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 DAVID JOHN ROBERT SMITH

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1 Introduction - Qualifications and Experience

1.1 My full name is David John Robert Smith. I am a Technical Director, Transportation Planning at Abley Limited (**Abley**), a transportation, spatial and data intelligence professional services company.

1.2 I hold a Bachelor of Technology (with Honours) in Industrial Operations Research and Master of Philosophy in Operations Research from Massey University. I am a Chartered Member of the Institute of Logistics and Transport (CMILT), a member of Engineering New Zealand (MEngNZ) and a member of the NZ Modelling User Group sub-group of ENZ. I have been appointed to the NZ Transport Agency Independent Professional Advisors panel for Transportation Modelling. I am also certified as a Hearings Commissioner having completed the Making Good Decisions course in 2019.

1.3 I hold the position of Technical Director of Transportation Planning at Abley. I have been in this position since 2018 and have been at Abley for nine years. I lead a range of development planning and transportation planning projects for both public and private sector clients.

1.4 My previous work experience includes 21 years of transportation planning and engineering experience. I have managed and led numerous projects related to transportation business cases, transportation research and Resource Management Act (RMA) related matters for public and private sector clients. As an expert witness I was engaged by the Environmental Protection Authority (EPA) to provide transportation advice and evidence directly to the Board of Inquiry presiding over the Basin Bridge hearing. I have also recently been engaged by Foodstuffs South Island Limited, Auckland Council, Selwyn District Council, Queenstown-Lakes District Council, Ports of Auckland and Fonterra as an expert witness.

2 Code of Conduct

2.1 Whilst I acknowledge that this is not an Environment Court hearing, I confirm that I have read and am familiar with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with the Code of Conduct in preparing this evidence and I agree to comply with it while giving any oral evidence during this hearing. Except where I state that I am relying on the evidence of another person, my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

3 Scope of Evidence

3.1 I have been asked by the Applicant, Urban Estates Limited, to provide evidence in relation to Plan Change 78 for traffic and transportation matters.

3.2 An Integrated Transportation Assessment (ITA) has been prepared by Abley staff under my direction to assess the potential transportation related effects of the proposed rezoning on the future transport network.

3.3 In preparing my evidence, I have reviewed the following documents and evidence:

- *'South West Rolleston Plan Change Integrated Transportation Assessment' prepared by Abley dated 10th December 2020;*
- *Requests for Further Information (RFI) email received from Selwyn District Council (Council) Asset Manager – Transportation and responses prepared by Abley;*
- *Submissions addressing transportation-related matters;*
- *Transport-related matters in the Section 42A report; and*
- *Transportation Hearing Report prepared by Flow Transportation Specialists (Appendix 4 to Section 42A report.*

3.4 My evidence is structured as follows:

(a) Overview of Integrated Transportation Assessment;

(b) Response to transport-related submissions on the Plan Change; and

(c) Response to the Council's Transportation Evidence in the Section 42A Report.

4 Executive Summary

4.1 I have prepared an Integrated Transportation Assessment to assess the potential transportation related effects of the proposed rezoning on the future transport network. This included a transportation modelling assessment of the Plan Change traffic which demonstrated there is sufficient capacity on the transport network to accommodate development traffic, with future intersection upgrades in the vicinity of the Plan Change anticipated by Selwyn District Council and included in the Selwyn District Long Term Plan 2021-31.

4.2 My assessment also identified that the Plan Change site integrates well with adjacent development areas including PC75 and Acland Park, and seeks to

maximise connectivity and accessibility for all modes including walking and cycling.

4.3 I have also concluded that PC78 is well located to be directly serviced by public transport, and has the potential to integrate well with a future Rolleston-wide public transport network, maximising opportunities for uptake of sustainable transportation modes.

4.4 I have reviewed the strategic planning framework and consider that the Plan Change is consistent or can be consistent with the relevant transport-related provisions. I have concluded that the Plan Change can be supported in relation to transportation matters, and any effects associated with the Plan Change are appropriately mitigated or anticipated by the Selwyn District Long Term Plan 2021-31.

4.5 I have reviewed transport-related matters raised in submissions and have concluded that any concerns raised are adequately addressed through the Plan Change.

4.6 I have also read the Transportation Hearing Report prepared by Mr Collins and appended to the Section 42A planner's report. Mr Collins makes several recommendations for minor changes to the ODP including:

(a) That minor adjustments are undertaken so that the ODP aligns with adjacent development areas;

(b) Frontage upgrades for Lincoln Rolleston Road and Selwyn Road be noted in the ODP with detail to follow at subdivision consent stage;

(c) Consideration of continuous north/south and east/west cycle routes through the site be included in the ODP; and

(d) Mr Collins notes with the inclusion of the aforementioned north/south cycle route, PC78 is consistent with the Rolleston Structure Plan.

4.7 I support these recommendations and have advised Ms Harte that I recommend minor amendments be made to the ODP accordingly.

4.8 Following consideration of submissions and the Section 42A Transportation Hearing Report, I remain of the view that the Plan Change can be supported in relation to transportation matters.

5 Overview Of Integrated Transportation Assessment

Existing Land Use and Transport Environment

5.1 The existing environment is reported in Section 2 of the ITA. The Site is shown in **Figure 1,** is adjacent to the existing Rolleston urban area and is located approximately 6km north-west of Lincoln town centre and 18km south-west of the Christchurch CBD. The existing land use is a mix of farmland and rural residential properties, the surrounding land use is similar.

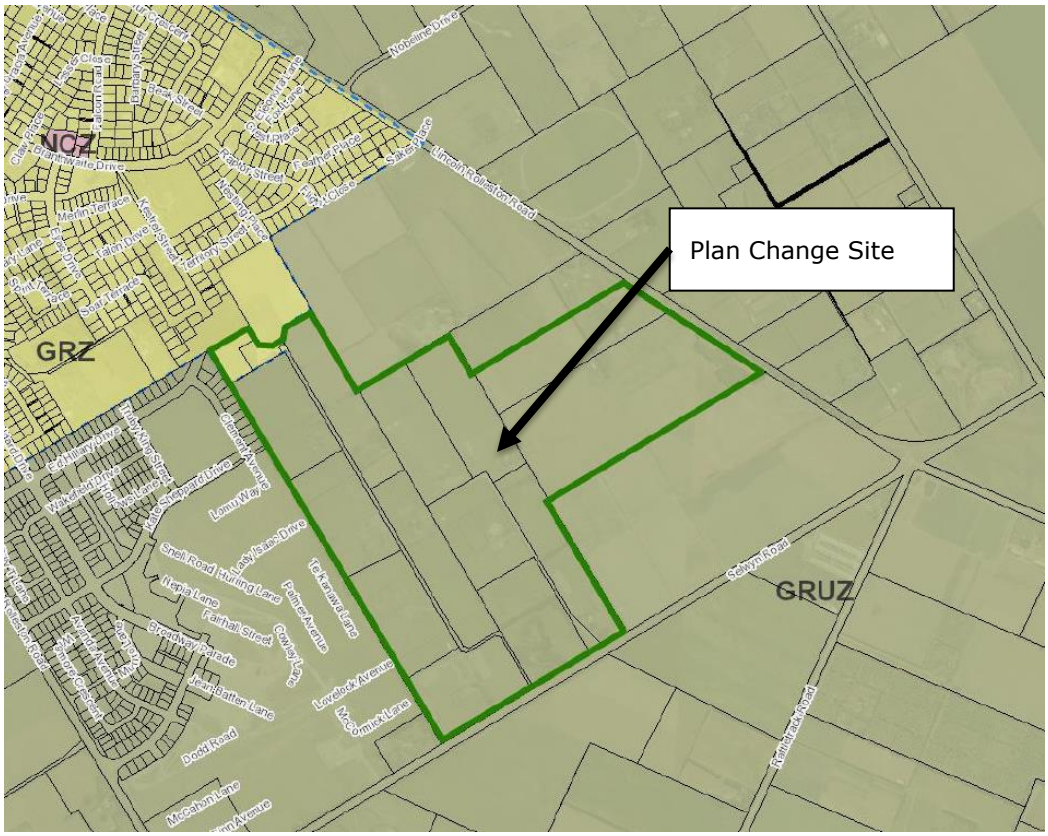

Figure 1: Plan Change Site Location[1]

5.2 The Site has frontage on to Selwyn Road along its south-eastern boundary and Lincoln Rolleston Road along its north-eastern boundary. The intersection of Selwyn Road and Lincoln Rolleston Road is a stop intersection with priority given to Lincoln Rolleston Road. Selwyn Road between Lincoln Rolleston Road and Weedons Road has an Annual Daily Traffic (ADT) of 9,832 vehicles per day

[1] sourced: Canterbury Maps 2019

(vpd)[2] and between Springston Rolleston Road and Selwyn Road has an ADT of 4,887 vpd[3].

5.3 Selwyn Road runs in a southwest-northeast orientation between Selwyn Lake Road and Shands Road in the northeast, a distance of 18.5km. Over this length the characteristics change several times and passes through Rolleston, Lincoln and other townships. The road is consistent along its length and consists of a single 6.4 metres wide carriageway. The road has no footpaths on either side and the overall road reserve is 20 metres in width.

5.4 The District Plan classifies Selwyn Road as a Local Road along the vicinity of the site, but northeast of its intersection with Lincoln Rolleston Road it is classified as an Arterial Road and west of Maddisons Road it becomes a Secondary Collector. The posted speed limit ranges from 80km/h to 100km/h, with a limit of 80km/h within the vicinity of the Site.

5.5 Lincoln Rolleston Road runs in a northwest-southeast orientation between the Lowes Road and Levi Road roundabout in the north and Selwyn Road in the south, where it turns east to become Selwyn Road heading east. To the northwest the road leads to Rolleston town centre 3km away, while to the southeast it links with roads leading towards Lincoln, Prebbleton and Christchurch. Lincoln Rolleston Road to the west of the site carries 5,993 vpd[4].

5.6 Lincoln Rolleston Road is classified as an Arterial Road, in the vicinity of the site the road has an open road speed limit of 100km/h. North of the site the speed limit changes to 60km/h as it approaches the Rolleston urban area. The road remains consistent along its length with a carriageway width of 8.5 metres and 0.75-metre-wide shoulders. There is a 1.5 metre shared path along the western side of the road separated from the carriageway by a 1.5 metre wide berm. The overall road reserve is 20 metres in width.

5.7 I have undertaken a safety assessment of the local network using the Waka Kotahi Crash Analysis System (CAS) database for the period of 2015 to 2019 (inclusive). The results are shown in **Table 1** and identified 20 crashes in the vicinity of the Site. The crash history shows that most of the crashes are concentrated at the intersections of Selwyn Road and Weedons Road and Springston Rolleston Road and Selwyn Road. This is due to the higher levels of traffic travelling on the arterial routes. The single reported serious crash occurred due to a vehicle on Selwyn Road not seeing an oncoming vehicle on Springston Rolleston Road. This may indicate that the intersection is deficient

[2] SDC April 2021 traffic counts database, count date November 2020
[3] SDC April 2021 traffic counts database, count date July 2020
[4] SDC April 2021 traffic counts database, count date September 2019

in terms of visibility, however I note this intersection is signalled to be upgraded in the Selwyn District Long Term Plan 2021-31 (LTP).

Location	Fatal	Serious	Minor	Non-Injury	Total
Intersection of Lincoln Rolleston Road and Selwyn Road			2	2	4
Intersection of Selwyn Road and Weedons Road				6	6
Lincoln Rolleston Road between Branthwaite Drive and Selwyn Road				3	3
Selwyn Road between Springston Rolleston Road and Weedons Road				1	1
Springston Rolleston Road and Selwyn Road		1	3	2	6
Total		1	5	14	20

Table 1: 2015-2019 Crashes in the vicinity of the site

5.8 Due to the rural nature of the site, there are limited walking facilities particularly on Selwyn Road which has only a grass verge. Lincoln Rolleston Road has a shared path on the western side of the road that connects with Rolleston to the town of Lincoln. All three main intersections surrounding the site do not provide appropriate crossing facilities for pedestrians.

5.9 There are limited cycle facilities as the roads are rural in nature. Cyclists would need to share the road with vehicles on Selwyn Road, on Lincoln Rolleston Road there is a shared path mentioned earlier enabling cyclists to ride off road. The shared path is shown in **Figure 2**.

Figure 2: Lincoln Rolleston Road looking southeast in the vicinity of the site with the shared path on the right.

5.10 The dominant public transport service connects Rolleston and Lincoln to the City of Christchurch but there are also local connecting bus services between Burnham, Rolleston, Springston and Lincoln. The nearest bus service to the site is Route 820 as shown in **Figure 3**. This service is 730 metres to the west of the site through Acland Park and will become more accessible as Acland Park develops in the near future.

5.11 Not shown in **Figure 3** is Route 85 which is an express service between Rolleston and Christchurch connected to the two Park and Ride stations that uses a variable route depending on traffic conditions.

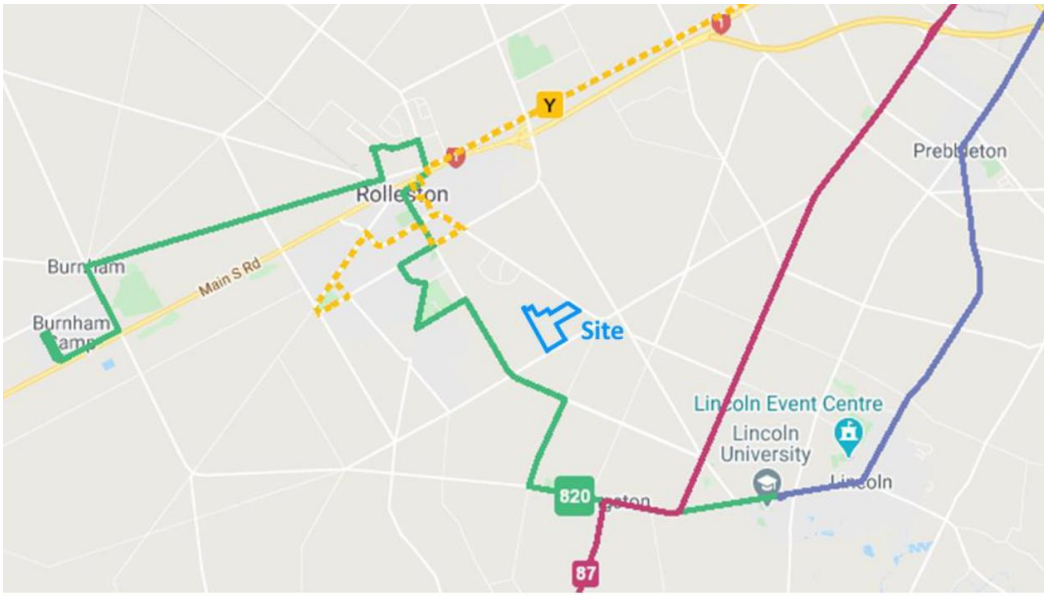

Figure 3: Location of bus services

5.12 Park and Ride public transport facilities are located at Foster Park and Kidman Street, and are conveniently located approximately 2km and 3km from the Plan Change site respectively.

6 Future Receiving Environment

6.1 Section 3 of the ITA presents the future receiving environment as at 2020. There are several roading upgrades planned in the vicinity of the site and included in the LTP which was adopted by Council in June 2021. I note these roading upgrades are summarised in Table 1 of the Flow report included as Section 42A Appendix 4. Based on the plan there will be upgrades to Selwyn Road / Weedons Road and Lincoln Rolleston Road / Selwyn Road intersections and it is understood that design work is currently underway to convert both of these to dual lane roundabouts[5]. The original Plan Change request referred to the Lincoln Rolleston/Selwyn intersection as being a seagull type, however this has been superseded by recent design work at Council. There are also plans for the extension of Broadlands Drive to Lincoln Rolleston Road. Lastly, improvements will be made at Levi Road / Lincoln Rolleston Road / Masefield Drive to convert the current roundabout to signals.

6.2 The LTP also includes $5.4 million of cycleway improvements across the district over the next 10 years rising to $14.1 million in the longer term to provide safe and convenient between township routes.

[5] Abley have recently modelled this configuration for Selwyn District Council to inform intersection design work.

6.3 In relation to this Plan Change, future cycleways proposed in the Walking and Cycling Strategy Action Plan include Rolleston to Burnham; West Melton to Rolleston; and, Springston to Rolleston

7 Proposed Plan Change

7.1 The Plan Change will enable an area of land located in east Rolleston to be developed for housing. The area is approximately 63 hectares of land which is proposed to change to General Residential Zone under the Proposed District Plan. The ODP area is intended to achieve a minimum of 12 households per hectare or approximately 756 dwellings.

7.2 The site will have two access points on Lincoln Rolleston Road, two on Selwyn Road and local connections to the surrounding residential areas north and west of the site. These access points will integrate the site into the overall road network by providing several well-connected access points.

8 Accessibility

8.1 I have assessed the Plan Change against the commuter maps available through Statistics New Zealand in Section 5 of the ITA which shows the destinations people are travelling to and from within a selected area. This was used to determine the level of accessibility by each mode of transport. The main locations that residents from south east Rolleston are travelling to are Rolleston South West, Lincoln West, Islington-Hornby Industrial, Christchurch Central south, Rolleston Izone and Rolleston North East.

8.2 I have concluded that the Site has good accessibility based on:

(a) Travel durations within Rolleston are observed to be largely comparable between private vehicle and cycling.

(b) For trips to Islington-Hornby Industrial and Christchurch Central-South, which are further afield, travel times for private vehicles and public transport are comparable but cycling is much longer.

8.3 Rolleston is currently served by Route 85 and the Yellow Line to Christchurch and the 820 Lincoln, with existing Park and Ride facilities at Foster Park and Kidman Street. Public transport will need to be reviewed as the Rolleston Township grows.

8.4 The Rolleston township area is within the comfortable cycling distance of 5-7km of the Site. In addition a significant amount of development between-townships for cycling has been made in recent years. New routes including

Rolleston to Lincoln and Little River Rail Trail have been established which provides onward travel from Lincoln to Christchurch.

8.5 The Site will be designed to ensure that pedestrians can conveniently walk between developments within the wider site and the adjacent road network.

9 Transport Modelling Assessment

9.1 Section 6 of the ITA presents the traffic generation, distribution and modelling assessment I have undertaken to understand local and wider network effects using the 2028 Rolleston model developed in Paramics Discovery for the Council.

9.2 The Rolleston Paramics microsimulation model (the model) draws demand information down from the Christchurch Assignment and Simulation Traffic (**CAST**) model as an input. The model was developed for Council under my direction by the Abley team and has been used to support transportation planning across the township since 2014.

9.3 The model results are presented in the ITA as intersection delays and as Level of Service (**LoS**) which is a function of delay. LoS is a concept used by transportation engineers to qualitatively describe network performance as shown in the classifications of **Table 2**.

Level of Service Band	**General Traffic Flow Description**
LoS A	Primarily free-flow operation
LoS B	Reasonably unimpeded operation
LoS C	Stable operation
LoS D	A less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed
LoS E	Characterised by unstable operation and significant delay
LoS F	Characterised by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay

Table 2: Level of Service (LoS) descriptions

9.4 The model has been run for the morning peak period of 8am to 9am and evening peak period of 5pm to 6pm. Peak scenarios for a future year of 2028 have been modelled both with and without the development traffic to inform the assessment of effects and intersection performance has been assessed for the following intersections with locations shown in Figure 3:

(a) Selwyn Road / Weedons Road roundabout;

(b) Lincoln Rolleston Road/ Selwyn Road intersection;

(c) Lincoln Rolleston Road / CRETS Collector Road priority Intersection.

(d) Springston Rolleston Road / Selwyn Road priority intersection.

9.5 A summary of the approach with the greatest delay and LoS of each intersection with and without Plan Change traffic in the morning (am) and evening (pm) is shown in **Table 3**.

Figure 3 Intersection and travel time assessment locations

	Without Plan Change			With Plan Change		
Intersection	**Vehs/ hour**	**Delay (sec)**	**LoS**	**Vehs/ hour**	**Delay (Sec)**	**LoS**
a. Selwyn / Weedons (am)	1515	4	A	1680	4	A
a. Selwyn / Weedons (pm)	1785	5	A	2067	6	A
b. Lincoln Rolleston / Selwyn (am)	1384	8	A	1533	9	A
b. Lincoln Rolleston / Selwyn (pm)	1645	19	C	1913	17	C
c. Lincoln Rolleston / CRETS (am)	985	8	A	1187	12	A
c. Lincoln Rolleston / CRETS (pm)	1101	12	B	1350	15	B
d. Springston Rolleston / Selwyn (am)	1084	13	A	1182	18	C
d. Springston Rolleston / Selwyn (pm)	1348	53	F	1389	78	F

Table 3: Intersection assessment summary

9.6 The assessment demonstrates that the performance of the key intersections is similar under each scenario with average intersection delays at all but Springston Rolleston / Selwyn, increasing by no more than five seconds at the three intersections which operate at LoS C or better. The intersection of Springston Rolleston / Selwyn shows the biggest increase at delay at 25 seconds, however the LOS does not change between the two scenarios. This modelling indicates that the intersection requires an upgrade regardless of the traffic generated by this Proposal and this has been anticipated by Council as it is included in the LTP.

10 Strategic Planning Framework

10.1 Section 8 of the ITA includes a review of the Plan Change against both regional and local policy documents. I have concluded as set out in the ITA that the Plan Change is not anticipated to give rise to adverse effects on the strategic transport network and does not require any new external roading links and is

consistent with and/or not contrary to the Canterbury Regional Land Transport Plan 2015-25, Canterbury Regional Public Transport Plan 2018-28, Christchurch Strategic Plan 2012-2042 and the objectives and policies of the District Plan to the extent that these documents contain provisions in respect of transportation.

10.2 The Canterbury Regional Public Transport Plan (2018-2028) sets out Environment Canterbury's objectives and policies for delivering public transport in Canterbury. One of the key objectives of the plan is to achieve "*A network of public transport services in the Greater Christchurch and Timaru urban areas that provides people with access to key destinations."* To achieve this, four new routes are proposed. The proposed bus route network shows a high frequency service between Rolleston and Christchurch CBD. Rolleston also has a connecting service to Lincoln. In the long-term, rapid transit is desired from Rolleston to the Christchurch CBD which will greatly increase the Public Transport accessibility of Rolleston in general. There will be the opportunity to expand current supporting infrastructure such as further Park and Ride stations in Rolleston and active modes can be used to provide access to this enhanced provision.

10.3 I consider that the proposed plan change is consistent, or can be consistent, with the Selwyn District Plan (operative and proposed). It is anticipated that at resource consent stage of any development, the transport related District Plan Rules set out in Section C5 LZ Roading (Living Zone Rules – Roads and Transport) of the Township Volume in the Selwyn District Plan and Part 2 - District Wide Matters / Energy, Infrastructure and Transport / TRAN – Transport will form an appropriate basis for the design and layout of the internal site.

11 Submissions

11.1 I have reviewed the submissions received on the Plan Change and address the issues raised in turn in the following paragraphs.

11.2 Since the submissions were lodged on the Plan Change, there has been a change to the planning framework for Greater Christchurch, with confirmation on 28 July 2021 that the Plan Change site is within a Future Development Area in the Canterbury Regional Policy Statement. This a new Policy 6.3.12, which states:

6.3.12 Future Development Areas

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

1. It is demonstrated, through monitoring of housing and business development capacity and sufficiency carried out collaboratively by the Greater Christchurch Partnership or relevant local authorities, that there is a need to provide further feasible development capacity through the zoning of additional land in a district plan to address a shortfall in the sufficiency of feasible residential development capacity to meet the medium term targets set out in Table 6.1, Objective 6.2.1a; and

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:

a. Providing opportunities for higher density living environments, including appropriate mixed use development, and housing choices that meet the needs of people and communities for a range of dwelling types; and

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

3. The timing and sequencing of development is appropriately aligned with the provision and protection of infrastructure, in accordance with Objective 6.2.4 and Policies 6.3.4 and 6.3.5; and

4. The development would occur in accordance with an outline development plan and the requirements of Policy 6.3.3; and 5. The circumstances set out in Policy 6.3.11(5) are met; and 6. The effects of natural hazards are avoided or appropriately mitigated in accordance with the objectives and policies set out in Chapter 11.

11.3 Relevant to my area of expertise is the reference to the efficient use of infrastructure, specifically the transport network. It is evident that the development of PC78 has been anticipated by Selwyn District Council with intersection improvements identified within the LTP which facilitate the growth of the wider future urban areas including the PC78 site.

11.4 My transportation modelling assessment, as well as that presented by Mr Collins in Section 42A Appendix 4 (which I address in more detail in paragraphs 12.6-12.13), demonstrates that the adjacent transport network operates with

appropriate level of service such that the current network and that anticipated by Council through the LTP will operate in an efficient manner. I further consider that the integration of the Plan Change transport network with adjacent development areas and the wider network seeks to maximise connectivity and accessibility for all modes including walking and cycling.

11.5 It is my view that PC78 is well-positioned to be directly serviced by public transport, and has the potential to integrate well with a future Rolleston-wide public transport network, further maximising opportunities for the efficient use of transport infrastructure.

Submitter 2 – Christchurch City Council/ Submitter 4 – Environment Canterbury

11.6 Submissions #2 and #4 from Christchurch City Council and Environment Canterbury are neutral as to the Plan Changes, but nevertheless raise some transport-related matters.

11.7 Submission #4 concludes that the Plan Change would not easily support a conclusion that the plan change site is "*well-connected along transport corridors" as part of determining compliance with NPS-UD Policy 8, nor that it contributes to a well-functioning urban environment as required by NPS-UD Policy 1*. CRPS Policies 6.3.4 and 6.3.5 are also cited, with Policy 6.3.4 (2) stating: *"providing patterns of development that optimise use of existing network capacity and ensuring that, where possible, new building projects support increased uptake of active and public transport, and provide opportunities for modal choice".*

11.8 Currently there are two public transport routes servicing Rolleston, a direct service to Christchurch (Route #5) and a link service connecting Burnham, Rolleston and Lincoln (Route #820). I understand that there are proposed public transport services updates to these services planned as part of the Greater Christchurch PT Futures Combined Business Case[6] preferred option. The preferred option proposes additional services on the existing routes as well as an enhanced direct service between Rolleston and Christchurch. The link service #820 has updated routing in the preferred option to increase accessibility through southern Rolleston near the PC78 area. It is my opinion that the completion of the CRETS road will provide further opportunities to increase provision of public transport to a wider catchment in south Rolleston, including the PC78 area.

[6] https://api.ecan.govt.nz/TrimPublicAPI/documents/download/4106274

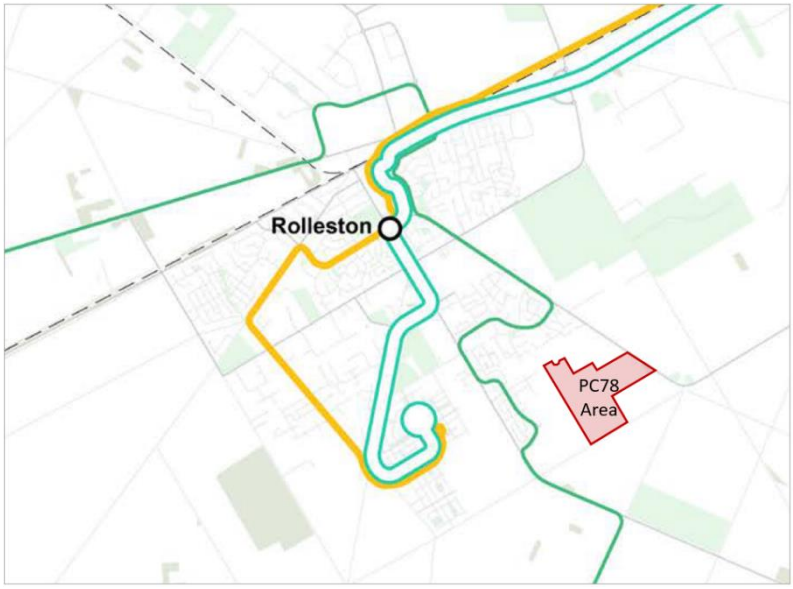

Figure 4: PT Futures preferred option bus routes in respect of the PC78 location

11.9 As the surrounding area is still being developed, the existing level of public transport being provided nearby is limited. However, the site can be developed to enable good access to public transport if provided along the CRETS connector road in the future to connect to central Rolleston and/or the services to Christchurch via SH1. Ensuring there is a high standard of access for walking across the site and to the CRETS road will be key to integration with potential future public transport opportunities. I note that there would likely need to be a sufficient residential catchment in the vicinity prior to the route being altered by the Regional Council.

11.10 I have undertaken an assessment of the walking and cycling provision and connectivity provided in the ODP and conclude that the site will be well-connected to support the uptake of walking and cycling modes. High quality pedestrian and cycle connections to the north and west provide connectivity to the town centre, Te Rohutu Whio school, and current bus stops, as well as providing a direct connection to any future public transport opportunities along the CRETS road.

11.11 I further consider there is nothing in the Plan Change precluding the provision of improved public transport services from directly serving the CRETS road to the north of the development or the east-west roading connector directly through the middle of the PC78 site. These would be engineered to a suitable standard to accommodate public transport movements as required under the

design requirements for Collector Roads in Council's Engineering Code of Practice Part 8: Roads and Transport [7] and Subdivision Design Guide 2009[8].

11.12 Submission #2 considered that there are inconsistencies with the NPS – UD due to an increase in travel to Christchurch as a result of the Plan Change, with a subsequent increase in vehicle emissions, congestion and longer journey times. The submission seeks a funded and implemented public transport system to serve the site prior to any residential development. I defer to Ms Harte in respect of the interpretation of the NPS – UD but have provided some assessment in the following paragraphs of the travel demands arising from the Plan Change.

11.13 I would expect the level of Plan Change traffic driving to Christchurch would be similar to my trip distribution assessment presented in the ITA, which is based on modelling undertaken using the Rolleston Paramics Model. The assessment in the ITA has assumed that the future trip patterns will be similar to current trip patterns, unless there were a substantial increase in employment, education facilities and commercial services in the town, in excess of the rate of population growth expected.

11.14 On this basis as more residential development such as that which would be enabled under PC78 occurs, I would expect an increase in travel demand between the Plan Change site and Christchurch. However, the impact of this travel on the operation of the Christchurch City road network is likely to be widely dispersed and diluted due to the wide range of employment and other destinations in the City.

11.15 To elaborate on this matter, I have estimated that the Plan Change will generate 484 trips in peak hour and 38% of this traffic will be split between using SH1, Jones Rd, or Maddisons Rd (all via Weedons Interchange), and Selwyn Rd, to access Christchurch. Modelling has indicated that the most attractive routes will be SH1 and Selwyn Rd, at around 152 additional trips in peak hour. This corresponds to 50 vehicles per hour or less than one vehicle per minute on each Christchurch-bound traffic lane. The average lane capacity of a rural corridor or motorway is in the range of 1800-2200 vehicles per lane per hour in each direction, and as such this would utilise a very small proportion of the capacity of the existing State Highway connections to Christchurch. When this traffic reaches the city, the wide range of workplace, education, shopping, and other destinations result in the less than one vehicle per minute dispersing across the Christchurch urban road network with an increasingly

[7] https://www.selwyn.govt.nz/__data/assets/pdf_file/0014/35402/Part08_Roading-transport_final.1908.pdf
[8] https://www.selwyn.govt.nz/property-And-building/planning/design-guides/subdivision-design-guide

diluted effect on any given road link. In my view, the effects of this increase (in isolation from other similar developments) will not be noticeable to other transport network users.

11.16 I am not aware of any precedents for Christchurch City Council's request for an applicant to provide a funded and implemented public transport service prior to development of a site, but note that as the southern Rolleston urban area develops it will be more attractive to provide improved public transport services due to the larger residential catchment.

Submitter 3 – Ministry of Education

11.17 Submitter 3 is concerned regarding walking and cycling connectivity from the site to the future "Te Rōhutu Whio" primary school which is planned to open in 2022 that is located approximately 20m west of the site. The Ministry of Education is generally supportive of infrastructure to encourage modes of active travel, however consider there is insufficient detail to assess whether adequate provisions are in place to provide safe and accessible travel routes to and from the school.

11.18 The school is located approximately 50 metres west of PC78. A cycle and pedestrian route are proposed east of the school towards PC 78 as shown in the black circle in Figure 5. This is located at an ideal position to connect from the site to the school, creating cycling and pedestrian permeability. Overall the plan change area has good connectivity to the proposed school.

Figure 5 – Plan Change 78 walk/cycle connection (in black circle)

12 Response to the Council's Transportation Evidence in the Section 42A Report

12.1 Mr Friedel on behalf of Selwyn District Council has prepared the Section 42A which includes a Transportation Hearing Report produced by Flow Transportation Specialists as Appendix 4. Mr Collins is the principal author of the Flow Report. This Report addresses the transportation matters associated

with PC78 and makes recommendations around the site ODP and the effects of the Plan Change on the wider transport network. I address the key points from the Flow Report in the following paragraphs.

Outline Development Plan

12.2 Mr Collins reviews the proposed ODP and considers *"that the proposed transport network shown in the ODP generally aligns with adjacent developments"* and that it is *"generally consistent with the Rolleston Structure Plan".* The Flow Report addresses the need for minor amendments to boundary connections to integrate the local transport network with adjacent developments, namely Acland Park and PC75. It is intended that the ODP aligns with these adjacent developments, and I agree with Mr Collins' recommendation in this regard.

12.3 Mr Collins recommends *"that the ODP be amended to include walking and cycling routes within PPC78, including north/south and east/west cycle routes"*. I agree that these walking and cycling routes are desirable to provide connectivity by active modes within PC78 and to the wider network, including in relation to the future "Te Rōhutu Whio" primary school as shown in Figure 5.

12.4 Whilst the specific locations and routes for north/south and east/west cycle routes can be addressed at subdivision consent stage, I propose that the ODP be modified to include indicative alignments such that:

- A continuous north-south and east-west walking and cycling route will be provided across the PC78 site, and,
- The walking and cycling network will link with the existing connection(s) in the Acland Park development and the proposed connection(s) in PC75.

12.5 Mr Collins requests that frontage upgrades are shown on the ODP for the site's interfaces with Lincoln Rolleston Road and Selwyn Road. I agree with the need for frontage upgrades on these roads and, if required, this can be indicated on the ODP. However, I consider that the details of the frontage can be addressed at subdivision consent stage and agree with Mr Collins that these are requirements under the Council Engineering Code of Practice[9].

Traffic modelling and assessment

12.6 Mr Collins analyses a transport modelling assessment to assess the cumulative effects of lodged residential plan change applications in Rolleston. For

[9] https://www.selwyn.govt.nz/__data/assets/pdf_file/0014/35402/Part08_Roading-transport_final.1908.pdf

transparency, this assessment was undertaken earlier in 2021 by Abley for Selwyn District Council under my direction. This was declared to both Council and the Plan Change applicant and it was agreed that undertaking a cumulative effects modelling assessment as instructed by Council did not constitute a perceived or actual conflict of interest. Mr Collins has independently reviewed this assessment on behalf of Council as documented in his report.

12.7 A 2028 baseline model and 2033 cumulative effects model have been run to assess network performance with and without the eight Rolleston plan change applications including PC78. I agree that an assessment of cumulative impacts of all eight plan changes is an appropriate methodology to ensure that the transportation network is planned to meet the demands of likely future development.

12.8 Both the 2028 baseline and 2033 cumulative effects models include future transportation infrastructure upgrades included in the LTP to enable growth in Rolleston. Several intersection upgrades are proposed in the vicinity of the PC78 site which will allow future growth traffic to be accommodated by the transport network.

12.9 Both the models include improvements to SH1 proposed as part of the New Zealand Upgrade Programme (NZUP). Mr Collins notes that the models do not include the potential conversion of the SH1 / Rolleston Drive intersection to a left-in left-out intersection. However, I understand that this NZUP project is currently partway through a business case process and no final intersection form has yet emerged. Furthermore, Mr Collins identifies that PC78 will only generate 30 peak hour movements through this intersection by 2033. Based on these factors, I consider that this intersection has been appropriately accounted for in the modelling and that the form of the intersection is not a concern in relation to PC78.

12.10 The Flow Report provides a summary of intersection performance from the 2028 and 2033 Rolleston models. PC78 accounts for no more than 5.3% of the peak hour traffic at any of the intersections evaluated. This indicates that PC78 has only a very small proportional effect on the future network. The highest proportion of peak hour traffic contributed by PC78 is at the Lincoln Rolleston Road / Selwyn Road intersection, amounting to 5.3% of all traffic. I do not consider this a substantial or inappropriate proportion of traffic given that this intersection is currently in a rural environment and that it connects the plan change site's two boundary roads, one of which is an arterial.

12.11 Mr Collins suggests that Council consider completing three intersections in the vicinity of PC78 earlier than the dates currently identified in the 2021-31 LTP. I agree that earlier implementation would benefit existing and future traffic

generated by the various Plan Changes assessed by Mr Collins, and that that recommendation is not unique to or required as a direct result of PC78 in isolation from the other Plan Changes. However, this is a matter for Council to address. As noted, it is my understanding that these improvements have been included within the LTP to enable growth, and I would therefore consider it appropriate that they be timed to be completed as development comes online. The key intersections identified by Mr Collins are:

(a) Selwyn Road / Weedons Road

(b) Lincoln Rolleston Road / Selwyn Road

(c) Springston Rolleston Road / Selwyn Road

12.12 Mr Collins suggests that the Lincoln Rolleston Road / CRETS intersection, which is currently expected to be located within PC75, should take the form of a roundabout rather than a priority intersection. I agree with this assessment and consider that a roundabout would benefit traffic generated by the plan change site as well as wider Rolleston traffic. However, it is a matter for Council to address.

12.13 The report raises concerns around the funding shown in the LTP for the Lowes Road / Levi Road / Masefield Drive. This is a matter for Council to address. I would note that PC78 is only shown to be generating 3.4% of the traffic through this intersection in 2033, and it is forecast to operate at an acceptable LOS.

Responses to submissions

12.14 The Flow report addresses five points from submitters, and my comments on these are as follows.

12.15 The responses to PC78-0001/002 (Selwyn 564 Ltd) and PC78-0002/002 (CCC) relate to planning matters and I therefore defer to Ms Harte on these matters.

12.16 I agree with Mr Collins' comments in response to submissions PC78-0002/001 (CCC) and PC78-0004/002 (ECan) relating to public transport. I elaborate on these matters in paragraphs 11.16-11.26 of this statement of evidence.

12.17 I agree with Mr Collins comments in response to submission PC78-0003/001 by the Ministry of Education. I refer to my response in paragraphs 11.17-11.18 of this statement of evidence.

13 Conclusions

13.1 I have prepared an Integrated Transportation Assessment to assess the potential transportation related effects of the proposed rezoning on the future

transport network. I concluded in my assessment that the Plan Change can be supported based in relation to transportation matters, and any effects associated with the Plan Change were appropriately mitigated or have been anticipated by works identified in the Selwyn District 2021-31 LTP.

13.2 I have reviewed submissions and the Section 42A report and consider that all matters raised are satisfactorily addressed by the Plan Change, can be addressed at subdivision consent stage or can be addressed through minor amendments to the ODP (which I have recommended to Ms Harte be included). I remain of the view that the Plan Change can be supported in relation to transportation matters.

David Smith

20 October 2021