

Before the Selwyn District Council

under: the Resource Management Act 1991

in the matter of: Proposed Private Plan Change 69 to the Operative
District Plan: Lincoln South

and: **Rolleston Industrial Developments Limited**
Applicant

Summary of Evidence of Eoghan O'Neill (Flooding / stormwater)

Dated: 19 November 2021

Reference: JM Appleyard (jo.appleyard@chapmantripp.com)
LMN Forrester (lucy.forrester@chapmantripp.com)

chapmantripp.com
T +64 3 353 4130
F +64 3 365 4587

PO Box 2510
Christchurch 8140
New Zealand

Auckland
Wellington
Christchurch



SUMMARY OF EVIDENCE OF EOGHAN O'NEILL

INTRODUCTION

- 1 My name is Eoghan O'Neill and I am a Technical Director with Pattle Delamore Partners Ltd. I am a Chartered Professional Engineer with approximately 20 years' experience in the planning and design of wastewater, water supply and stormwater infrastructure
- 2 My evidence below addresses a number of concerns identified during my review of the stormwater and flood assessments carried out in preparation of the PC69 application. A number of these concerns have also been raised by submitters and the Section 42a report.
- 3 The appropriateness of the modelling relied on for the assessments has been discussed. It is my opinion that the SDC flood hazard model which has been relied on for stormwater and flood assessments is not fit for the purpose of delineating flood extents across much of the PC69 area. These activities are outside of the intended scope of the model construction. Nevertheless, the SDC model is still a valuable source of flood information and indicative areas of flooding and overland flow.
- 4 Based on an assessment of historical flood information of the PC69 site and the SDC model results, I cannot support the proposed Living X zone which has now been removed from the Plan Change ODP. Additional wording has also been added to the ODP to ensure *"Development within the ODP area shall be designed to account for the effects of floodplain filling and this may dictate subdivision construction methodology and minimum floor levels and mitigation to avoid effects from floodwater on third parties"*.
- 5 It is my opinion that more detailed and validated site-specific modelling is required to appropriately locate SMA infrastructure, accurately predict flood depths across the Plan Change site, assess mitigation options for filling of areas subject to inundation and assess appropriate floor levels of future development within the site. This modelling will need to consider a range of storm events such as the 20% AEP, 5% AEP, 2% AEP and 0.2% AEP storm intervals. This modelling would need to be carried out prior to any subdivision consents being granted to develop land within the Plan Change Area. The modelling will also need to incorporate new topography for the subdivisions to the north of the Plan Change area and latest climate change predictions including rainfall and extreme tide predictions.
- 6 I consider that development of the proposed Living Z zone in the ODP is appropriate subject to further modelling being carried out prior to subdivision to appropriately locate the SMA's, set appropriate floor levels for building and assess mitigation options. I believe it is appropriate for this modelling to be carried out prior to the consent application for subdivision stage with SDC and prior to the consent

application for stormwater discharge with ECan. Through proposed changes to the ODP, these applications will be required to demonstrate to the consenting authority (SDC) that the proposed development meets stormwater objectives and does not result in adverse effects to third parties. Therefore, I conclude that this further modelling is not integral to the decision making of the Plan Change process.

- 7 Subsequent to completion of my evidence I have had further discussions with Mr Morris. These discussions have confirmed that there is general agreement with the conclusions and opinions expressed in my evidence.
- 8 I am happy to answer any questions concerning my evidence or the proposed conditions.

Dated: 19 November 2021



Eoghan O'Neill