Before the Selwyn District Council

under: the Resource Management Act 1991

in the matter of: Proposed Private Plan Change 80 to the Operative District Plan

and: **Two Chain Road Limited**
Applicant

Evidence of Mark Taylor (ecology)

Dated: 5 October 2022

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EVIDENCE OF MARK TAYLOR

INTRODUCTION

1 My full name is Mark James Taylor.

2 I hold a degree of Bachelor of Science in Zoology, and have 36 years' experience in environmental assessment, with 17 years (1984-2001) with MAF Fisheries Research Division & NIWA, where I worked as a senior technical officer. In 2001 I founded Aquatic Ecology Limited, a consultancy group, and still working there.

3 I have been the senior author, and co-authored, a number of scientific papers on freshwater fish ecology while with NIWA.

4 I have been a member of the Limnological Society of New Zealand, now the New Zealand Freshwater Sciences Society, since 2001.

5 Commissioned by either Selwyn District Council or local civil and development companies, I have undertaken resource surveys, faunal translocations and green-field investigations for Plan Changes in the Selwyn District, including developments in the Rolleston and Lincoln area which involve springs and waterways. These include the Verdeco, and Liffey Springs developments, Faringdon stages, and other proposed Carter Group Plan Change initiatives (PC69 and PC81).

6 For about 10 years, we have undertaken some work for the Selwyn District Council and have been involved in stormwater consent compliance and impact assessment studies for works near waterways.

7 AEL has undertaken field studies for Environment Canterbury to map trout spawning and inanga (whitebait) spawning grounds in the Te Waihora/Lake Ellesmere catchment, including the LI & LII catchments.

8 Further afield, I have prepared numerous reports and memos on ecological values throughout New Zealand, for both private companies and regional councils. In respect to residential developments, I have been involved in greenfield surveys, Assessment of Effects, and naturalisations in waterways and wetlands in many of the major residential subdivisions in Christchurch (Prestons, Champions Mile, Aidanfield, Spring Grove, Burlington, Yaldhurst Estate, Milns Park, and others).

9 Most recently and locally, AEL has been involved in two fish translocations from the Tennyson Street drain and Goulds Road Drain in central Rolleston.

10 In respect to community service, I sat on the board of management, for the Living Laboratory Board of Management (Styx River environmental enhancement) for 10 years.

11 I am familiar with private plan change 80 (*PC80*). I prepared the ecological values assessment attached to the AEE.

CODE OF CONDUCT

12 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the Code of Conduct for Expert Witnesses contained in Part 7 of the Environment Court Practice Note 2014. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

13 My evidence covers the following:

13.1 Green-field visual surveys of regions of the Plan Change Area, on the following dates: 14th July 2021, 6th September 2021, 31st January 2022, and 2nd February 2022.

13.2 These field visits culminated in my memo dated 11th February 2022 which updates earlier memos and reviews comments by Dr. Burrell (5th Nov 2021).

13.3 The memo from Dr Burrell in respect to the extra field visits and provided information (19th August 2022),

13.4 Finally, the ecology section of the s42A report dated 28th September 2022.

14 In preparing my evidence, I have reviewed:

14.1 The s42A report including Dr Burrell's memo, and my earlier memos.

SUMMARY OF EVIDENCE

15 I summarise the aquatic habitat values in proposed Plan Change 80 area. These are composed of one irrigation race with perennial flow which will be retained as surface flow with a 10 m development setback, and two habitats of ephemeral wetland status which will be subject to further ecological assessment at the subdivision stage, in order to determine their future treatment and management. Three

other damp areas were assessed as not having wetland status. These are all shown at Appendix 1.

16 There is agreement with this approach between me, as the Applicant's ecologist, and the Applicant's ODP. This approach is also agreed to by the SDC consultant ecologist, Dr. Burrell, and the Councils Planner (Liz White), as outlined in the s42A report.

ECOLOGICAL VALUES OF THE PC80 SITE

17 When land access was made available, broad assessments of all known and suspected wetland areas in the proposed Plan Change Area were undertaken. This was reported in my memo dated 11th February 2022, which followed further investigations and a s92 report requesting further information on areas not originally assessed in 2021 (memo Dr. Burrell, Instream Consulting 5th November 2021).

18 The waterway with permanent (perennial) flow was limited to the irrigation water race depicted as the blue line towards the western side of the ODP. This water race will be retained with a 10 m development setback.

19 Five damp or wet areas along the fence line at 25 Two Chain Road, and on the property of 15 Two Chain Road, required further inspection (shown in Appendix 1), using the survey and assessment protocols under the recent NPS-FM and associated technical guides for assessing the water tolerance of plants and the nature of underlying soils (Ministry for the Environment 2020a; Ministry for the Environment 2020b; Ministry for the Environment 2021a; Ministry for the Environment 2021b) (Clarkson 2013; Clarkson *et al.* 2021; Fraser *et al.* 2018).

20 Based on these protocols, Area 2 is an old soak hole and did not support wetland values and is classified as a non-wetland. Areas 3 and 4 supported a mixture of common pasture grasses and a naturalised (non-native) rush (*Juncus effusus*), and were categorised as non-wetlands. These 3 areas do not require development setbacks.

21 Area 1 is a short (10 m) reach of an ephemeral channel, which would be regarded as a wetland under the RMA, and subject to setback rules under the Selwyn District Plan. It is proposed that this small area of a few square metres could form the new soak hole for the waterway terminus. This area is marked for further investigation on the ODP at the time of subdivision.

22 Area 5 is a soak hole for the raceway branch at 15 Two Chain Road, but which had been modified to provide ornamental and amenity functions. These modifications included the provision of a plastic

liner, and some riparian planting of mainly exotic plants. It contained water at the time of my field visit on 31st January 2022, but it was unclear if the water was permanent, as the habitat did not support any identifiable aquatic plants, but eels had been observed by the landowner in the feeding irrigation race. In addition to Area 1 mentioned above, this area is marked on the ODP as one for further investigation at the time of subdivision.

RESPONSE TO OFFICER'S REPORT

23 Following the provision of extra ecological information from further field visits, as summarised above, Dr. Burrell is of the opinion that the combination of desktop and field-based assessment is appropriate for a Plan Change assessment in a modified setting (memo 19 August 2022).

24 Dr. Burrell then concludes that he agrees with the proposed approach to managing ecological effects as part of the proposed land zoning change.

25 I agree with the conclusions made in the s42A officers report (Liz White, para 98) that, based on Dr. Burrell's comments above, she is satisfied that there are no ecological effects which would preclude the rezoning of the Site, and that the methods for managing effects on ecological values are appropriate.

26 I also agree with Ms White's opinion on Mr. England's (SDC) comments about options for the water race's future (para. 99). Specifically, that, for ecological reasons, the waterway be retained as a surface waterway as depicted in the ODP, and this is consistent with Mr England's option of incorporating it into the development.

CONCLUSION

27 I have read the s42a Officers report, Dr. Burrell's report, and re-read my underlying memos. I have reviewed the ODP for Plan Change 80, and agree the ODP and management approach for identified aquatic habitats is appropriate aligns with the purposes of the RMA.

Dated: 5 October 2022

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Mark Taylor

REFERENCES

Clarkson, B. 2013: A vegetation tool for wetland delineation in New Zealand.

Clarkson, B., R.; Fitzgerald, N. B.; Champion, P.; Forester, L.; Rance, B. D. 2021. New Zealand Wetland Plant List 2021. Manaaki Whenua - Landcare Research, *LC3975*. 58 p.

Fraser, S.; Singleton, P.; Clarkson, B., R. 2018. Hydric soils – field identification guide. LandCare Research, Wellington. 83 p.

Ministry for the Environment 2020a. National Policy Statement for Freshwater Management, pp. 70 (*Issue*): 70.

Ministry for the Environment 2020b. Wetland delineation protocols. Ministry for the Environment, Wellington. 10 p.

Ministry for the Environment 2021a. Defining ‘natural wetlands’ and ‘natural inland wetlands’. Wellington. *ME 1590*. 25 p.

Ministry for the Environment 2021b. Wetland delineation hydrology tool for Aotearoa New Zealand. Wellington. *ME 1575*. 63 p.

APPENDIX 1

Figure i. The eastern area of the proposed Plan Change Area indicated damp areas warranting further field visits.