

Before the Selwyn District Council

under: the Resource Management Act 1991

in the matter of: Proposed Private Plan Changes 81 and 82 to the
Operative District Plan: Dunns Crossing Road, Rolleston

and: **Rolleston Industrial Developments Limited** and
Brookside Road Residential Limited
Applicant

Statement of Evidence of Tim McLeod (Infrastructure)

Dated: 26 August 2022

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STATEMENT OF EVIDENCE OF TIM 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 a 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 have previously prepared evidence for the Proposed Private Plan Changes PC69 (Lincoln) and PC73 (Rolleston).
- 5 I am familiar with:
 - 5.1 The plan change application by Rolleston Industrial Developments Limited to rezone approximately 28 hectares of rural land in Rolleston to Living MD (PC81); and
 - 5.2 The plan change application by Brookside Road Residential Limited to rezone approximately 110 hectares of rural land in Rolleston to Living MD and Business 1 (PC82);

together the *Proposed Plan Changes*, and Rolleston Industrial Developments Limited and Brookside Road Residential Limited together the *Applicants*.
- 6 I prepared a technical report on infrastructure requirements for PC81. I have also reviewed the technical reports prepared by Fraser Thomas covering geotechnical, contamination site investigation, and infrastructure aspects (dated 14, 15 & 21 October 2021 respectively) prepared for PC82. I agree with the findings of these reports as they are substantially similar in terms of content to my report for PC81.

CODE OF CONDUCT

- 7 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

- 1 My evidence will deal with the following:
 - 1.1 Wastewater system capacity;
 - 1.2 Water Supply;
 - 1.3 Stormwater and Flooding;
 - 1.4 Electricity and Telecommunications.
- 2 In preparing my evidence I have reviewed:
 - 2.1 SDC Water Supplies Activity Management Plan Volume 2 2018;
 - 2.2 The Rolleston Long Term Plan;
 - 2.3 The evidence of **Mr Victor Mthamo** prepared in support of the proposed plan changes on behalf of the Applicants;
 - 2.4 Section 42A report prepared by the Selwyn District Council officers including that of **Ms Elizabeth White** and **Mr Murray England**; and
 - 2.5 Submissions on the proposed plan change relevant to my area of expertise.

SUMMARY OF EVIDENCE

- 3 Accounting for the infrastructure assessments provided for PC81 and PC82, my evidence on PC73, and the Council decisions on PC73 and PC69 (insofar as they concerned infrastructure requirements), I consider the infrastructure requirements of the Proposed Plan Changes can be accommodated and such matters should not present a barrier to the rezoning.
- 4 The PC81 and PC82 areas are able to be supplied with water using existing water take consents. There is enough annual volume from the combined consents to meet the annual demand. Firefighting requirements can also be met from the potable supply allocation.

BRIEF DESCRIPTION OF THE PROPOSED PLAN CHANGE

- 5 The PC81 site comprises approximately 28.4 hectares located on the northwest corner of the intersection of Dunns Crossing, Selwyn and Goulds Roads. It has frontage to both Dunns Crossing and Selwyn Roads.
- 6 The PC82 site is located on the southwest corner of the intersection of Dunns Crossing and Brookside Roads, extending west to the intersection with Edwards Road. It has frontage to Dunns Crossing, Brookside and Edwards Roads. The site is approximately 109.8 hectares.
- 7 The applicant's proposed plan changes from rural zoning to residential if granted are expected yield up to 350 lots within the PC81 area and 1,320 lots within the PC82 area (combined total of 1,670 lots).

SERVICING (GENERAL)

- 8 The combined effect of rezoning the Proposed Plan Change Blocks PC81 and PC82 as sought by the Applicants will add approximately 1,670 additional households plus a number of businesses (two Business 1 areas within PC82).
- 9 Infrastructure requirements for wastewater, water supply, stormwater, electricity, and telecommunications do not substantially alter when considering the Plan Change blocks together or separately.

WASTEWATER

- 10 There are a number of options for collection and conveyance of wastewater from the plan change sites to the Pines Wastewater Treatment Plant (WWTP), including direct connection to the existing rising main in Selwyn / Edwards Roads or construction of a new rising main to transfer to the WWTP.
- 11 Conveyance of wastewater via a gravity line from the PC81 block to the proposed Southwest Pump Station as suggested by **Mr. England** in p.26 of his officer's report is a feasible option.
- 12 If PC82 is considered as a standalone block then at least 50% of the PC82 block is unable to connect via gravity to the existing SDC wastewater network due to site levels and a pump station discharging into the existing rising main in Edwards Road would be required. If PC82 is considered in combination with the neighbouring PC73 block (to the south) then gravity reticulation falling to a single pump station is feasible.

- 13 Capacity modelling has confirmed the existing trunk rising main in Sewlyn Road / Edwards Road to the Pines WWTP has capacity to service the plan change sites. Final configuration of the wastewater reticulation would be determined in consultation with Selwyn District Council (SDC) engineers during the subdivision design process.
- 14 The Pines WWTP has a current capacity of around 45,000 Equivalent Persons (EP) and services approximately 42,000 – 45,000 EP (i.e. is at or near capacity). In his s.42 report **Mr. England** noted that planned upgrades are already underway to increase the WWTP capacity to approximately 60,000 EP. The additional load from the Proposed Plan Changes is within the scope of projected growth for the WWTP. Mr England also noted that extension of the WWTP to 120,000 EP capacity has been identified and funded as described in SDC Wastewater Activity Management Plan, with design and consenting works programmed for the forthcoming years to allow for unanticipated development within the district, and this would accommodate demands arising from the Proposed Plan Changes.
- 15 The timeframe for development from subdivision approval through to completion and occupation of houses which generates the demand for wastewater treatment capacity will, in my view, be sufficient to complete the consenting and construction required for expansion of the Pines WWTP to meet the anticipated demand from these (and other) plan change areas.

WATER SUPPLY

- 16 Upgrades to the water reticulation network in Dunn's Crossing and Selwyn Road are already planned by SDC to improve the supply to West Rolleston as noted in **Mr England's** s42 report. If required, these planned network upgrades can be augmented to provide for the plan change site, including establishment of a new community supply bore and treatment plant.
- 17 Existing water take consents associated with the PC82 plan change area could be transferred to SDC for reallocation of use for community drinking water supply. The average demand volume for the combined PC81/82 blocks areas is 1,670m³/day or 609,550m³/year (1,670 households at 1.0m³/household/day average water use). Existing water take Consent CRC021647 permits a maximum take of 2,200m³/day (no annual limit) from bore M36/7225 near Brookside Road for irrigation purposes, and therefore could meet the demand for the combined PC81/82 sites.
- 18 I note that in his evidence Mr. Victor Mthamo provides more detailed information on the water demand generated by the proposed plan change and how the demand can be met by reallocation of existing consents.

- 19 The Canterbury Land and Water Regional Plan (CLWRP) has policies, objectives and rule relating to new community supplies or the transfer of consents from one site to another (Rule 5.115). Transfers for community water supplies are not subject to a volume reduction (Rule 11.5.38(4)(a)).
- 20 Other water take consents CRC961375 (M36/2047) and CRC961383 (M36/5022) associated with the PC82 Block could also be transferred to SDC to meet the water demand for potential neighbouring plan change sites (i.e., PC73). Consents would be required to amalgamate the existing water take consents and/or to change their uses and/or to change the flow rates, and to install a new deeper bore(s) for potable water supply.
- 21 Detailed modelling of new water reticulation networks will be carried out as part of the subdivision design process to ensure system pressure and flows comply with the SDC Engineering Code of Practice.

STORMWATER AND FLOODING

- 22 Stormwater from the development would be discharged directly to ground as is typical in the Rolleston area. Residential sites will discharge primary runoff from roofs and hardstand areas directly to ground via on-site soak pits. Runoff from roads and streets will be collected and treated before discharging into ground via soakpits or infiltration trenches. **Mr. England** noted in his evidence that the proposed stormwater management is appropriate for this area.
- 23 Flood risk within the development can be mitigated by the creation of roads and streets which convey overland flows down-gradient without affecting proposed new dwellings. Confirmation of overland flow paths and checks on minimum floor levels for dwellings would be carried out at the subdivision design stage.

ELECTRICITY AND TELECOMMUNICATIONS

- 24 Recent communications with Orion New Zealand have confirmed that planned network upgrades to the area can be advanced to provide sufficient electrical power to service the proposed plan change sites.
- 25 Enable New Zealand have confirmed that the existing fibre network can be easily extended to service the proposed plan change sites and there is spare capacity in the trunk fibre network.

RESPONSE TO SUBMISSIONS

- 26 Environment Canterbury (PC81-0008) states that "The entirety of this site has featured Hazardous Activities and Industries List (HAIL)

activity A10 – Persistent Bulk Use or Storage.” It notes that the Preliminary Site Investigation (PSI) did not directly address this activity and consider that further information is required to understand the presence and concentrations of contaminants.

- 27 In response to Environment Canterbury’s submission, to state that the entirety of the site has featured Hazardous and Industries List (HAIL) activities is an exaggeration.
- 28 The Preliminary Site Investigation (PSI) prepared for PC81 concluded the potential of contamination to soil associated with historical land use for agriculture is low.
- 29 The PSI prepared by Fraser Thomas Ltd for the PC82 block identified potential HAIL areas including poultry sheds, old lead-painted farm buildings, storage tanks or drums for fuel, chemicals or liquid waste, buildings that potentially contain asbestos material, on-site wastewater disposal fields from toilets and ablutions, potential burn pads, and a historic offal pit. The potential HAIL areas can be identified from historical aerial photographs and represent less than 10% of the total site area.
- 30 Nevertheless, the potential/actual HAIL areas within both the PC81 and PC82 blocks will be further investigated as part of a Detailed Site Investigation (DSI) carried out in accordance with NESCS guidelines at the time of subdivision consent. If this is done and areas are validated as being free of contamination, then subsequent earthworks and soil disturbance activities can be undertaken without having to consider contamination issues, other than accidental discovery protocols for unexpected contamination.
- 31 If soil sampling finds contamination to be present above NESCS background and/or guideline levels then this may trigger a resource consent under the NESCS provisions for “subdivision”, “change of land use” and “soil disturbance”. Any such consent will require the preparation of a Site Management/Remediation Plan that will set out soil disturbance management requirements. Contaminated areas will be remediated as necessary as part of enabling (pre-construction) works prior to any bulk earthworks or other soil disturbance activities.
- 32 I agree with **Ms White’s** assessment that on the basis of the PSI reports prepared for both PC81 and PC82 sites there are no contaminated land matters that preclude the rezoning of the site for residential purposes.
- 33 With respect to concerns raised in several submissions regarding infrastructure:

- 33.1 Upgrades for wastewater treatment are already planned for and in progress, and the proposed plan change is within the scope of planned upgrades of the WWTP to 60,000 EP.
- 33.2 Upgrades to water infrastructure would be triggered by the proposed development including potential establishment of new water supply bore and pump station to improve supply pressure on the west side of Rolleston.
- 33.3 Other required infrastructure improvements such as upgrades to the electricity supply network to Rolleston are already underway.

RESPONSE TO OFFICER'S REPORT

- 34 I agree with the officer comments of **Mr. England** that servicing of the development is feasible. Final details of servicing will be subject to engineering approval process at the subdivision design stage.
- 35 I understand the Applicant has accepted **Ms White's** recommended rule regarding supply of potable water, although I do not consider this is required given my evidence above.

CONCLUSION

- 36 Overall, I am of the view that practical and economic solutions are available to provide the required infrastructure for the Proposed Plan Changes can be supported from an infrastructure perspective.

Dated: 26 August 2022

Tim McLeod