

Annexure 3

TABLE 2

The court’s findings in relation to degraded estuaries and ICOLLS¹

Estuary/ICOLL	Microalgae biomass	Phytoplankton biomass	
Estuaries	Estuarine trophic status based on TN load ¹	Estuarine trophic status based on TN load ¹	Estuarine trophic status based on TP load ¹
Waikawa Harbour	Not degraded	Degraded	Degraded
Haldane Estuary	Not degraded	Not degraded	Degraded
Toetoes (Fortrose) Estuary	Degraded	Not degraded	Not degraded
New River (Oreti) Estuary ²	Degraded	Degraded	Degraded
Jacobs River Estuary ²	Degraded	Not degraded	Not degraded
Coastal lakes (ICOLLS) ⁴	NPS-FM, Table 1	Phytoplankton (trophic state)	

¹ Water Quality JWS, dated 1 August 2022. Table 2 reports on the results of Dr Snelder’s assessment which the court has accepted.

Te Waewae Lagoon	Not degraded	Degraded	Degraded
Waituna Lagoon ²	Not degraded	Degraded	Not degraded
Lake Brunton (closed) ³	Degraded	Degraded	Not degraded

Notes

1 Trophic status is defined as ‘not degraded’ where current state nutrient load is less than threshold nutrient loads that corresponds to the minimum acceptable state for macroalgal biomass or phytoplankton biomass. Additionally, when the current state load is less than the threshold load (for TN or TP), then the estuarine state is considered ‘not degraded’. Exceedance of TN and TP are indicative ‘proxy’ measures for biomass of an estuarine state that is moderately impacted by macroalgal or phytoplankton biomass. Table 2 does not include the ‘determining primary indicator’ (i.e. whether the estuary is most susceptible to eutrophication by macroalgae or phytoplankton blooms), instead both indicators are included. See transcript (Snelder and Depree) at 2002-2003, Water Quality JWSs, dated 7 July 2022 and 1 August 2022.

2 Note 2 indicates that both Dr Snelder and Depree assessed the waterbody as being degraded.

3 Lake Brunton (open) was assessed by Dr Depree, but not by Dr Snelder. Dr Depree assessed Lake Brunton (open) as degraded based on modelled macroalgal EQR susceptibility <0.4.

4 ICOLLS means ‘intermittently closed and open lakes and lagoons’.

