's was a scientific recommendation in my evidence that was balanced by  
 2781 Ms O'Callahan who did not actually adopt it, and **Tom's** [01.04.29] as well.  
 2782

2783 O'Callahan: I can take you to the part of Dr Greer's evidence that addresses why that is –  
 2784 with some help from him perhaps, where it says that it requires significant land  
 2785 use change.  
 2786 **[01.05.00]**  
 2787 It's paragraph 122. He is saying that makes sense because it lines up with some  
 2788 other attribute, periphyton. This might be the case anyway with achievability  
 2789 around periphyton. It requires a hundred percent of the areas to be treated within  
 2790 the stormwater for [01.05.47] and Wellington urban and fifty percent of the  
 2791 urban nutrient losses...it just sounded like a lot of additional impact. He has  
 2792 pointed out that even if it was physically possible to implement those mitigations  
 2793 it's such a large scale it would be extremely expensive. I just took that as being  
 2794 this is not a priority in terms of funding to try and achieve that, and it sounded  
 2795 like it was in the unachievable camp.  
 2796  
 2797 I guess you can question Dr Greer on that a bit more tomorrow, to understand it  
 2798 fully.  
 2799  
 2800 I have addressed that in my evidence somewhere. I will just carry on and see if  
 2801 I can find where I explained that.  
 2802

2803 Chair: Another question maybe for tomorrow then Dr Greer, is just in the row below  
 2804 that with the dissolve reactive phosphorous. My understanding of your evidence,  
 2805 I think at paragraph 125...

2806  
 2807 O'Callahan: Mine or Dr Greer's?  
 2808  
 2809 Chair: I think Dr Greer's – that the 0.035 might be 0.025.  
 2810  
 2811 Greer: That recommendation was made for exactly the same reason as the nitrogen one  
 2812 was made. I believe not adopted by Ms O'Callahan for the same reason as well,  
 2813 in terms of it requires significant amounts of stormwater treatment to achieve it.  
 2814  
 2815 O'Callahan: I have addressed this around 317 to 320.  
 2816  
 2817 Chair: So it can be done but would require significant work in the network and probably  
 2818 not just at a specific place. It would probably require changes throughout the  
 2819 infrastructure?  
 2820  
 2821 Greer: Yes, it would require significant upgrades to both the stormwater and  
 2822 wastewater networks in an area where there is not a strong indication that there  
 2823 is an x based need for it. My recommendation was based purely on consistency  
 2824 with the guidelines that were implemented and they set maximum thresholds for  
 2825 those attributes to be managed at. I mistakenly didn't adopt those when I  
 2826 developed the nutrient outcomes the first time. Those numbers are simply to be  
 2827 consistent with those guidelines. The periphyton cover [01.09.30] data for that  
 2828 site indicates that the biomass target is likely being met, so there's not a huge  
 2829 effects basis to implement nutrient management there It's simply process based.  
 2830  
 2831 McGarry: So what you're saying in a nutshell, if I'm getting it right, is that there would be  
 2832 a lot of expense for that improvement, but that ecologically it wouldn't be very  
 2833 meaningful in terms of ecological health?  
 2834 [01.10.02]  
 2835 Greer: Yes, the recommendation was made simply because the guidelines said it should  
 2836 be made and not because there is a big environmental driver for it.  
 2837  
 2838 Chair: Ms O'Callahan you're Objective WH.09E(1) I have been reading and rereading  
 2839 this and I am not sure I fully understand it. I'm sorry and I know it's late but I  
 2840 was looking at a policy and I just picked a random one, just to see if I understood  
 2841 how this would be implemented. I just picked policy WH.P4. Do you mind just  
 2842 talking me through? This says that if a specific policy is fully satisfied and the  
 2843 target attribute state can be considered to be consistent with this objective. So  
 2844 Police WH.P4, which I just turned to, is about achieving visual clarity target  
 2845 attribute states.  
 2846  
 2847 Do you mind just talking through how you would see that provision would  
 2848 apply?  
 2849  
 2850 O'Callahan: In E I'm talking about where specific policies and rules are included in this  
 2851 chapter of the plan to manage an activity. That's not an activity policy. I'm  
 2852 talking about say a policy that is to manage say a stormwater discharge. We  
 2853 could add some cross-references if we needed to. Say we've got a rule for  
 2854 stormwater from a new greenfield area, we've got a rule there and we've got  
 2855 policies. The rule might be WH.6 and the policy might be... my rule was new  
 2856 development so I've got P14. That's the one that talks about the 85 percent of

2857 the volume and the rain guard and detention device. I think we've got stormwater  
 2858 standard fall. So that's sort of what I was thinking.

2859

2860 Chair: [Inaudible 01.13.18]

2861

2862 O'Callahan: You're doing your bit to contribute to the target attribute state. If you don't meet  
 2863 it then you're arguably not and they need to assess it.

2864

2865 That really should further the activity I think, and the assessment of the  
 2866 achievement of the target attribute state. There might just need to be some more  
 2867 words there. I'm happy to look at that and come back to you in the morning.

2868

2869 McGarry: Just as a suggestion: maybe it's where at the beginning of the run, where the  
 2870 specific policies and rules applying to the activity are fully satisfied. That sort  
 2871 of clarifies what you're saying about the activity.

2872

2873 O'Callahan: I'll come back to you.

2874

2875 McGarry: I'm not sure you need the whole rest then.

2876

2877 O'Callahan: I'll just have a look at it.

2878

2879 McGarry: The last one is, the first two years when?

2880

2881 Chair: I think I could follow it for 2 and 3. Thank you.

2882 [01.15.03]

2883 O'Callahan: As long as you can understand the concept of what I'm trying to communicate.  
 2884 It's just a draft and I'll need some input I'm sure. It's just a first crack.

2885

2886 Chair: This is an objective where it's not purely state of the environment reporting. This  
 2887 does matter for consenting and not just network discharges, but this would apply  
 2888 to individual consenting applications.

2889

2890 O'Callahan: That's where the concerns come from in the submissions.

2891

2892 Chair: Thank you very much Ms O'Callahan and Dr Greer. We will finish there for the  
 2893 day and we are back tomorrow at 10.45am. We will pick up again with the  
 2894 Council team. Thank you very much for your presentations and helping us with  
 2895 our questions today. Thank you.

2896

2897 A karakia to close the day, thank you Mr Ellis.

2898

2899 Ellis: Thank you very much Commissioner Nightingale.

2900

2901 *E Rongo, whakairia koe ngā kōrero*  
 2902 *Ki roto i te kete waitau.*  
 2903 *Ana, ka tāpiri atu ki te pātū o tēnei whare*  
 2904 *Ko Ranginui e tū nei*  
 2905 *Ko Papatūānuku e takato nei*  
 2906 *Ko te aroha o te taiao*  
 2907 *e tauawhi nei i a tātou.*

2908 *Tūturu whakamaua kia tina!*  
2909 *Tina! Haumi e, hui e! TĀIKI E!*  
2910  
2911  
2912 [End of recording 01.17.36]