BEFORE AN INDEPENDENT HEARINGS PANEL

THE PROPOSED WAIKATO DISTRICT PLAN (STAGE 1)

UNDER the Resource Management Act 1991 (the Act)

IN THE MATTER OF Hearing 21A: Significant Natural Areas (Proposed Waikato District Plan) submissions and further submissions

STATEMENT OF REBUTTAL EVIDENCE FOR JOHN PAUL TURNER FOR THE WAIKATO DISTRICT COUNCIL (ECOLOGY)

DATED 13 NOVEMBER 2020

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1. Introduction

1.1 My name is John Paul Turner. I am a Technical Principal – Ecology with WSP where I have been employed since 1999. I have over 30 years' experience as an ecological consultant.

1.2 I have the following qualifications and experience:

(a) BSc (Hons) Applied Science, specialising in environmental sciences, from The Polytechnic, Wolverhampton;

(b) 31 years' experience as a professional ecologist, having worked as an ecological consultant for 10 years in the United Kingdom, before taking up my position with WSP in New Zealand;

(c) extensive experience and expertise in valuing vegetation, habitats and species as part of many ecological impact assessments of a wide range of projects including major infrastructure within the Waikato and nationally, as well as technical peer reviews for Regional and District Council's;

(d) direction and interpretation of data from numerous long-tailed bat surveys and monitoring projects within the Waikato since 2011, including long-term monitoring of bat activity and behaviour along the Huntly, Hamilton and Cambridge Sections of the Waikato Expressway;

(e) extensive experience in monitoring and observing bat behaviour in relation to road corridors, including sections of the Waikato Expressway illuminated by street lighting;

(f) a high level of familiarity with the ecology and values of ecosystems within the Waikato District having lived in Hamilton for 22 years, with most of my work focussed within the Waikato Region; and

(g) full membership of the Chartered Institute of Ecology and Environmental Management, the United Kingdom's main professional institute for ecologists, which I have held since 1995 and full membership of New Zealand Ecological Society.

1.3 I confirm that I am familiar with the Code of Conduct for Expert Witnesses as set out in the Environment Court Practice Note 2014. I have read and agree to comply with the Code. Except where I state that I am relying upon the specified evidence or advice of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

2. Scope of evidence

2.1 This statement of evidence provides a response to issues raised in the following statements of evidence provided by submitters:

a) Statement of evidence of Dr Yanbin Deng for Waikato Regional Council;
b) Statement of evidence of Antony Julian Beauchamp on behalf of the Director-General of Conservation; and
c) Statement of evidence of Tertia Thurley on behalf of the Director-General of Conservation.

3. Response to Statement of Evidence of Dr Yanbin Deng

3.1 Dr Deng raises concerns in the following matters:

a) Lack of robust SNA assessment to support the S42A report and recommendations.
b) Lack of recognition of provisional SNA dataset and mapping.
c) The importance of DOC protected land in protecting biodiversity in the Waikato.
d) Some specific examples of incorrect changes to SNA status.

Lack of robust SNA assessment

3.2 Issue: Dr Deng does not consider that the Significant Natural Areas Assessment (2020) that I undertook to be robust or comprehensive. Dr Deng states that my report has not aligned with the standard SNA data validation methodology (Environment Waikato & Wildland Consultants Ltd, 2002 and Kessels Ecology, 2017). The site visits were undertaken at the property level, not at the SNA site scale, which means only small parts of entire SNAs have been ground truthed. Dr Deng is concerned that the methodology I used has resulted in inappropriate site reassessment and significance ranking.

3.3 Response: My brief was to assess whether or not the Significant Natural Area (SNA) mapping was valid at the property level when evaluated against the criteria contained in Appendix 2 Criteria for Determining Significance of Indigenous Biodiversity. I was instructed by Waikato District Council (WDC) that I could only assess the validity of the SNA as it related to the property that was the subject of submission. I made it clear in the report[1] (Section 2.1) that the assessment was modified to take account of the fact that it was a response to submissions made and was not a comprehensive assessment of the full extent of SNA's that extended beyond the boundary of the property. It was my understanding based on the briefing provided by my client that I could not assess the validity of SNA's on properties where submissions had not been made.

3.4 The most important part of determining whether or not a site, or part of a site, is a SNA is whether it meets one or more of the criteria in Section 11A of the Waikato Regional Policy Statement, which is

[1] Turner, J.; 2020. Waikato District Plan Review: Significant Natural Areas Assessments. *WSP Report prepared for Waikato District Council, 17th October 2020 2-WLASS.85.*

included in Appendix 2 of the Proposed District Plan as "Criteria for Determining Significance of Indigenous Biodiversity". This forms the core of each site assessment and was used for all the sites visited. While it is accepted that the assessments undertaken were not necessarily comprehensive in terms of entire SNA's i.e. SNA's extending over multiple properties, it is my opinion that the assessments that I undertook were sufficient for their intended purpose of determining if SNA's within a given property, or parts thereof, met the threshold for being a SNA.

3.5 From the selected sites surveyed in response to submissions received relating to SNA boundaries, it was clear that there was a high degree of inaccuracy of the SNA boundaries shown on the Proposed District Planning Maps. Less than 25% of the SNA boundaries surveyed remained as per the District Planning Maps following ground truth survey (Annexure A). Many of the sites surveyed included gardens or sites dominated by exotic plant communities and clearly did not meet SNA criteria. These observations supported the main conclusion of my report that the SNA boundaries shown on the Proposed District Planning Maps cannot be relied upon for planning purposes until comprehensive ground truth surveys have been undertaken.

Lack of recognition of provisional SNA dataset and mapping

3.6 Issue: Dr Deng states that the lack of recognition of the process of provisional SNA mapping and dataset development is a critical oversight in my approach and report (2020). Dr Deng goes on to state that the development of the dataset "….*involved multiple parties and significant investment across those parties. This comprehensive consultation process should not be easily discarded given that both Waikato Regional Council and Waikato District Council have invested a large amount of resources for the identification and assessment of these SNA sites. At a minimum, it would seem that the 50 sites visited and updated by previous ecological assessment, should also be included as part of Ms Chibnall's report (2020a) - Option 5."*

3.7 Response: A review of the original dataset did not form part of my brief. The additional sites visited and updated by the previous ecological assessment could (subject to review) be included in the mapping if the Waikato District Council wishes. However, I note that this still comprises a small proportion of the total number of potential SNA's within the District and can hardly be described as representative.

The importance of DOC protected land in protecting biodiversity in the Waikato

3.8 Issue: Dr Deng raises the matter of the large amount of SNA on Department of Conservation (DOC) land, which amounts to approximately 23,000 ha and considers that DOC land should be retained as part of SNA mapping.

3.9 Response: The retention of DOC land as part of the SNA mapping did not form part of my brief. The DOC land could be retained within the mapping if WDC wishes. I note however that DOC land already has a level of protection by virtue of being DOC land that exceeds that of an SNA and therefore

protection under the District Plan provides no additional protection although Dr Deng indicates that it provides the ability to manage biodiversity across public and private boundaries. This may be the case although I have no experience that would enable me to confirm this.

Specific examples of incorrect changes to SNA status

3.10 Issue: Dr Deng is concerned that Ms Chibnall's report (2020b) paragraph 814 accepts the deletion of manuka /kanuka scrub from SNA 60 around 1665 Whaanga Road. Noting that this is part of a site that has been ranked by DOC as a Threatened Species Management Unit. In Dr Deng's opinion, the extension of the DOC SNA into private land has ecological and functional importance as a buffer or barrier to external influences from the environment. Dr Deng considers that the manuka /kanuka scrub growing at the site potentially provides habitat for threatened species. Dr Deng considers that the proposed deletion of part of SNA 60 could potentially inhibit threatened species migration and ecological corridors from mountain to sea, given its status as a DOC Threatened Species Management Unit.

3.11 Response:

Kanuka/manuka dominated shrubland is very much secondary vegetation indicative of historic land clearance. The character and species composition of the stands of kanuka/manuka contrast sharply with the areas of broadleaved podocarp forest that support a diverse range of tree and shrub species including climax canopy species. Dr Deng has questioned the exclusion of kanuka/manuka from SNA's associated with the 1665 Whaanga Road property. The kanuka/manuka shrubland supports a low number of plant species compared to the broadleaved podocarp forest and in most places grazed beneath. I note Dr Deng's reference to aerial images dating back to 1997 and I accept that some of the areas of kanuka/manuka may have been regenerating for several decades. However, going further back in time these areas were almost certainly cleared completely, otherwise the vegetation character would be different i.e. would have greater species diversity and include many more broadleaved species. Kanuka/manuka is a pasture weed in this area and can be clearly observed as such. I have provided photographic evidence of this in my report[2] (page 315). The farmland areas along this section of coastline have significant areas of both broadleaved podocarp forest and kanuka/manuka scrub. The high value areas of broadleaved podocarp forest have been retained within the SNA boundary and these will provide ecological function and corridor function between mountain and the sea. I do not consider the inclusion of the areas of kanuka/manuka within SNA's in this locality to be critical for the protection of threatened species. The extensive areas of broadleaved forest on both public and private land in the area that will be protected through being identified as a SNA are sufficient to achieve protection of biodiversity including threatened species.

[2] Turner, J.; 2020. Waikato District Plan Review: Significant Natural Areas Assessments. *WSP Report prepared for Waikato District Council, 17th October 2020 2-WLASS.85.*

3.12 I understand some of the reasoning behind Dr Deng's concerns and the value of kanuka/manuka in different context is a matter that ecologists will differ on in their opinions. However, this is one example of the 40 sites visited that Dr Deng has questioned. Most of the assessments undertaken do not concern exclusion of ecosystems dominated by native species, rather they are concerned with removal of areas that in some cases are buildings, gardens, pasture and areas dominated by exotic plant species and other ecosystems that very clearly do not meet the criteria for a SNA. In other words, the example provided by Dr Deng, while debatable, is not representative of the 40 sites surveyed. Where I have recommended that sites assessed to be excluded from the SNA mapping, in whole or in part, the exclusion in most cases is much clearer.

3.13 Issue: Dr Deng states in conclusions that by mapping only a small number of sites as part of Option 5 (Ms Chibnall's report, 2020a), there is a real risk for safeguarding the biodiversity asset of the district, including rare ecosystems, threatened species and their habitats and the representativeness of vegetation types in the Waikato District.

3.14 Response: There are certainly risks and threats to biodiversity within the District. Identification mapping of SNA's within the District and the detailed cataloguing of their characteristics and values is an important step in the process of providing for the protection and management of biodiversity within the District. However, based on the selective assessment of sites that I have undertaken to date, the present boundaries of SNAs included on maps within the proposed District Plan are in many cases unreliable. Under these circumstances there is a very real prospect of property owners being unfairly disadvantaged. Only comprehensive surveys, including a ground truth survey, are likely to provide the necessary level of information to provide for the protection and management of biodiversity within the District and safeguard the interests of affected land owners.

3.15 In any event, Option 5 as recommended by Ms Chibnall actually results in protection of a considerably larger expanse of SNAs across the District due to relying on the Appendix 2 criteria, rather than erroneous mapping. While it is evident that the mapping is incorrect and has identified areas of vegetation that do not meet the criteria for SNA, it is likely that legitimate SNAs have been missed from the maps.

4. Response to Statement of Evidence of Anthony Julian Beauchamp

4.1 Issue: The evidence of Dr Beauchamp provides details of the causes, biology and diagnosis of kauri dieback as well as how kauri dieback is spread and consequences of kauri dieback. He is concerned that a voluntary approach is not sufficient for the protection of kauri and minimising the spread, particularly as this relates to urban areas.

4.2 Response: Dr Beauchamp provides a good summary of the issue and seriousness of the problem and I acknowledge his considerable experience in this area over many years. I also acknowledge that my own experience concerning the disease is far more limited. I concur with his descriptions of the problem and that kauri dieback represents a significant threat to the future of the species in New

Zealand. The area of disagreement concerns the most effective ways of preventing the spread of the disease which Dr Beauchamp considers should include rules within the District Plan concerning earthworks and vegetation clearance as this relates to kauri.

4.3 My advice concerning kauri dieback to Ms Chibnall has been based on my knowledge of the disease and distribution of kauri within the District as well as consideration of what I consider the practicalities of effectively containing the disease. However, the advice provided has been from my perspective as an ecologist and I defer to Ms Chibnall in terms of the practicalities of protection of kauri from dieback via rules within the District.

4.4 In my report[3] (section 3.4) to WDC that considered the issue of kauri dieback I stated that because most of the natural kauri stands within the Waikato District are within bush reserve areas that the protection of these is best managed by the bodies responsible for those areas including DOC. This reflects the approach taken in other areas such as the Auckland Region. I still consider that this is a very important part of containing the spread of the disease within the District. Furthermore, it is difficult to see how rules concerning earthworks and vegetation clearance within such areas would benefit these natural stands.

4.5 Outside of natural forests, kauri has been widely planted across the district and within Hamilton City, the main regional centre. Most of the potentially affected trees are young trees within private native restoration plantings and also public open spaces and gardens. While it may be possible to have rules in the District Plan that provide controls around earthworks and vegetation clearance I suspect they would prove challenging to implement and monitor in many situations. Whether those challenges are likely to prove insurmountable or not I will leave to others to decide.

4.6 There is another point regarding this matter that I would like to offer for consideration. Based on my understanding of how the disease is spread, including a review of Dr Beauchamps evidence, there are many other means by which the disease can be spread other than via earthworks. For example, transport via soil on footwear and on the feet of domestic animals, feral animals or stock. I note the measures listed on the Waikato Regional Council website[4] providing guidance on how to stop the spread of the disease which include amongst other steps: keeping 3 times the circumference of the tree drip line; cleaning and disinfecting footwear after being in kauri areas; keeping dogs on a lead in kauri areas and not parking in kauri areas. For trees within the urban area and private gardens this is likely to prove challenging for even the most conscientious and conservation minded. My point here is that even with rules addressing earthworks and vegetation clearance within the District Plan there are still a whole range of other means by which the disease can be spread and that are much more likely to occur on a regular basis. Many of these activities would be very difficult to control and monitor by regulatory means and would still rely voluntary actions by the public and landowners. The reliance on

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[3] Turner, J.; 2020. Waikato District Plan Review: Technical responses to submissions relating to ecology. *WSP Report prepared for Waikato District Council, 14th October 2020 2-WLASS.85.*

[4] https://www.waikatoregion.govt.nz/services/plant-and-animal-pests/kauri-dieback/#:~:text=about%20kauri%20dieback%3F-,What%20is%20kauri%20dieback%3F,cuts%20nutrients%20to%20the%20tree.

education and voluntary actions would still be critical for managing this issue even with rules in the plan concerning earthworks and vegetation clearance.

5 Response to Statement of Evidence of Tertia Thurley on behalf of the Director-General of Conservation

5.1 Issue: Ms Thurley provided evidence on the ecology of long-tailed bats, conservation status and reasons for their decline, particularly the consequences for the loss of trees, but also other factors including housing, infrastructure development and lighting. Ms Thurley proposes the inclusion of mapped Bat Protection Zones within the District Plan as a basis for the addition of objectives, policies and rules which recognise bat zones and tree protection (as discussed in the evidence of Mr Riddell).

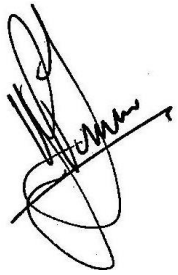
5.2 Response: For the most part I agree with the evidence provided by Ms Thurley, although comparisons concerning the pressures on populations between rural South Canterbury and the Waikato (paras 6.6. and 6.7) in my opinion may be unduly pessimistic, based on my many years of monitoring and observing bats within the District. That stated, it is prudent to assume that some decline in the bat population is occurring and as stated in my report[5] (section 2.3) it is appropriate that measures are taken to protect their habitat and avoid killing or injuring bats during tree felling. Loss of roost trees not only risks killing or injuring bats but also represents a loss of roosting habitat as Ms Thurley points out in her evidence. However, I am not convinced that Bat Protection Zones (BPZ's) are an appropriate mechanism for achieving this. I presented some of my reasons in my report, which I will not repeat here, except the point that long-tailed bats are found widely across the District and this would likely include areas outside BPZ's. All bats are protected from being killed or injured under the Wildlife Act 1953 wherever they are present, and the creation of BPZ's, with associated rules in the District Plan could create the impression that activities outside those zones would exempt persons from undertaking measures that prevent killing or injuring bats and from prosecution under the Act. Following the rules in the District Plan as they relate to tree removal within a BPZ would not in my understanding exempt a person from their obligations under the Wildlife Act 1953.

5.3 Ms Thurley acknowledges (para 11.4) that the distribution data for long-tailed bats in the Waikato District is incomplete and that areas for which there is currently no data does not necessarily mean that bats are not present (para 8.2). I agree with her. Ms Thurley recommends (para 11.5) that an important bat zone be defined by the maximum observed home range of bats in the Waikato and further recommends using a 7.3km buffer around each currently known bat observation as the basis for mapping. The results of this approach are shown in the map in Appendix 3 of her evidence. In reviewing the map, I note that even with an incomplete dataset (that would be added to in the future), BPZs based on this approach would cover a significant area of the District. Further surveys would

[5] Turner, J.; 2020. Waikato District Plan Review: Technical responses to submissions relating to ecology. *WSP Report prepared for Waikato District Council, 14th October 2020 2-WLASS.85.*

almost certainly add to this area to the extent that most, if not all, the District would be a BPZ, at which point it would cease to be a useful overlay, as it would provide no differentiation between high and low value areas, nor areas where rules apply and where they do not.

5.4 In my opinion the approach recommended is too crude to be useful in defining important parts of the Waikato District for bats. I know from my experience that while bats are widely distributed in the Waikato, some areas and habitats are far more important than others. If there is to be some effective recognition and additional protection of these areas then this requires a more refined approach that defines their purpose and the particular measures to be implemented within them, whether this is within the District Plan or via alternative mechanisms. In my opinion we are not at a stage where this can be done effectively.



John Turner

13 November 2020

ANNEXURE A

Summary of findings of the SNA ground truth surveys

	Matter	The Transport Agency's Submission or Further Submission Number	S42A report's recommendation	The Transport Agency's Comment
1	Policy 5.6.3 – Subdivision in the Country Living Zone	S742.41	Accept in part	Agree
2	Policy 5.6.14 – Managing the adverse effects of signs	S742.42	Accept in part	Agree
3	Policy 5.6.15 – Artificial outdoor lighting	S742.43	Accept	Agree
4	Policy 5.6.16 — Noise	S742.44	Reject	Agree
5	Rule 23.1.1 P3 — Temporary Event	S742.232	Accept	Agree
6	Rule 23.1.1 P4 — a Home Occupation	S742.233	Reject	Disagree
7	Rule 23.2.2 — Glare and artificial light	S742.234	Accept	Agree
8	Rule 23.2.6.1 Signs — General	S742.235	Accept	Agree
9	Rule 23.2.6.2 P1 Signs — effects on traffic	S742.236	Reject	Disagree
10	Rule 23.2.6.2 D1 Signs — effects on traffic	S742.237	Accept	Agree
11	Rule 23.3.7.1 P1 and P2 Building setbacks– All boundaries	S742.238	Reject	Agree
12	Rule 23.3.7.1 RD1 Building setbacks – All boundaries	S742.241	Missing from s42 A report	
13	Rule 23.3.7.2 P1 Building setback -sensitive land use	S742.240	Accept	Agree
14	Rule 23.3.7.2 D1 Building setback -sensitive land use	S742.241	Accept	Agree
15	Rule 23.4.7 RD1 Subdivision – road frontage	S742.144	Accept in part	Agree