Before the Selwyn District Council

under: the Resource Management Act 1991

in the matter of: Proposed Private Plan Change 73 to the Operative District Plan: Dunns Crossing Road, Rolleston

and: **Rolleston West Residential Limited**
Applicant

Statement of Evidence of Timothy Douglas McLeod (Infrastructure)

Dated: 13 September 2021

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STATEMENT OF EVIDENCE OF TIMOTHY DOUGLAS MCLEOD

INTRODUCTION

1 My full name is Timothy Douglas McLeod and I am a Senior Civil Engineer at Inovo Projects Limited.

2 I hold a Bachelor of Natural Resources Engineering Degree from Canterbury University (BE[NatRes]), and am a Chartered Member of Engineering New Zealand (CMEngNZ) and Chartered Professional Engineer (CPEng).

3 I have over twenty-five years' experience as a Civil Engineer working on a range of infrastructure and land development projects in New Zealand, Australia, the United Kingdom and Guinea, West Africa.

4 I am familiar with the plan change application by Rolleston West Residential Limited (the *Applicant*) to rezone approximately 160 hectares of land in two separate locations on Dunns Crossing Road, Rolleston to enable approximately 2,100 residential sites and two commercial areas.

CODE OF CONDUCT

5 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the Code of Conduct for Expert Witnesses contained in Part 7 of the Environment Court Practice Note 2014. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

6 My evidence will deal with the following:

6.1 Construction Earthworks Issues raised in the submission by Jason Horne (PC73-0006);

6.2 Flood Risks as raised in submission by Ethan Lancaster (PC73-0014);

6.3 Potential for Land Contamination raised in the submission by Ministry of Education (PC73-0048); and

6.4 Infrastructure provision.

7 Reverse sensitivity issues associated with infrastructure and upgrades to infrastructure are addressed by others.

PLAN CHANGE AREA SUMMARY

8 The proposed plan change area is comprised of approximately 160 ha of land in two blocks on the western side of Rolleston's current urban area. The plan change made up of two separate blocks of land, commonly referred to as the "Holmes Block" which is approximately 87.5ha, and the "Skellerup Block" which is approximately 72.7 ha in land area. Both sites are flat and currently used for cropping and grazing. Underlying ground conditions are good and suitable for land development.

9 The plan change application seeks to rezone both blocks from Living 3 to Living Z Zone. In addition, a small portion of each Block, along the road frontage with Dunns Crossing Road, is proposed to be zoned Business 1 (Local Centre) Zone.

CONSTRUCTION EARTHWORKS

10 Concerns were raised by one submitter, Jason Horne (PC73-0006), that significant earthworks would result and impact on his ability to enjoy his section due to high dust and noise.

11 The earthworks on the site will be limited to shaping of lots (cut-to-fill to less than 1m), trench excavation for installation of services, and exavation for construction of roads. Earthworks can be staged and carried out in such a way as to reduce the generation of dust through the use of normal construction management practices. Erosion and Sediment control measures will be implemented in accordance with the Environment Canterbury Erosion and Sediment Control Toolbox guidelines.

12 Dust and noise generation during earthworks construction is expected to be no worse than if the land was under cultivation or during harvest if farming operations continue on the site.

13 I agree with the Officer's Report that the effects resulting from construction can be appropriately managed through subdivision consent conditions relating to the construction phase, and through existing mechanisms, including:

13.1 the control of noise through the NZ Standard for construction noise; and

13.2 management of dust through requirements under the Regional Land and Water Plan.

POTENTIAL LAND CONTAMINATION

14 The Ministry of Education noted in their submission (PC73-0048) that the presence of contaminated land may be an issue for West Rolleston Primary School during excavation of the Holmes Block, and supported a Detailed Site Investigation (DSI) to be undertaken prior to development.

15 The PSI (Preliminary Site Investigation) prepared for the plan change application concluded that the potential of contamination to soil associated with historical land use for agriculture is low. The risk to West Rolleston Primary School during excavation on the site is about the same as the current (ongoing) risk if the undeveloped land is under cultivation for farming purposes. Once subdivision construction is completed then the risk from disturbance of potentially contaminated land (if present) drops to zero.

16 A DSI will be completed in accordance with the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 as part of the subdivision approval process to test for contamination levels across the site.

FLOOD RISK

17 Flood risk to existing properties was raised as a concern by one submitter, Ethan Lancaster (PC73-0014), that any development would increase runoff or re-direct runoff into existing properties when the development's proposed stormwater soak pits are overwhelmed. It is noted that there are currently no soak pits on the site so during extreme storm events, once the soil becomes saturated, all rain falling on the site can contribute to overland flow and therefore flooding downstream. Development of residential sites enables direct discharge of rainwater into the underlying gravels which does not occur pre-development. The overall effect is that runoff from the site may actually decrease in extreme events as a result of development.

18 The subdivision will be designed, and subject to assessment at the consenting stage, in such a way as to direct any secondary flowpaths to follow the path of natural servitude and therefore to not change the risk of flooding to existing properties downstream.

19 The Officer's Report also notes that if approved, the engineering approval stage will require evidence that stormwater can be managed and disposed of on-site for up to a 50 year rainfall event. The Officer accepts Mr England's conclusions that no adverse flooding effects will result off-site as a result on this plan change and I concur with that conclusion.

INFRASTRUCTURE PROVISION

20 Concerns raised in submissions included that the wastewater and water supply network are not sufficient to support the level of development proposed, and will impose additional costs on ratepayers. As noted in the Officer's Report, upgrades will either be undertaken (and funded) by the developer or, for upgrades required beyond the site, there are mechanisms available to the Council to recoup proportional costs from the developer such as through development contributions.

21 Consistent with my assessment accompanying the Plan Change Request:

21.1 The site can be developed with adequate "on-demand" potable water services to provide for the needs of future residential properties. This would be enhanced with the transfer of existing water-take consents to Council.

21.2 Planned upgrades to the water reticulation network in Dunn's Crossing and Selwyn Road by SDC, in conjunction with extensions of the water supply network associated with development of the plan change sites will improve supply pressure to existing residential properties in the area. Development of a new supply bore(s) in or near the proposed plan change area would further improve supply pressure.

21.3 Analysis by WSP confirmed the existing trunk network conveying wastewater to the Pines Waste Water Treatment Plan (WWTP) does not require upgrades to service the application sites.

21.4 In his report accompanying the Officer's Report, Mr England confirmed that various options for conveyance of wastewater to the Pines WWTP are feasible and will be subject to the engineering approval process.

21.5 The site conditions are such that there are no obvious impediments to obtaining a stormwater discharge consent (for disposal of stormwater to ground via soak pits and appropriate treatment devices where required) for residential and commercial development as would be enabled by the Plan Change.

21.6 Power and communication network extension requirements would be carried out prior to any subdivision occurring, however there are no reasons preventing such extensions.

22 In summary, already planned and/or readily achievable upgrades to existing infrastructure and typical infrastructure constructed as part

of the development of the Plan Change sites can provide for the infrastructure needs of the Plan Change. Accordingly, I agree with the conclusion in the Officer's Report that there are no physical or capacity constraints to the provision of necessary infrastructure for the Plan Change.

CONCLUSIONS

23 Concerns raised by submitters regarding dust and noise nuisance during earthworks construction can be mitigated by appropriate controls on construction activities.

24 Assessment of potential soil contamination and flood risk will be carried out in more detail at time of subdivision design but are not expected to impede development of the Plan Change areas.

25 The required infrastructure upgrades will be practicable to develop the Plan Change area in accordance with the proposed zoning. Concerns raised by submitters about capacity of existing infrastructure will be addressed by provision of new infrastructure and upgrades to existing infrastructure to service the proposed Plan Change areas.

26 Overall, I remain of the view that the proposed Plan Change can be supported from an infrastructure engineering perspective.

Dated: 13 September 2021

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Timothy Douglas McLeod