

**BEFORE THE INDEPENDENT HEARINGS PANELS APPOINTED TO HEAR AND MAKE
RECOMMENDATIONS ON SUBMISSIONS AND FURTHER SUBMISSIONS ON PROPOSED PLAN
CHANGE 1 TO THE NATURAL RESOURCES PLAN FOR THE WELLINGTON REGION**

UNDER the Resource Management Act 1991 (the
Act)

AND

IN THE MATTER of Hearing of Submissions and Further
Submissions on Proposed Plan Change 1 to
the Natural Resources Plan for the
Wellington Region under Schedule 1 of the
Act

**STATEMENT OF REBUTTAL EVIDENCE OF MEGAN CLAIR
MELIDONIS
ON BEHALF OF GREATER WELLINGTON REGIONAL COUNCIL
HEARING STREAM 2 – COASTAL ECOLOGY**

28 MARCH 2025

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INTRODUCTION

- 1 My full name is Megan Clair Melidonis. I am a Senior Coastal Scientist at Greater Wellington Regional Council.
- 2 I have read the evidence and statements of:
 - 2.1 Pat Van Berkel
 - 2.2 Aimee Rei-Bishop on behalf of Te Rūnanga o Toa

QUALIFICATIONS, EXPERIENCE AND CODE OF CONDUCT

- 3 My qualifications and experience are set out in paragraphs 7 to 11 of my Statement of Primary Evidence dated 28 January 2025. I repeat the confirmation given in that report that I have read and agree to comply with the Code of Conduct for Expert Witnesses.

RESPONSES TO SUBMITTER EVIDENCE

- 4 My evidence addresses:
 - 4.1 The state of Te Awarua-o-Porirua (**TAoP**) Harbour; and
 - 4.2 Coastal sediment rate objectives for TAoP Harbour.

STATE OF TE AWARUA-O-PORIRUA HARBOUR

- 5 In the submission to the hearing panels, Mr Van Berkel submitted that *“the Harbour will soon reach the state of the Tamar Estuary in Launceston, Tasmania (<https://www.launceston.tas.gov.au/News-Media/TEMT-exploring-sedimentoptions>) if serious action is not taken now.”*
- 6 I disagree with the above statement. One of the major threats to the Kanamaluka/Tamar estuary and Esk rivers systems is high nutrient concentrations in the water, while high nutrient levels are of little concern in TAoP Harbour. Exceptions are within hotspots of sediment contamination where waterfowl gather and at sites of stormwater or other piped outfalls as stated in paragraph 30 of my Statement of Primary Evidence².
- 7 Water quality is generally good in the Pāuatahanui Inlet as it is well flushed by tidal flow, and suspended sediment is the main concern in this area. In the Onepoto Arm, less tidal flushing occurs and faecal bacteria is of concern in some areas as detailed in Dr Wilson’s

Statement of Primary Evidence; however, infrequency of algal and phytoplankton blooms indicates that land-derived nutrients are of little concern.

- 8 In Kanamaluka/Tamar estuary, infilling and sedimentation is also a threat to ecological health, as with TAO P Harbour; however, the two systems are very different in geology, hydrology, and extent and cannot be so simply likened. Sedimentation is extremely catchment and system dependant and management actions in the two systems are also substantially different.

ADDITIONAL INFORMATION ON THE RECOMMENDED AMENDMENTS TO THE COASTAL SEDIMENTATION RATE OBJECTIVES FOR PORIRUA HARBOUR

- 9 In her statement to the hearing panel Ms Aimee Rei-Bishop (on behalf of Te Rūnanga o Toa Rangatira) seeks further explanation for Ms Mary O'Callahan's¹ recommended amendments to the sedimentation rate objectives set for TAO P Harbour in Table 9.1 of Objective P.O3 of PC1. While the reasons for this are set out in paragraph 70 to 82 of my Statement of Primary Evidence², a summary is also provided in paragraph 10 to 12 below.
- 10 There is only moderate certainty around TAO P Harbour sedimentation accumulation rate (**SAR**) values as sedimentation rate data were averaged across each inlet for PC1, rather than being related to specific sub-catchments adjacent to SAR monitoring sites. Although the Coastal Receiving Environment Scenario Tool (**CREST**) takes sediment movement into account as explained in Mr Oldman's Statement of Primary Evidence, there remain uncertainties around average inlet-wide sedimentation rates.
- 11 Added to this uncertainty, is the exclusion of natural sedimentation rates (**NSR**) when calculating the notified SAR targets which, as a result, may fall close to natural state in some areas of the Harbour.
- 12 The sedimentation rates in PC1 are unlikely to be achievable under realistic catchment management scenarios and are likely to require wholesale land-use change of the Porirua Catchment as explained in Dr Greer's Statement of Primary Evidence.

¹ Plan Change 1 to the Natural Resources Plan for the Wellington Region Section 42A Hearing Report. Hearing Stream 2: Objectives. Prepared by Mary O'Callahan for Greater Wellington Regional Council (dated 28th February 2025)

² [Evidence of Megan Clair Melidonis on Behalf of Greater Wellington Regional Council \(dated 28th February 2025\)](#)

CONCLUSION

13 Paragraphs 6 to 9 address the submission relating to the state of TAoP Harbour, while paragraphs 10 to 13 address the submission relating to TAoP sedimentation rate targets.

DATE: 28 MARCH 2025

Megan Melidonis

MEGAN CLAIR MELIDONIS

SENIOR ENVIRONMENTAL SCIENTIST

**GREATER WELLINGTON REGIONAL
COUNCIL**