

BEFORE THE SELWYN DISTRICT COUNCIL

UNDER the Resource Management Act 1991

IN THE MATTER of Proposed Plan Change 78: East Rolleston

APPLICANT Urban Estates Limited

STATEMENT OF EVIDENCE OF ANDREW JAMES EMIL HALL

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A handwritten signature in dark green ink that reads "Anthony Harper". The signature is written in a cursive, flowing style.

Introduction

- 1 My full name is Andrew James Emil Hall. I am a Chartered Professional Engineer and a director of Davie Lovell-Smith Ltd, an engineering firm based in Christchurch.
- 2 I hold a Bachelor of Surveying from Otago University and a Bachelor of Engineering (Honours 1st Class) from Coventry University (UK). I am also a member of New Zealand Institute of Surveyors (NZIS) and the Institute of Professional Engineers (IPENZ). I am a Chartered Engineer.
- 3 My area of expertise is consulting in civil engineering related to the development of land. I have 30 years' experience in this field including 20 years' experience in the greater Christchurch area.
- 4 I am currently involved as a consultant in the development of over 8000 residential sites in Canterbury and over 200ha of industrial land.
- 5 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014. I confirm that I have considered all material facts that I am aware of that might alter or detract from the opinions I express, and that this evidence is within my area of expertise, except where I state that I am relying on evidence of another person.
- 6 In preparing my evidence, I have consulted with Mr Murray England, representing the Selwyn District Council.

Scope of Evidence

- 7 The purpose of this evidence is to provide an outline of how water supply, stormwater, and wastewater will be managed as part of the applicants land becoming a residential zone.
- 8 My evidence addresses the following:
 - (a) Strategic planning of wastewater infrastructure in the area
 - (b) Strategic planning of water supply infrastructure in the area
 - (c) Proposed stormwater management strategy;
- 9 Please refer to the attached plan of Rolleston for a description of the PC78 Site Location, the RPS Future Development Areas, the Projected Infrastructure Boundary and the sewer route to the Pines Treatment Plant.

Summary

- 10 Consultation has been carried out with Council Officer Mr Murray England, and this evidence is in compliance with his advice. Mr England and myself are in agreement as to how the proposal can be successfully serviced. The PC78 site is within the Rolleston Projected Infrastructure Boundary.
- 11 Stormwater. The site is underlain with very deep gravels suitable for direct soakage as is normal practice throughout Rolleston. Groundwater is approximately 9m below ground level.
- 12 Wastewater. A new pump station is to be constructed at the lower end of the site on Selwyn Road. This pump station will receive wastewater from a catchment that includes the PC78 area. The wastewater will be pumped to the Pines Wastewater Treatment Plant. The Pines has sufficient allocated capacity for the flows from PC78.
- 13 Water Supply. The Selwyn District Council has a strategy for the supply of potable water to the future development areas in Rolleston. The PC78 site is included in

this strategy. The water is abstracted from aquifers below the town. Should Selwyn District Council require a new well within the PC78 area, then that can be accommodated.

- 14 Reference is made to Chapter 6 of the Regional Policy Statement which describes this PC78 site as a Future Development Area. The Future Development Areas are subject to a number of policies listed in section 6.3.12 of the RPS. With respect to servicing, this proposal is compliant.

Introduction

- 15 This evidence supports the Plan Change 78 proposal and addresses the servicing of the site for water supply, wastewater, stormwater, power and telecommunications.
- 16 The land is within the Projected Infrastructure Boundary and is recognised as a Future Development Area by the Regional Policy Statement (Chapter 6). The specific requirements for allowing development under the RPS, are detailed in Sec 6.3.12.2b as follows:

6.3.12 Future Development Areas

Enable urban development in the Future Development Areas identified on Map A, in the following circumstances:

.....

2. The development would promote the efficient use of urban land and support the pattern of settlement and principles for future urban growth set out in Objectives 6.2.1 and 6.2.2 and related policies including by:

b. Enabling the efficient provision and use of network infrastructure;

- 17 Following consultation with Selwyn District Council, it appears that this requirement has been met.

Stormwater

- 18 There is no formal District Council stormwater reticulation in the area to service this site.
- 19 Geotechnical testing and investigations have been carried out in the area and these show that the underlying soils are conducive to good soakage conditions. The PC78 area is underlain with very deep gravels and the groundwater level is at a depth of approximately 9m. It is intended that stormwater will be infiltrated to ground as is normal in Rolleston.
- 20 Roof water on individual properties will be dealt with on site up to the 1 in 10 year storm event as per the New Zealand Building Code.
- 21 Flows from public roading will be collected in sumps with a gross pollutant trap of greater than 60litres. Flows will then be piped directly to roadside soakholes.
- 22 The stormwater design will comply with the requirements of Selwyn District Council's Standards.
- 23 There will be a discharge consent required for the discharge of stormwater. This will be agreed in a coordinated fashion with the District Council to ensure that their maintenance regimes are upheld. Once the works are complete, the Consent will be transferred to Council.

- 24 There will be a discharge consent required from Environment Canterbury for the stormwater runoff during construction. It is expected that the construction runoff will be dealt with on a small scale with each individual development stage or each building site dealing with their own stormwater. It is our expectation that consent will be obtained describing a basic methodology in compliance with the Environment Canterbury, Erosion and Sediment Control Guidelines. Following this, each stage of construction will need to compile a Sediment Control Management Plan and present it to the Local Authorities prior to works commencing.
- 25 The stormwater facilities will be designed in association with soakage structures, to contain up to a 1 in 50 year event. This will include the full flow from the roading plus the overflow from house sites where the soakholes are only designed to contain the 1 in 10 year, 1 hour event.
- 26 Should an event exceed the stormwater facilities capacity, then the flows will be directed to safe overland flowpaths agreed in consultation with the Local Authorities but generally along the street network.

Wastewater

- 27 The Selwyn District Council are progressively working towards a single, integrated wastewater treatment plan that will service the majority of the population in Selwyn. This treatment plant is called the Pines and is located west of Rolleston. It currently receives wastewater from Lincoln, Prebbleton, Springston, West Melton and Rolleston. This is collectively called the Eastern Selwyn Sewage Scheme. This is soon to be expanded to include Kirwee, Darfield and perhaps Leeston and Southbridge. It is also proposed to expand the Pines Treatment Plant to accommodate general growth in the District. Quoting the Selwyn LTP 2021 - 2031 Pines 120K

The Rolleston Pines Wastewater Treatment Plant has been designed so that it can be upgraded in stages to match population growth. The current plant has the capacity to treat wastewater for up to 60,000 people. A masterplan has been developed for the treatment plant to expand the maximum treatment capacity to 120,000 people. The cost will be around \$100 million and will be funded largely by development contributions.

- 28 I have consulted with Council Officer Mr Murray England as to the existing capacity at the Pines to accommodate PC78. He has confirmed that this capacity currently exists and is allocated to the Future Development Areas within the Projected Infrastructure Boundary. This includes for the PC78 site. Please refer to the attached plan.
- 29 It is proposed that a new pump station will be installed on Selwyn Road to service the wastewater catchment that includes the PC78 area. This proposed pump station will connect directly to the Pines Treatment Plant via a proposed new rising main to be installed along Selwyn Road and Dunns Crossing Road.
- 30 In addition to this flow, the pipe from Prebbleton will be redirected to this new pump station. This will allow for larger flows from Prebbleton and also free up capacity at the existing pump station at the corner of Selwyn Road and Springston-Rolleston Road where the Prebbleton flows are currently directed. This Pump Station is known as the RADAR pump station and its relief of incoming flows will allow for the development of other Future Development Areas.
- 31 All future homes and businesses within the PC78 area will be serviced with a gravity sewer connection to the boundary in accordance with Selwyn District Council Standards.

- 32 The applicant is willing to work with the District Council to facilitate the construction of the key wastewater infrastructure by way of a Private Developer Agreement or some other similar instrument. This type of arrangement allows the developer to progress works, but in a joint arrangement with the Council so that all of the Council's strategic requirements are met and the wastewater catchment is fully serviced. The extra/over costs of the key wastewater infrastructure, above that required by the developer, is paid back to the developer by the Council at the time of 224c certification. Alternatively, the Council may wish to construct the infrastructure, or portions of it, and recover the cost through Development Contributions. This will require the particular works being included in the Council's Long Term Plan.
- 33 Both Council and the applicant are in full agreement as to the provision of wastewater services to the PC78 area.

Water Supply

- 34 The water supply in Rolleston is provided by a network of bores and a pumped pipe network. Rolleston is underlain with several deep gravel aquifers providing high quality potable water. Generally, should more water be required for an expanding population, then additional bores are installed in locations and depths so as not to detrimentally affect existing bores in any significant way.
- 35 Council have a water supply strategy for the provision of water to the Future Development Area that includes the PC78 area. Council may require a bore to be installed on the site and the applicant is prepared to assist with this by way of providing land for a bore site and facilitating the expansion of the pipe network strategy by way of a Private Developer Agreement or some other similar instrument.
- 36 The PC78 site contains a number of existing wells. The water permits from these well will be transferred to the council to assist with their consenting for water takes.
- 37 All future homes and businesses within the PC78 area will be serviced with a water supply connection to the boundary and in accordance with Selwyn District Council Standards.
- 38 Both Council and the applicant are in full agreement as to the provision of water supply services to the PC78 area.

Power and Telecom

- 39 All future homes will be connected to the Orion and Enable networks in accordance with the Standards of those Utility Companies.

Section 42A Report – Appendix 3: Officer Comments of Murray England.

- 40 I have reviewed the Officer Comments of Murray England contained in Appendix 3 to the S42A Officer's Report. Mr. England refers at his paragraph 13 to the expectation that Rolleston will see significant growth over the next 30 years and that capacity upgrades are propose to meet this growth.
- 41 Mr. England considers all of the infrastructure matters discussed above, and reaches the same conclusions as to myself as to the feasibility of servicing the PC78 area.
- 42 One additional matter Mr. England discusses [paras 41 – 45] is the water race flowing through the proposed PC78 area, his overall opinion being that the

ultimate treatment of the race can be determined at subdivision consent stage. I full agree with Mr. England on this matter.

Conclusion

- 43 Stormwater will be discharged to ground within the Plan Change area. A consent for this discharge will be required from Environment Canterbury and this will be coordinated with the District Council for transferral once works are complete. There are no particular difficulties expected in obtaining this Discharge Consent. Overland flow paths will be provided generally along Roads
- 44 Wastewater capacity at the Pines Treatment Plant is available. Flows from the PC78 area will be collected and pumped directly to the Pines in a coordinated fashion with the Council wastewater strategy.
- 45 Water supply will be provided in accordance with the Councils strategy and land will be provided to Council for a new bore if required. Any underlying Water Permits will be transferred to Council
- 46 Given the level of agreement between myself and Mr. England, it appears that the requirements of Chapter 6 of the Regional Policy Statement can be achieved in respect to servicing.

Andrew J E Hall

18 October 2021