**EKETAHUNA WASTEWATER TREATMENT PLANT WETLAND: SUMMARY OF EVIDENCE OF TABITHA MANDERSON (PLANNING) FOR TARARUA DISTRICT COUNCIL**

1. As outlined in my evidence the main purpose of the proposed wetland is to allow the overall proposed discharge of treated wastewater from the EWWTP to meet the requirements of Policy 5-11, and in doing so to recognise cultural concerns.

2. Potential flooding effects have been assessed as less than minor and soil disturbance effects during construction will be dealt with through the ESCP.

3. There is a large degree of agreement between the groundwater experts and Ms Boam concludes the development of the wetland will have a less than minor effect on the groundwater system.

4. The proposal as a whole will contribute to improving water quality and the proposed conditions allow for remaining uncertainty with regards to the scale of effects to be measured and appropriately avoided, remedied or mitigated. Wetland performance, while not being relied upon for treatment, can be managed through wetland management.

5. The proposal is in my opinion consistent with the relevant Chapter 2 – Te Ao Māori provisions, taking into account the recommended conditions and efforts undertaken by TDC around further consultation.

6. The EWWTP is regionally significant infrastructure for the purposes of Policy 3-3(a).

7. An updated draft ESCP has been provided and conditions recommended that are consistent with the identified objectives and policies of Chapter 13.

8. I am in agreement with Ms Morton in relation to assessment of Chapters 14, 16, 17 and 12.

9. I have given general recourse to Part 2, and consider that overall the Wetland Application promotes the purpose of the RMA.

10. Changes to conditions recommended include having the compliance monitoring point for the treated wastewater to be post the treatment wetland

(with the exception of E.coli), alternatives in relation to I&I investigations, and pond permeability investigations.

11. In his evidence Mr Percy suggests the proposed wetland would be more like a lake than land.

12. A lake is described in the RMA as a body of water surrounded by land. Schedule F of the One Plan describes a lake as an area *"of standing (non-flowing) water".*

13. A wetland, as defined in the RMA, includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions. The One Plan, too, envisages wetlands containing water, for instance for bog and fen wetlands "*The water table is often close to or just above the ground surface*" and for swamp and marsh wetlands "*Standing water and surface channels are often present, with the water table either permanently, or periodically, above much of the ground surface"*.

14. Accordingly, it is clear to me that areas of shallow water can be expected within a wetland system.

15. Further, as described in the evidence of Mr MacGibbon, in order for a treatment wetland to function the wastewater will need to come into contact with the soil, plant roots and other organic matter. These plants are adapted to growing within the wetland ecosystem but remain rooted to ground in order to grow.

16. The proposed wetland will meet Policy 5-11 in that it will enable treated wastewater to:

    (a) be applied "onto land" at the point it is conveyed from the treatment ponds to the wetland;

    (b) be applied "into land" as some of the treated wastewater will percolate down through the wetland base, coming into contact with soil and organic matter; and

    (c) "flow overland" as it flows above the ground as it makes its way through the wetland system..

17. Mr Percy identifies a "Site of Significance – Aquatic" as one of the Values that applies to the Makakahi River. He has footnoted this as identifying Shortjaw kokopu at Bruce Stream tributary, Makakahi River tributary and Makakahi River). Mr Brown in his original evidence provided a useful map (Map 1) which confirmed that Site of Significance - Aquatic does not apply to the specific reach.