

## SUMMARY STATEMENT

1. My name is **Robert Brian Norton**. I am a Senior Stormwater Planning Engineer at Christchurch City Council (**Council**).
2. I have prepared evidence on behalf of the Council in respect to stormwater infrastructure issues associated with the proposed development controls in Plan Change 14 (**PC14**). I have also engaged in expert witness conferencing and am a party to the Joint Statement of Infrastructure Experts, dated 27 September 2023.
3. I appeared before the Panel on 18 October 2023 and provided a summary statement on that date which is also largely relevant to the matters considered in this Residential Zones hearing. I will not repeat that statement, but key aspects of relevance to this hearings topic are:
  - (a) PC14 permits widespread redevelopment potential across the city and future stormwater patterns will change because of this intensification.
  - (b) PC14-enabled development will increase imperviousness of affected land throughout the city and this will generate higher stormwater flows and increased stormwater runoff volumes. Without mitigation this will exacerbate flood hazards in many parts of the city, and contribute to an ecological decline of natural waterway and wetland systems. Some of these effects can be partially mitigated by:
    - (i) developments providing onsite stormwater mitigation systems (storage, treatment) at their own cost; and
    - (ii) the Council engaging in reactive mitigation programmes to maintain minimum levels of service of its stormwater networks and relieve flood affected neighbourhoods.
4. Highly detailed flood modelling currently underway will assist the Council in identifying network constraints and areas of heightened flood risk. The Council will also continue to engage in water quality mitigation projects in order to comply with conditions of its network discharge consent requiring water quality improvements over time.
5. I agree with the submission by Environment Canterbury that development on hill land poses a higher risk to surface water contamination via eroded sediment disturbed by earthworks and mobilised by stormwater. These effects are exacerbated by the fine and dispersive nature of the loess soils

found on the Port Hills, which are difficult to remove from stormwater. Any qualifying matter that reduces intensification (and disturbance) of hill land will be beneficial. Mr Kleynbos addresses the proposal to create a Port Hills Stormwater Qualifying Matter.

Date: 2 November 2023

**Robert Brian Norton**