SUMMARY STATEMENT OF EVIDENCE OF CAREY SENIOR — STORMWATER AND FLOODING (PPC85)

1.1. Good afternoon. My name is Carey Henry Douglas Senior. I am a Principal Civil Engineer with 23 years of consulting experience in civil and environmental engineering. I have been engaged by Kaipara District Council to provide evidence on the stormwater and flooding effects associated with PPC85.

1.2. I have previously submitted three evidence statements for this hearing: my statement of evidence on stormwater dated 1 December 2025, my supplementary statement dated 23 January 2026, and my statement of rebuttal evidence dated 9 February 2026. I do not intend to repeat their content. Instead, I will highlight the key points and explain where matters currently stand.

1.3. The proposed Stormwater Management Plan (**SMP**) provides a suitable framework for managing stormwater within PPC85. It adopts a low-impact, water-sensitive design approach with hydraulic neutrality based on the 95th percentile rainfall event, that is generally consistent with stormwater management plans proposed as part of other plan changes in Mangawhai, specifically Plan Change 83 The Rise and Plan Change 84 Mangawhai Hills.

1.4. The proposed SMP sets overarching performance standards rather than detailed design. In my opinion, the detailed lot-level hydraulic modelling and infrastructure sizing are appropriately deferred to subdivision consenting, where site-specific design is a standard requirement.

1.5. PPC85 discharges to a tidal receiving environment, being Mangawhai Harbour, with no downstream properties outside of the plan change area at risk. Peak flow attenuation for large events is generally not required, unless impacting a receiving wetland. Where upper catchment areas develop first, subdivision consent will need to demonstrate that conveyance routes to the coast are maintained and sufficient. I am confident that engineering solutions are available to manage future runoff appropriately and can be determined at Resource Consent stage.

1.6. The SMP addresses peat soil and groundwater recharge management without requiring soakage as the sole disposal method where conditions are unsuitable. Site-specific stormwater management will be determined at subdivision stage. Water quality treatment is required for all likely contaminated surface runoff, with solutions including wetlands, swales, and raingardens.

1.7. Turning to where matters have landed, the applicant's engineer Mr Peters and I are in agreement on the key issues. We agree that the stormwater effects assessment for PPC85 is appropriate, that the provisions and proposed SMP will ensure runoff and quality impacts

are addressed, and that our Natural Hazards risk assessment (under the new National Policy Statement) has consistent conclusions and outcomes.

1.8. There remains a point of disagreement with Mr Westwood, who provided evidence on behalf of the owners of Lots 1 to 7, Windsor Way. Mr Westwood considers that site-specific hydraulic modelling and enforceable infrastructure provisions should be required at the plan change stage.

1.9. I do not agree. The SMP provides the appropriate framework at this stage. Requiring detailed lot-level modelling at plan change is premature and negates the purpose of a structure plan process. Enforceable criteria must be met at subdivision consent, where detailed design is able to be practically undertaken.

1.10. I also do not concur with Mr Westwood that deferring technical resolution to the consenting stage is inconsistent with the recently published National Policy Statement for Natural Hazards 2025. The SMP and Development Area provisions identify the hazards, establish overlays and performance criteria, and ensure subdivision cannot proceed without demonstrating flood risks are avoided or mitigated.

1.11. In closing, the SMP and Development Area Provisions are technically robust and provide sufficient controls to avoid increased flooding, maintain hydraulic neutrality, and protect the receiving environment. There does not appear to be any stormwater or flooding related reason to decline the plan change.

1.12. Thank you. I am happy to answer any questions.