Before the Independent Hearings Panel
at Waimakariri District Council

under: the Resource Management Act 1991

in the matter of: Proposed private plan change RCP31 to the Operative Waimakariri District Plan

and: **Rolleston Industrial Developments Limited**
Applicant

Evidence of Simon Nicholas Milner

Dated: 7 July 2023

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EVIDENCE OF SIMON NICHOLAS MILNER

1 My full name is Simon Nicholas Milner.

2 I hold a Bachelor of Arts (Economics, 1991) from the University of Essex, United Kingdom and a Master of Arts (Transport Economics, 1993) from the University of Leeds, United Kingdom.

3 I have over 25-years experience delivering transportation design solutions to a range of public and private sector clients.

4 I am currently the public transport subject matter expert for PTM Consultants, providing public and private sector advice to clients on their public transport planning requirements and public transport design requirements.

5 I have worked for seven years in the public transport planning space for Auckland Transport, initially as part of the team redesigning Auckland's bus network and then as the team lead responsible for all public transport infrastructure specification across Auckland.

6 Before moving to Auckland in 2012, I spent over five years working as a regional transport planner / senior strategy advisor for Environment Canterbury and prepared two iterations of the Canterbury Regional Public Transport Plan.

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 9 of the Environment Court Practice Note 2023. 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

8 My evidence provides:

8.1 An overview of current public transport services (both scheduled and school services) that operate close to or through the Ōhoka township area.

8.2 A review of public transport service provision policy in the Greater Christchurch area and its relevance to the PC31 proposal.

8.3 An overview of potential public transport demand from the Ōhoka township and surrounding area that might be apparent with current land use zoning and proposed land use zoning changes, including PC31.

8.4 Potential public transport service delivery models that may be applicable to the PC31 site, wider Ōhoka township and surrounding areas.

8.5 An indicative assessment of potential costs and proposed developer funding involved in delivering public transport service solutions to this area.

8.6 A response to the Section 42A Report and accompanying technical assessment by Mr Shane Binder.

EXECUTIVE SUMMARY

9 My evidence commences with a review of existing public transport services in the immediate Ōhoka area, which is limited to Ministry of Education funded school services, serving Ōhoka Primary School and Kaiapoi High School. Bus services provided in the wider Waimakariri area are then summarised in relation to their proximity to Ōhoka and the PC31 site – it is my conclusion that the existing services are all too distant to be accessed on foot or by other non-motorised means.

10 The public transport policy context is discussed, with three principal documents being of relevance to this matter:

10.1 Canterbury Regional Public Transport Plan 2018-2038 (*RPTP*) – I have summarised relevant areas of policy that have applicability to the potential to develop and trial new public transport initiatives in the Ōhoka area.

10.2 Greater Christchurch Public Transport Future Bus Improvements Programme:

(a) The programme confirms future commitment to "frequent" (every fifteen minutes at peak times) buses between Kaiapoi and Christchurch.

(b) The programme also outlines a new proposed fixed route service that would come closer to the Ōhoka area – the potential to divert it, or potentially replace a large part of it with an on-demand public transport service is discussed in my evidence.

10.3 National Policy Statement on Urban Development 2020 (*NPS-UD*) – is reviewed in terms of the relevant objectives and policies that relate to public transport to/from the PC31 site.

11 A high-level discussion of potential public transport demand from the PC31 and wider Ōhoka area is presented – this uses trip data from the Integrated Transport Assessment (*ITA*) that was prepared to support the PC31 application and also public transport mode share data from the last census. The conclusion of this analysis is that total demand will be low, given the future scale of the development if PC31 is approved, but also that the demand trip matrix will be varied – it is not all about peak commuting to Christchurch. This conclusion has implications for the type of public transport service solution that best supports a demand profile such as this.

12 A range of potential public transport service responses are then presented and each is briefly assessed in terms of how appropriate and feasible it is likely to be in terms of supporting the PC31 site with effective and enduring public transport. The options considered encompass:

12.1 Diversion of existing / proposed bus services – it is concluded that this would be unlikely to be a viable solution, largely due to the inability to cross the Cust River in a location that would make the diversion a relatively small deviation of the straight-line route path from Rangiora to Kaiapoi via Flaxton Road.

12.2 A new bus service in the Tram Road corridor – the potential for diverting a future Oxford/Cust to Christchurch bus service off Tram Road to serve Ōhoka is discussed. It is concluded that the distances involved would make this an expensive all-day bus service to operate, relative to the potential demand.

12.3 A new local scheduled bus service linking Ōhoka to Kaiapoi. I consider it unlikely that there is sufficient demand within the Ōhoka area, even with PC31 in place, to sustain an all-day fixed route bus service, given the land uses that such a service would traverse.

12.4 A new peak period express bus service linked to a future Ōhoka Park and Ride site delivered as part of PC31. It is considered feasible to extend the existing Route 92 Kaiapoi Park and Ride service to a new terminus at Ōhoka. Funding support for this might be acceptable to the applicant for a period of time to assess demand potential if PC31 is approved and building commences.

12.5 An on-demand service. Evidence is provided on two other schemes that have recently converted low patronage fixed

bus routes to an on-demand model. It is my opinion that the Ōhoka area, given its demand potential, may be best suited to this type of scalable service product. It is also my opinion that an on-demand service linking Ōhoka to both Rangiora and Kaiapoi could remove the need for the proposed future fixed route bus service along Flaxton Road.

12.6 My evidence then presents some information on potential cost implications associated with any new bus service to/from Ōhoka, noting that, particularly for an on-demand service product, this is difficult to cost until more is known about its potential scope and span of operational hours.

EXISTING PUBLIC TRANSPORT

13 There are no current scheduled public transport services that serve the Ōhoka township, besides those serving the needs of school students to both Ōhoka Primary School and Kaiapoi High School.

Current scheduled bus services in the wider area

14 Figure 1 below shows an overview of all current scheduled bus routes that Environment Canterbury operates north of the Waimakariri River.

Figure 1: Waimakariri Bus Routes - Overview. Source: Environment Canterbury

15 To give a broader context to the Waimakariri routes, Figure 2 provides a wider network view of Waimakariri routes as part of the overall Christchurch bus network.

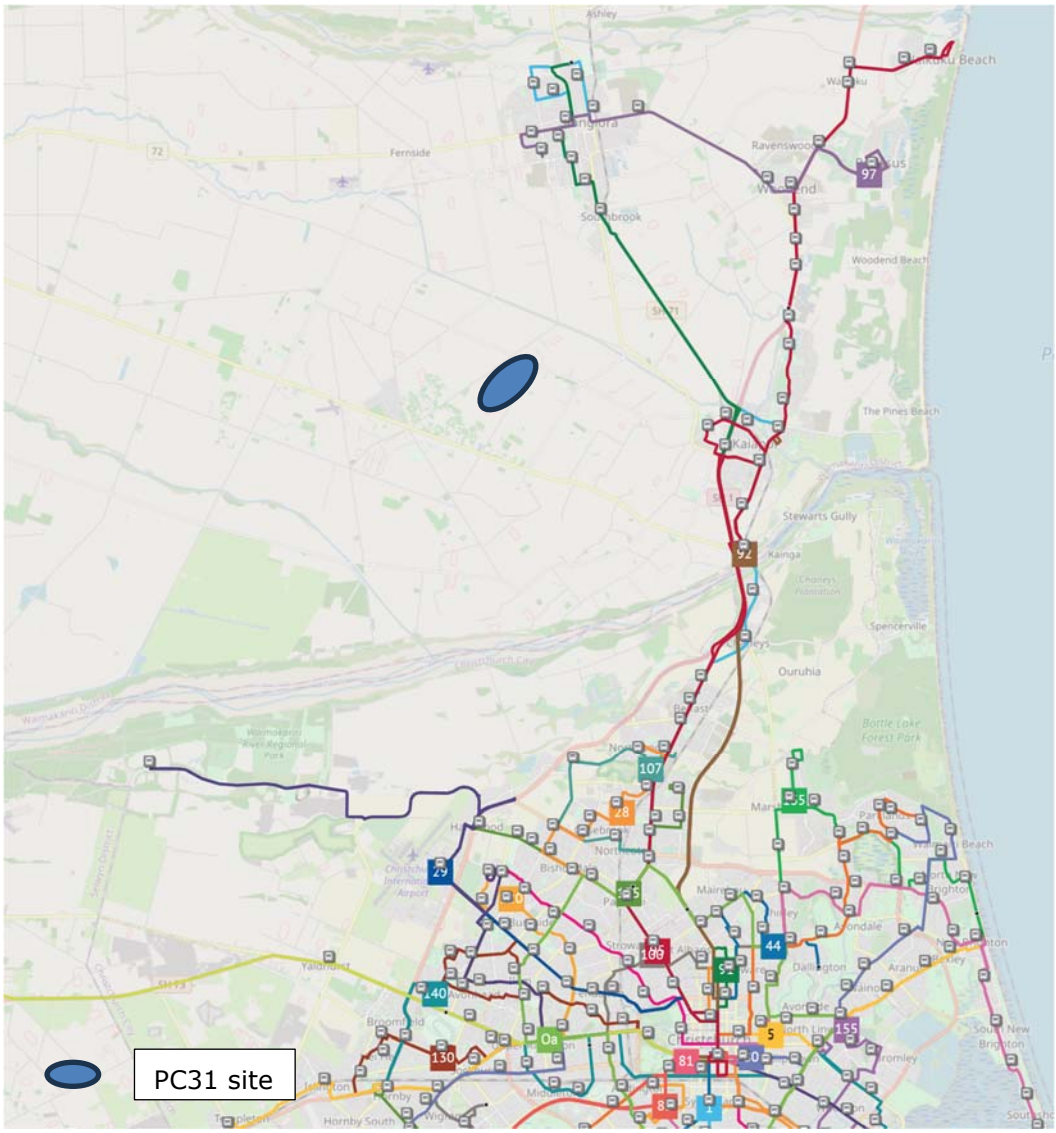

Figure 2: Waimakariri and northern Christchurch bus routes. Source: Environment Canterbury

16 Rangiora and Kaiapoi are linked to each other and beyond to Christchurch by Route 1 (Blue).[1] The route path is shown below – via Lineside Road, Williams Street and Main North Road to Belfast and beyond to the south. The route typically operates every 30 minutes from both Rangiora and Kaiapoi termini, with additional services at peak times, as outlined below in Figure 3.

[1] Retrieved from 1-Rangiora-Cashmere.pdf (metroinfo.co.nz) on 06/06/2023

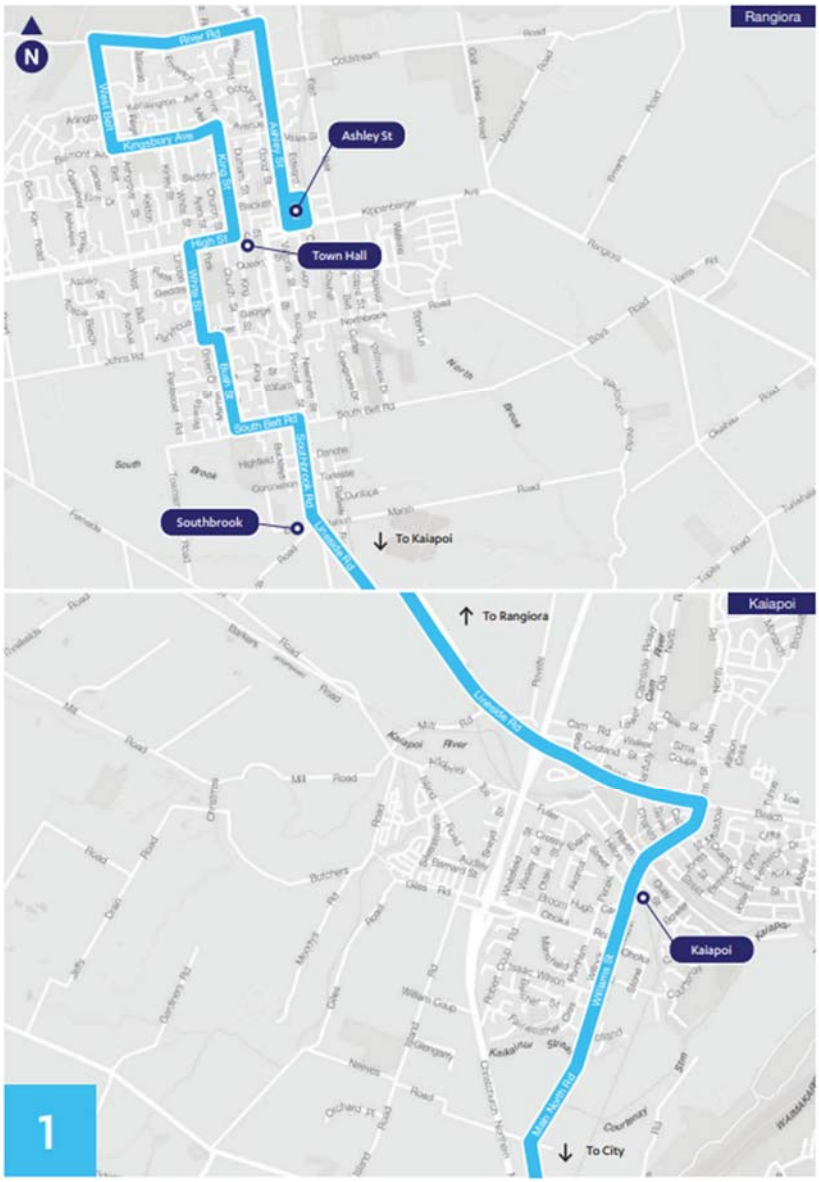

Figure 3: Blue Route 1. Source: Environment Canterbury

17 Route 1 is supplemented on weekdays at peak times (four morning inbound trips and five outbound afternoon trips to each town) by two express bus services (Routes 91 and 92[2]) that link three existing Rangiora Park and Ride sites and two existing Kaiapoi Park and Ride sites with Christchurch (see Figure 4 and Figure 5). It should be noted that Routes 91 and 92 are not linked – Route 91 only serves the three Rangiora Park and Rides and Route 92 serves the two Kaiapoi sites. Both services are limited stop – only picking up at the Park and Ride sites, then direct to two Christchurch destinations – the Bus Interchange and Christchurch Hospital. The

[2] Park-and-Ride-A4.pdf (waimakariri.govt.nz), retrieved 12/06/2023

express buses offer a faster journey – 30 minutes in the AM peak, versus 40 minutes on a Route 1 service.

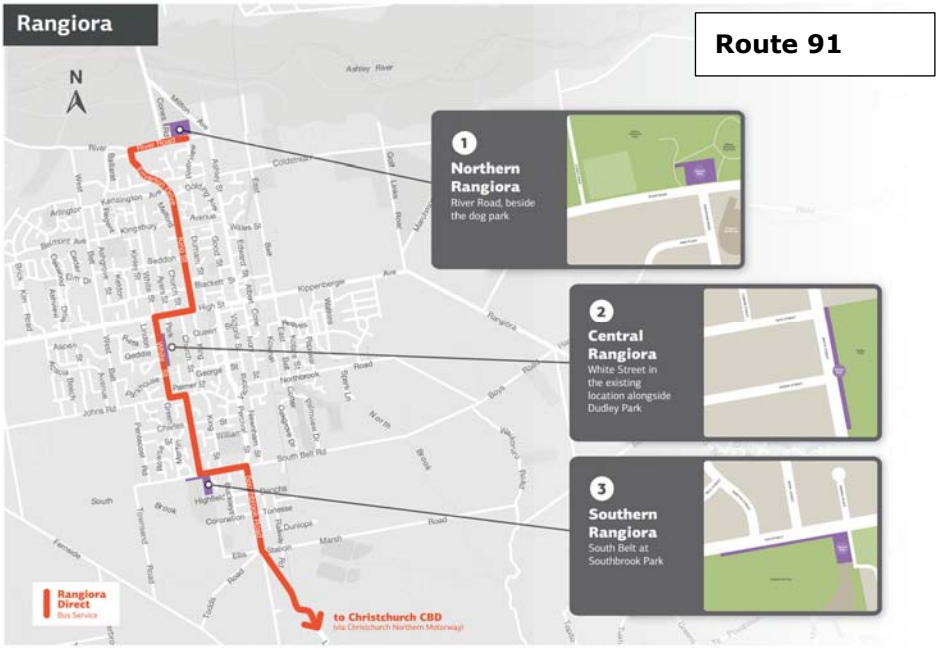

Figure 4: Route 91. Source: Environment Canterbury

Figure 5: Route 92. Source: Environment Canterbury

18 Kaiapoi itself is serviced by another bus route – Route 95 Pegasus/Waikuku to Christchurch City runs through central Kaiapoi and the emerging Silverstream subdivision to the west of the township. The section of the route that operates through Kaiapoi is shown below in Figure 6.

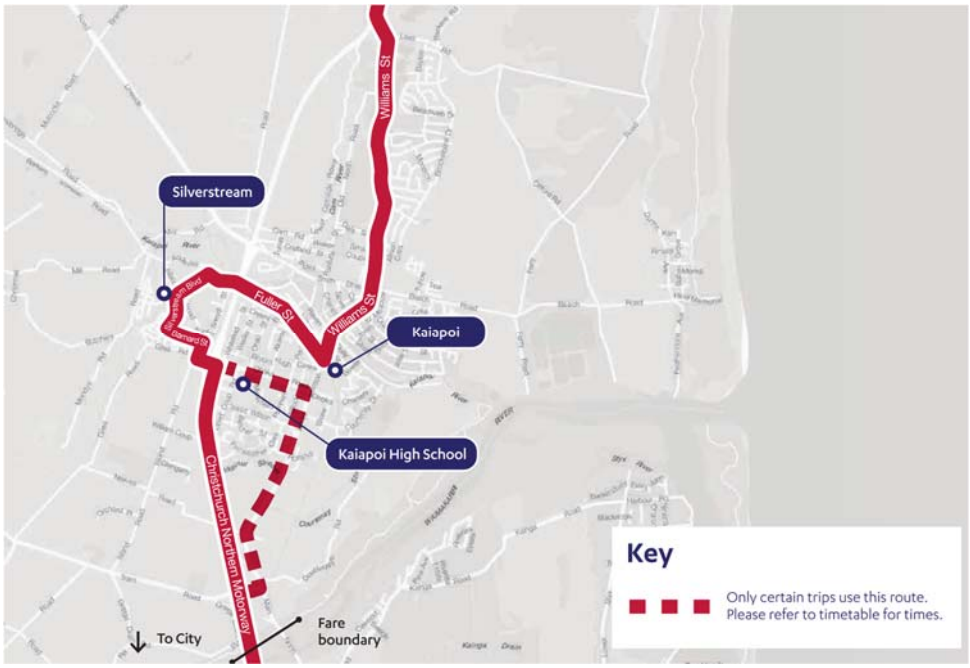

Figure 6: Route 95. Source: Environment Canterbury

Current School Bus Services

19 Two Ministry of Education funded school bus services operate in the immediate vicinity of the proposed development site, servicing Ōhoka School.[3] The routes are shown below in Figure 7.

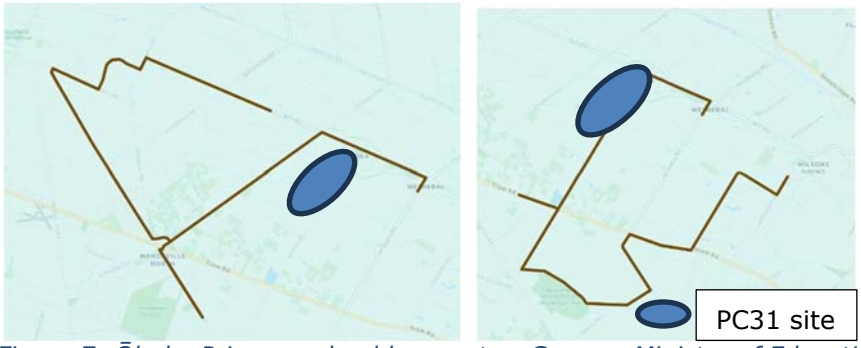

Figure 7: Ōhoka Primary school bus routes. Source: Ministry of Education

20 The first route commences on Mill Road, heads west in the morning to collect students in the McRoberts Road / Patterson Road area, before turning south-east onto Tram Road, through Mandeville North and then back toward the school along Bradleys Road.

21 The second route commences in the Wilson's Siding area to the east of Ōhoka, travels south via Raddens Road, then through the southern part of Mandeville via Edmunds Road and Baileys Road before heading towards the school along Whites Road.

[3] Retrieved from School bus route maps – Education in New Zealand on 06/06/2023

Ōhoka township is also linked to Kaiapoi High School via an anti-clockwise loop service (Mandeville (Eyreton 2)) that operates along Mill Road, Dawsons Road, Tram Road and Island Road. The AM route path is shown below in

Figure 8: Mandeville (Eyreton 2) school bus. Source: https://www.kaiapoi.school.nz/bus-routes/#mandeville

22 . The proposed development would be zoned for Kaiapoi High School.

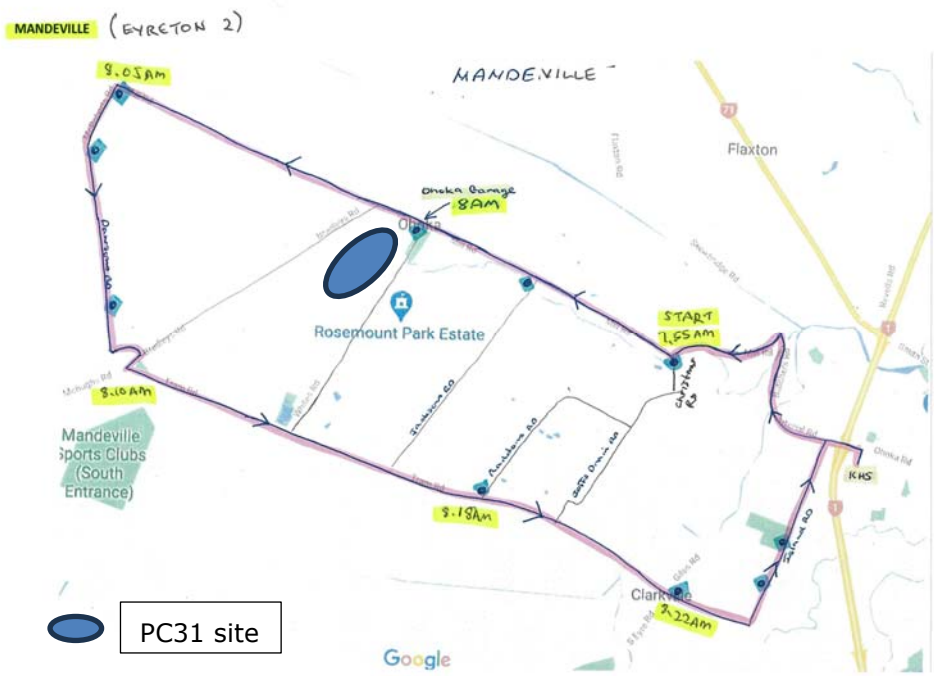

Figure 8: Mandeville (Eyreton 2) school bus. Source: https://www.kaiapoi.school.nz/bus-routes/#mandeville

23 Rangiora and Kaiapoi High School students are also served by three school services that link them to a range of Christchurch high schools. The Kaiapoi section of these routes is shown below in Figure 9.

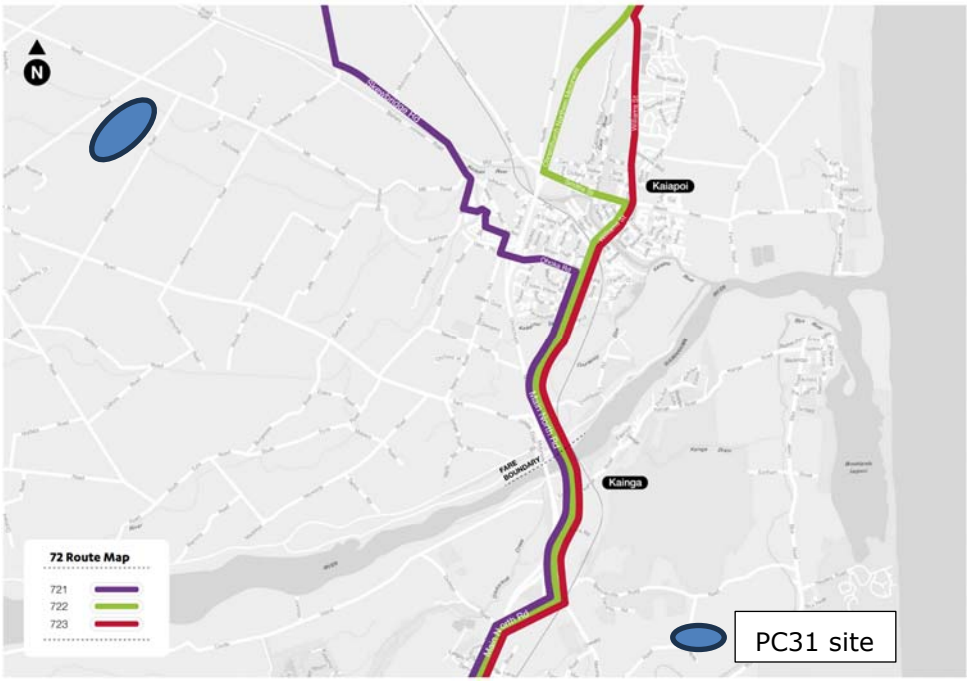

Figure 9: Rangiora / Kaiapoi to Christchurch Schools. Source: Environment Canterbury

POLICY CONTEXT – PUBLIC TRANSPORT

Canterbury Regional Public Transport Plan 2018-2038[4]

24 The RPTP is the statutory document that outlines policies and current and future public transport provision in the Canterbury region.

25 The RPTP encompasses a range of future plans, from improved service frequencies on existing bus routes, new routes to serve emerging growth areas and bus priority measures to support these services, up to and including a future rapid transit corridor linking Kaiapoi to central Christchurch and then southwards to Rolleston.

26 Specific policies contained within the RPTP that have relevance to the PC31 site are as follows:

[4] https://www.ecan.govt.nz/document/download?uri=3582320, retrieved 08/06/2023

Policy 1.1 Core services – *Provide a permanent network of frequent, direct core services that operate along strategic public transport corridors, with connections to key activity centres and employment centres*.

26.1 This policy supports a permanent network of frequent, direct core services within the overall bus network. Route 1 from Kaiapoi to Christchurch City is one of these routes. *The implication of this policy is that frequent bus services to/from Kaiapoi will be present into the future.*

Policy 1.5 Trials and innovation – *Enable the trial of new technology, services and service delivery types where existing services are not meeting customer needs or in order to test and assess the demand for, and viability of, new approaches.*

26.2 This policy enables innovative public transport delivery solutions to be trialled. *This policy could support a trial of an on-demand style bus service for the Ōhoka area.*

Policy 1.12 Services to areas of new development – *Enable timely and cost effective public transport service provision to new areas of urban development, in accordance with the following criteria:*

a) the planned eventual size of the development will support the provision of public transport services;

b) provision of service is supported by the residents;

c) cost, patronage and revenue projections indicate that the service will be financially viable in the long term; and

d) the infrastructure is in place to support the service provision.

26.3 This policy provides an environment for new services subject to the eventual size of the development area supporting financially viable services, that are supported by residents and has the necessary infrastructure to support services.

Policy 1.15 Measures to extend the reach of the public transport network – *provides supporting measures and infrastructure to extend the reach of core public transport services.*

26.4 This policy allows for extensions to the network where it supports patronage on the core network.

Policy 3.1 Fare box recovery – *maintain or improve the current level of fare box recovery by 2024*.

26.5 This policy indicates that any new service needs to not detract from overall fare box recovery levels over time. Fare box recovery is the share of total operating costs that the contracting authority recovers from paying passengers.

27 In summary, there are existing policies contained within the RPTP that allow for new services to be trialled in locations that are not currently served by existing public transport services, subject to them demonstrating viable patronage at a cost level that is sustainable within existing funding envelopes / cost recovery requirements.

Greater Christchurch Public Transport Future Bus Improvements Programme[5]

28 This programme is seen by the partner councils (Environment Canterbury, Christchurch City Council, Selwyn District Council and Waimakariri District Council) as fundamental to achieving the vision for public transport that is set out in the RPTP. Its long-term goal is the doubling of public transport uptake in the Greater Christchurch area and comprises three components – foundations, rest of network and mass rapid transit.

29 The combined business case for the first two components was formally endorsed by the partner councils in December 2020 and by the Waka Kotahi Board in May 2021.

30 In March 2023, the government announced[6] the investment of $78 million to accelerate the delivery of the programme over a five-to-six-year period.

31 Interventions contained within the programme that have relevance to the PC31 site are summarised as follows and addressed in further detail as relevant to PC31 in the subsequent section of my evidence:

31.1 **Direct services –** enhance frequencies on existing 'direct' services from Rangiora and Kaiapoi to every 15 minutes at peak and every 30 minutes off-peak. *The intervention confirms that high quality public transport services will continue to be available from Kaiapoi to/from Christchurch – which could be connected to the PC31 area.*

31.2 **Proposed new route –** the Waimakariri network shown indicates a future new Connector (every 30 minutes) level route linking Pegasus-Rangiora-Kaiapoi via Flaxton Road and Skewbridge Road as shown below in Figure 10. This would be

[5] Future public transport | Environment Canterbury (ecan.govt.nz), retrieved 08/06/2023

[6] Government delivers better public transport for Christchurch | Beehive.govt.nz, retrieved 08/06/2023

the closest future bus route to Ōhoka – the intersection of Flaxton Road and Skewbridge Road is approximately 3kms from the centre of Ōhoka township.

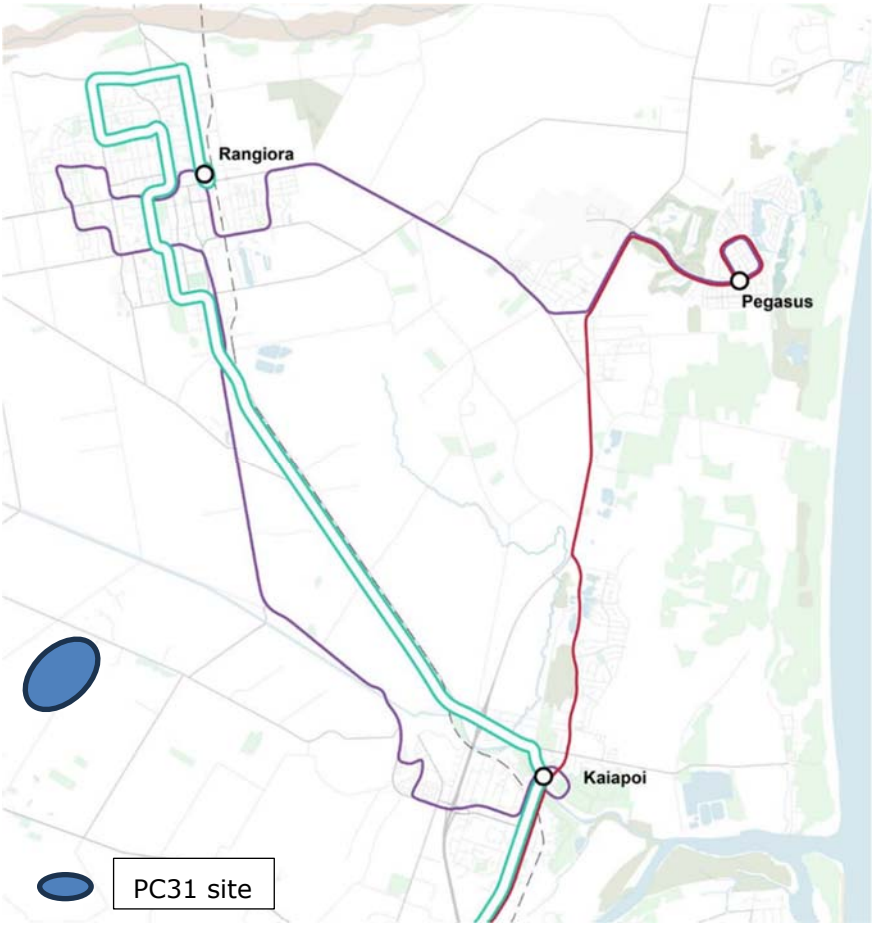

Figure 10: Future Waimakariri bus routes. Source: Environment Canterbury

National Policy Statement on Urban Development 2020[7]

32 The NPS-UD sets out the objectives and policies for the planning for well-functioning urban environments under the Resource Management Act 1991.

33 In preparation of this evidence, in relation to potential public transport provision support for the PC31 site, the requirements set out in the NPS-UD form part of the overall assessment that has been undertaken.

34 Of particular relevance is:

34.1 Objective 3(b) – that district plans enable more people to live in, and more businesses and community services to be

[7] National Policy Statement on Urban Development 2020 – Updated May 2022 | Ministry for the Environment

located in, areas of an urban environment in which the area is well-serviced by existing or planned public transport; and

34.2 Policy 1(a)(c) – planning decisions contribute to well-functioning urban environments, which are urban environments that have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport.

35 This evidence proposes that there are indeed ways that effective public transport services can be delivered to support good accessibility for future residents and, in addition, PC31 will bring a level of residential density that can act as an anchor for service provision that will also benefit the wider urban environment – including Ōhoka, Mandeville North, other parts of the Waimakariri District and Greater Christchurch.

ŌHOKA / MANDEVILLE – PUBLIC TRANSPORT DEMAND POTENTIAL

36 The ITA that has been prepared to support the PC31 application[8] is a useful starting point to begin to understand potential demand for public transport services from the Ōhoka area.

37 The ITA, when prepared, predicted that the fully built out PC31 development could generate 612 outbound vehicle trips in the AM peak hour from the proposed 850 dwellings and a further 94 outbound trips associated with the proposed school. The analysis forecasts that 65% (or 459 trips) will head south on SH1 and 18% (or 127 trips) will head north towards Rangiora, with the balance heading in other directions.

38 More recent work undertaken by Novo Group in preparation of their hearing evidence (refer to **Mr Fuller's** evidence) has indicated that PC31 Option 1 (Up to 850 dwellings, two commercial zones plus a 250 pupil primary school) may generate a lower level of AM peak hour trips than that noted above from the ITA – 949 trips. This lower figure does not materially impact the conclusions drawn below regarding potential public transport trips that might be generated if suitable services existed.

39 The public transport share of all trips made in Greater Christchurch is currently 2.25%.[9] 2018 census journey to work data presents a similar story for the Canterbury region as a whole – 2.78% of

[8] Integrated Transport Assessment – 535 Mill Road, Ōhoka, Wamakariri, Novo Group, March 2022

[9] Greater Christchurch Public Transport Futures Combined Business Cases- Non-Technical Summary, Boffa Miskell, November 2020

people living in Canterbury travelled to work by public bus.[10] If public transport options for travel to/from Ōhoka existed, then applying the 2.25% to the vehicle trips generated from the PC31 development would only result in around 10 public transport trips heading southwards and 3 towards Rangiora in the AM peak hour. Even with more successful mode share percentages, associated with an attractive and convenient public transport solution, the numbers will still only be around double what is noted here.

40 Whilst the residential zoning to the north / northeast of Ōhoka is not likely to be built out in a similar manner to PC31, this area would potentially contribute volumes to the forecast outbound AM peak hour trips. Public transport could serve both areas relatively well. There may also be a location such as the Mandeville North hub that could be served by a public transport service, although walk up catchment here is low, given the surrounding density of rural-residential development. This still only results on a very small number of potential southbound public transport trips in the AM peak hour from the wider township area – potentially in the order of up to 20/30 trips heading south and around 10 towards the north.

41 Clearly, the AM peak hour is only part of the overall future trip making picture for the Ōhoka area and there will be options for a future public transport service to capture more trip making than AM peak period commuting – such as shoulder peak commuting / education trips, off-peak trips to Christchurch and more local trips to Rangiora and Kaiapoi. This analysis is, however, presented to reinforce the point that any demand for public transport from a future, more developed, Ōhoka township will remain relatively small in total volumes.

42 These small potential demand volumes have implications for any public transport solution that may be provided / trialled.

PC31 ŌHOKA – POTENTIAL PUBLIC TRANSPORT RESPONSES

43 The following sections consider possible public transport solutions that could support travel to/from the PC31 proposal location.

Diversion of existing / proposed bus services

44 The proposed future bus service on Flaxton Road / Skewbridge Road discussed above comes within 3kms of the centre of Ōhoka. To serve Ōhoka, however, the service would need to head away from Kaiapoi via Threlkelds Road and Mill Road and then return along Mill Road to get back onto the proposed route in the emerging new development areas to the west of Kaiapoi (see Figure 11). Existing crossing points of the Cust River dictate the form of the roading

[10] Main means of travel to work for people living in the Canterbury Region, New Zealand - Figure.NZ, retrieved 13/06/2023

network in the area. The diversion (if a u-turn is possible in central Ōhoka or the proposed plan change site) would be an extra 5.3kms on the proposed route, or around 5 minutes additional travel time – assumed to be at an average of 60kmh.

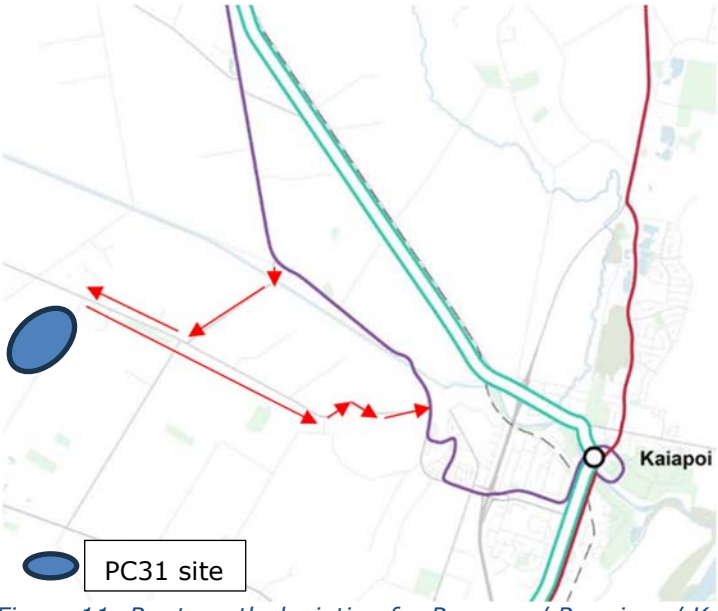

Figure 11: Route path deviation for Pegasus / Rangiora / Kaiapoi future bus service if serving Ōhoka.

45 Improving Connector bus services by straightening them out is discussed in the Public Transport Futures Programme as one of the seven key interventions to improve patronage. The rationale for this is that there is considerable evidence that bus services that provide "coverage" by winding through streets / suburbs / townships tend not to perform well in terms of patronage, as end-to-end journey times become very long and thus not attractive to potential customers.

46 The impact on overall demand for this proposed new service would, therefore, have to be carefully considered – there would be potential additional patronage generated by a diversion through Ōhoka, but this would need to be balanced against the negative impact on any customers on board who are not bound to/from the Ōhoka area.

47 Extending this service deviation further – for example via Bradleys Road to serve the Mandeville North hub area and then travelling via Tram Road / Jackson Road – brings more potential demand within the route's catchment, but at considerable cost to those on-board in terms of additional travel time. As discussed elsewhere in this evidence, the rural-residential development around the Mandeville North hub is not positive in terms of walk-up demand to a public transport service.

48 An alternative to this proposed new service could, however, be considered – the currently underserved areas to the west of Rangiora and to the west of Kaiapoi could be within the area of operation of an Ōhoka on-demand service that provided public transport options to both townships. I address the potential for an on-demand service later in my evidence.

New bus service – Tram Road corridor

49 In 2014, Redbus responded to ongoing calls for a public commuter bus service between Oxford and Christchurch with a 3-month trial service that started in October 2014.[11] The service had stops at Oxford, Cust, Swannanoa and Mandeville, before calling at Northlands Mall and then onwards to the Christchurch Bus Interchange. Whilst no public information is available regarding the trial, it was discontinued at some point, presumably due to low patronage.

50 It is considered unlikely that further residential development in the Ōhoka area would alter the viability of a Tram Road bus service between Oxford and Christchurch, as any new development would be at least 2.5kms away from the logical stopping point for a service in the Mandeville North area. Whilst the distance to Tram Road via Whites Road is slightly shorter, it is still over 2kms from most of the PC31 site. Typically, it is accepted that public transport customers will not walk more than 400m / 5 minutes to their closest bus stop.[12] Beyond this, the appeal of public transport declines significantly. This assessment is consistent with that of Mr Binder that is discussed below in my response to the Section 42A report.

51 An alternate route path for an Oxford – Christchurch bus services could, however, be considered. The "direct" route via Tram Road to the Tram Road / SH1 interchange is 9.5km from Mandeville North. If a future Oxford – Christchurch service was routed via Bradleys Road / Mill Road / Ōhoka Road, it could serve the Ōhoka township and the Silverstream area to the west of Kaiapoi, before accessing SH1 at the Ōhoka Road / SH1 intersection. This route path is around 10.8kms in length. Clearly there would be a small time penalty for any customers on board ex-Oxford and ex-Cust due to the slightly longer route path and two additional stops enroute, but these new areas of catchment could assist in the viability of a future Oxford – Christchurch commuter bus service. The route path for this potential future service is shown below in Figure 12.

[11] Oxford bus run to be trialled | Stuff.co.nz, retrieved 09/06/2023

[12] Walking | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

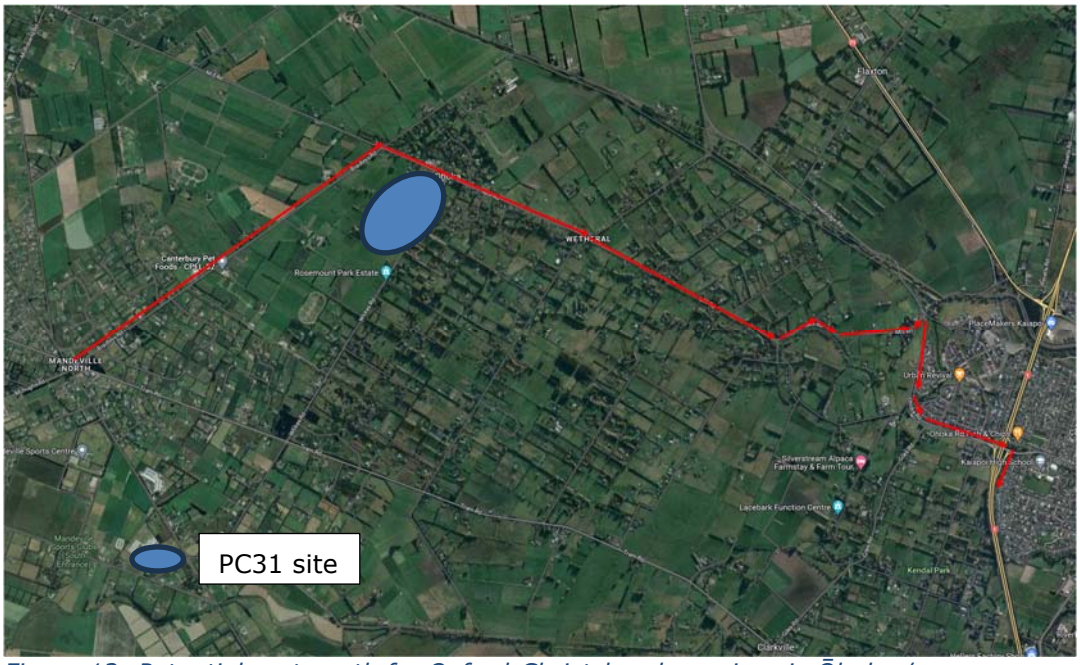

Figure 12: Potential route path for Oxford-Christchurch service via Ōhoka / Silverstream

52 From a financial perspective, the distances involved in any bus service linking Oxford to Christchurch via Tram Road are a barrier to an all-day bus service – the operating costs are significant relative to the patronage / revenue potential. This is discussed further below in the section of this evidence on 'Operating Costs'.

New local scheduled bus service – Ōhoka / Mandeville to Kaiapoi

53 The PC31 proposal is seeking to deliver 850 new dwellings to the south of the current Ōhoka settlement. The design report[13] prepared to support the plan change notes that the area to the north and north-east of PC31 is already zoned as residential. It has a similar footprint to the PC31 area to the south, albeit with lower densities envisaged. Whilst Ōhoka may offer a relatively dense demand point in the future, the same is not true for the wider Mandeville area.

54 One of the key challenges for the Greater Christchurch area is to grow public transport from its current very low (when compared to other centres in New Zealand) public transport mode share of 2.25% of all trips.[14]

55 Given the zoning of the wider area to the west of Kaiapoi is largely rural, it challenging to see how a new, fixed route local scheduled bus service between Ōhoka / Mandeville and Kaiapoi could generate

[13] Ōhoka Village Residential Development – Design Report, Reset Urban Design, May 2023

[14] Greater Christchurch Public Transport Futures Combined Business Cases – non-technical summary, November 2020, Boffa Miskell

enough all-day demand for a traditional format local bus service, particularly if the western part of Kaiapoi is served in the future by the service noted above in Figure 10.

56 The density and scale of PC31 is unlikely to deliver sufficient demand to support a new local bus service on its own, given the route path it would take and the potential catchment that it would traverse.

New peak period bus service extension – Ōhoka Park and Ride

57 The PC31 proposal currently has an area set aside for an approximate 106 space Park and Ride. This location could be the basis for several functions:

57.1 As an anchor for an extended Kaiapoi Park and Ride bus service;

57.2 As a base location / anchor point for an on-demand operation;

57.3 As additional parking for the commercial centre of Ōhoka / parking to support the Farmers Market; and

57.4 As a meeting / collection point for a rideshare scheme to support trip making from the wider area.

58 The Park and Ride model developed by Environment Canterbury for Kaiapoi and Rangiora is instructive in terms of what is required to make Park and Ride attractive to commuters – that being an express service that is both direct and fast in terms of overall journey time. For both towns, the Park and Ride sites have been chosen to be on a straight line for the bus service that serve them.

59 An Ōhoka Park and Ride cannot be readily served by either of the current Park and Ride services as an intermediate stop, as it is not on the direct route path.

60 One possible option that could be considered would be an extension of Route 92 described above. Route 92 could start and finish at the proposed Ōhoka Park and Ride – travelling via Mill Road, Ōhoka Road, Hayson Drive, Silverstream Boulevard, Fuller Street, Williams Street to serve the emerging Silverstream area of Kaiapoi as well as Ōhoka. The route path is shown below in Figure 13.

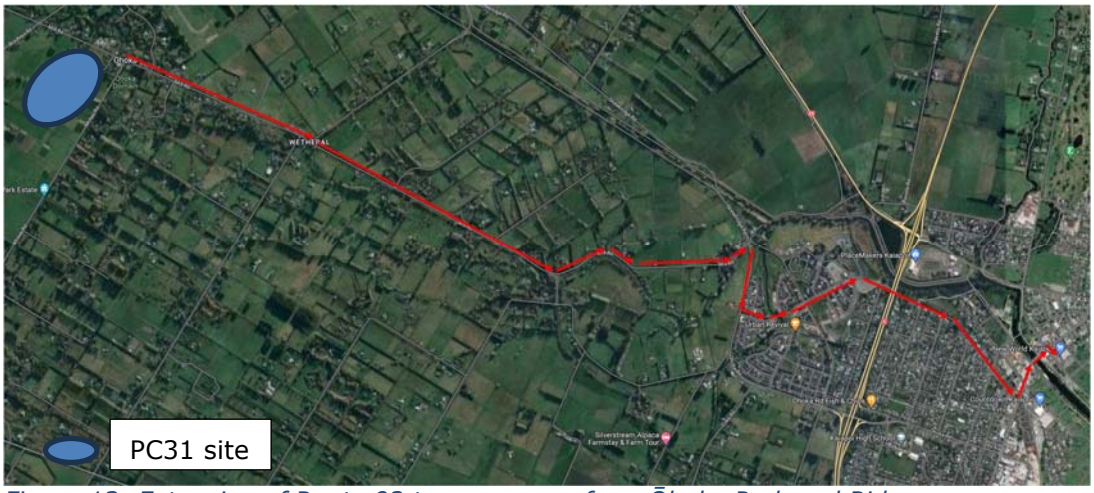

Figure 13: Extension of Route 92 to commence from Ōhoka Park and Ride

61 This additional route would add an additional 15 minutes to the total route length of Route 92, to cover the additional 8.6kms. If designed as a route extension, there is no disadvantage to any current customers who use this service. Potential costs associated with this route extension could be in the order of $100,000 per annum, if the changes did not trigger a requirement for an additional peak bus to be sourced.

62 The Environment Canterbury submission (#507) on PC31 notes that they do not consider that the limited nature of the current Kaiapoi Park and Ride service would be sufficient to provide realistic, attractive or viable transport choices for potential residents at the plan change site. This is accepted – an extension of Route 92 to an Ōhoka Park and Ride would be only part of a public transport solution for Ōhoka, but what it would do is offer a one-seat ride to Christchurch for many residents of Ōhoka, with those residing in the PC31 area being able to comfortably walk to the development's Park and Ride site.

On-demand service

63 Timaru replaced three fixed bus routes in June 2020, with a trial on-demand service called MyWay by Metro.[15] The success of the on-demand trial subsequently saw the final fixed bus route (Timaru Link) removed from service in February 2023, as most of its customers had migrated to the on-demand service. Ongoing (3 year) funding support for the service was confirmed in March 2022[16] and patronage has continued to grow.

[15] MyWay by Metro | Metro Timaru (metroinfo.co.nz), retrieved 08/06/2023

[16] On-demand public transport looks to the future | Environment Canterbury (ecan.govt.nz), retrieved 08/06/2022

64 Auckland Transport (*AT*) has been trialling a similar concept called AT Local[17] in a part of South Auckland. The on-demand shuttle serves an existing residential community that was formerly not served closely by scheduled services and has also replaced a former fixed route bus service that was suffering from persistently low patronage through the low-density suburbs that it travelled. Since its launch in November 2021 as a 12-month trial, the service has consistently grown demand and has now been confirmed as permanent feature of the wider AT public transport network.[18] The service uses electric vans and cars and is integrated with the Auckland wide AT HOP card for ticketing purposes.

65 Whilst both these on-demand services replaced poorly performing fixed route bus services, the common theme in their success is their flexibility that is well suited to serving "thin" catchment areas that are not densely populated enough to be viably served by traditional bus services.

66 From an infrastructure perspective, such services are relatively low in terms of investment requirements, as they can use existing town centre locations for their trip ends (although the size of the vehicle dictates whether it can legally use a "bus stop") and use electronic pick-up points identified in the booking app for their suburban / semi-rural pick-up / drop-off points.

67 For the Ōhoka township, such a service delivery model could potentially be a viable way of linking it to Rangiora and Kaiapoi with a full-time public transport service. This potential is explored further in the following commentary.

68 The "thin" nature of the catchment area has been discussed earlier in this evidence and that is a barrier to the ongoing viability of a fixed route bus service – whilst there may be commuter and school student demand to support peak period services using traditional buses, the demand from Ōhoka and its surrounding areas is unlikely to be strong during other periods of the day.

69 In this area, the direction of travel is typically quite different between the peak and off-peak period:

69.1 During peak periods, the Kaiapoi direction is the focus – for school students heading to the local high school and to other schools further afield in Christchurch and for commuters heading into Christchurch.

[17] AT Local, retrieved 08/06/2023

[18] Public transport review: How Auckland can get more for its money from on-demand services - NZ Herald, retrieved 08/06/2023

69.2 During off-peak periods, Rangiora, as the more important local centre becomes more of a focus, although there will still be some level of demand for travel southwards (via Kaiapoi) as well.

70 By using smaller capacity vehicles that operate on flexible route paths, the demand that does exist can be "collected" from the end of the road and "delivered" close to the destination, as opposed to the potential customer walking to a formal bus stop on a fixed bus route. Essentially, on-demand bus services fill the operational space between shared taxis and traditional buses.

71 The fleet is also more scalable to demand and could be combined with large buses that only operate during peak periods, with the smaller vehicles then continuing with off-peak service.

72 An on-demand service that provided connections from the Ōhoka / Mandeville area to both centres in a flexible manner could also provide the same service to residents of west Rangiora and west Kaiapoi, which could have the additional benefit of negating the need for a further fixed route bus services that brings these two areas into the coverage of the main public transport network.

73 Key to the success of such a service would be ticketing integration via the Metrocard ticketing product.

Summary

74 The nature of the Ōhoka area, if PC31 is approved, tends to lend itself to an on-demand public transport solution, potentially supported by a peak period commuter bus service via an extension of Route 92 to a new Ōhoka Park and Ride.

75 An on-demand service could provide a flexible and responsive solution to a diverse range of low volume trip making requirements from the area – both local trips to/from Rangiora and Kaiapoi and for connective longer trips to destinations within Christchurch.

76 One of the challenges for on-demand services is its inability to meet peak demands, whilst having a vehicle size / fleet size that is appropriate for the rest of the day / week when demands are much lower – this is where the addition of a peak period commuter offering may have a role to play.

77 It is my opinion that the residential densities in the area will not be sufficient to support a regular, fixed route local bus service – the walk-up demand on such a route would just not be high enough to warrant the costs of service provision.

78 For similar reasons, it is also my opinion that diversion of an existing / planned bus route would not be a viable public transport

solution for Ōhoka – the disbenefits to those already on-board, plus the costs (both monetary and in terms of time) would not be outweighed by any additional demand from the Ōhoka area.

COST IMPLICATIONS

79 Public transport service costs comprise both vehicle operating costs and associated infrastructure costs.

Operating costs

80 The potential public transport services options discussed in this evidence are very different in their scope and extent. Commuter services that offer a one-bus ride from the area will be very different in their cost profile to a more localised service that feeds into the existing public transport network in Kaiapoi or Rangiora.

81 There is limited publicly available information on operating costs, but it is noted that Redbus applied to Environment Canterbury in 2017[19] for an annual subsidy of $49,000 to continue their Oxford – Christchurch commuter services. This was not supported at the time. The Timaru MyWay service has been commented[20] in media as having doubled operating costs when compared to the fixed route bus service that it replaced, but it was noted at that time that the replacement service has greater service span across the whole week than the service that it replaced.

82 More generally, the Ministry of Transport has published data[21] in its 2022 Domestic Transport Costs and Charges Study that indicates that a typical urban bus costs in the order of $250,000 per annum to operate. The study also gives a figure of $5 per in-service km. This figure is the basis of the estimate for costs of extending Route 92 that has been discussed earlier in this evidence.

83 As noted above, Environment Canterbury has a specific farebox recovery policy in place that applies to existing and proposed public transport services. Farebox recovery is the percentage of system costs that are recovered from the passenger in the form or fares – there is a national target of 50% in New Zealand.

84 The Canterbury farebox recovery policy is described in Appendix 3 of the RPTP – it notes that regional policies are intended to contribute to the national target of 50%, but notes that, post-

[19] https://api.ecan.govt.nz/TrimPublicAPI/documents/download/3320245, retrieved 12/06/2023

[20] MyWay trial in Timaru gets tick of approval but taxis question costs | Stuff.co.nz, retrieved 12/06/2023

[21] DTCC-Draft-Synthesis-Report-07-August-2022.pdf (transport.govt.nz), retrieved 12/06/2023

earthquakes, the regional recovery rate has been well below the target – at 38.14% in 2017/18.

85 Any Ōhoka service – fixed route or on-demand – would be subject to this policy test before it was confirmed as an ongoing commitment for the regional council. The guiding principle would typically be that a new service was at or above the regional average, given that the region as a whole falls short of the national target by quite some distance.

Infrastructure costs

86 If a fixed route bus service was operated through the Ōhoka township, there would be costs associated with developing bus stops, potentially with at least one bus shelter at a central stop in the township.

87 For on-demand services, bus stops at the outer reaches of the services are typically "virtual" in the sense that they are locations on the booking app where customers go to in order to access the service. There is no physical infrastructure, although if key bus stop locations were developed, they can readily act as pick-up locations for an on-demand service.

SECTION 42A REPORT

General comments

88 The general view expressed in the Section 42A report and the submissions made on the plan change on public transport matters are to the effect that there is no public transport provision to/from Ōhoka and therefore, if approved, the new dwellings would be largely dependent upon car-based trip making. It is accepted within this evidence that, with the exception of school trips to/from Ōhoka Primary School and to/from Kaiapoi High School, the points raised are valid, without a suitable response in terms of public transport provision. My evidence set out above provides that response.

Potential population to support public transport services

89 Section 5.2.2 provides comparative statistics between the potential population of PC31 (2,485) and Oxford (2,200) and Pegasus (3,300).

90 It has been noted in this evidence that Oxford does not currently have public transport services and also that commuter services have been trialled in the past and have not endured in terms of viable patronage. It is important to note that Oxford is 33kms from Rangiora and over 40kms from Kaiapoi – typically a 30-minute drive before a connection onto existing public transport service could be made.

91 Pegasus is, however, connected to both Rangiora (9kms via Woodend on Route 97) and Kaiapoi (also 9kms via Woodend on Route 95) by public transport.

92 If public transport to/from Pegasus is a viable option to be supported by public authorities, then it would suggest that a solution should be able to be developed to support the Ōhoka area.

Section 6.8.6 Environment Canterbury submission (#507)

93 The Environment Canterbury submission notes that the limited nature of public transport services to/from the Kaiapoi Park and Ride will not be of a level that will make a material difference to travel choices from residents of a future PC31 site. As noted earlier in this evidence, that point is accepted. On its own, existing Park and Ride services from Kaiapoi, or an extended Park and Ride service to a new Ōhoka Park and Ride will not provide the appropriate level of all-day / all-week public transport solution that would be required to make public transport a viable choice for a range of trips.

94 The submission further notes that Environment Canterbury is concerned that new residents will ask for public transport services that are not planned or funded in any future programmes. This evidence acknowledges that. If PC31 is approved, it will require some form of public transport to be present from the outset to provide new residents with this option from the beginning of their occupation – otherwise a car dominated culture is reinforced from the outset and that is hard to change at a later date. I understand that the applicant is willing to work with Environment Canterbury on the nature of form of future public transport to serve the PC31 site and wider area and is also open to dialogue on seed funding to support services over several years to ensure that they can be trialled and adjusted for best fit / best outcomes.

Section 6.8.7 Waka Kotahi submission (#141)

95 The Waka Kotahi submission focuses on the additional Vehicle Kilometres Travelled (*VKT*) and the climate change provisions in the NPS-UD, noting that without adequate cycling facilities to Rangiora or public transport services to Rangiora / Kaiapoi, the proposal will contribute further to carbon emissions and will not achieve a VKT reduction due to reliance on private vehicle use.

96 This evidence supports the provision of public transport services to/from Ōhoka if PC31 is approved, so is consistent with the Waka Kotahi view. It is further noted that if, public transport services are provided to support the development of the PC31 site, there are potential public transport customers in Mandeville, west Kaiapoi and west Rangiora who could use this service – these areas currently have limited or no public transport, so VKT reductions could be achieved.

97 Whilst development of the PC31 site will likely increase VKT, any new development will generate travel, so that is to be expected. With the provision of the types of public transport proposed in this evidence, there is every possibility that the uplift in VKT will be less than would be the case if the same level of development was in currently residential zoned fringe locations of Rangiora and Kaiapoi. All these areas have (or potentially will have) limited, low frequency fixed bus routes serving them, which are typically not a very attractive mode choice – which is reflected in the low public transport mode shares outlined elsewhere in this evidence.

Section 6.8.23 to 6.8.26 - response

98 I have responded in detail to the points raised by Mr Binder below, which are summarised in these sections of the Section 42A report.

99 Many of the conclusions drawn assume that no public transport will exist to support a range of trip making from Ōhoka by new and existing residents. My evidence challenges this assumption and has proposed two different forms of public transport that, together, could provide this effective mode choice that would contribute to a well-functioning environment for these transport matters.

Appendix 7 – Evidence of Mr Shane Binder

100 Mr Shane Binder has provided evidence as part of the Section 42A report on transportation matters. The following sections of my evidence provide responses to several of the matters raised in Mr Binder's evidence.

Vehicle Kilometres Travelled and Emissions Reduction - response

101 As noted above in my response to the Waka Kotahi submission, it is acknowledged that VKT will likely increase, but if a successful on-demand public transport operation (using electric vehicles in line with national efforts to decarbonise the New Zealand bus fleet over time) can be developed to support the PC31 site development, there is every possibility that VKT increase can be mitigated in part with effective public transport trip making alternatives. This new public transport services would serve other areas in the vicinity as noted above, with the potential to reduce VKT there also.

Passenger Transport Evaluation - response

102 Paragraph 41 – my evidence also covers these points and is in agreement with them.

103 Paragraph 42 – these matters have been responded to specifically in this evidence, with the overall opinion that there can be ways to successfully serve Ōhoka with public transport at a level of cost that is sustainable in the longer term. My evidence is broadly in agreement with Mr Binder's views – that deviation of existing bus

services or new dedicated fixed route bus services are unlikely to be viable options.

104 Paragraph 43 – more information on the applicant's potential response to the Park and Ride matter has been presented in this evidence. The applicant is willing to fund the capital costs of a Park and Ride within the PC31 site (that will also support other activities). I understand that the applicant is also keen to explore how service operational costs could be financially supported over an initial period of 3 to 4 years if current Route 92 could be extended from Kaiapoi.

105 Paragraphs 46 and 47 discuss walk-up catchments for bus services and meshes with information provided earlier in my evidence. It is accepted that walking / cycling to existing public transport is currently infeasible (although noting **Mr Fuller's** evidence as to the Council's Walking and Cycling Network Plan) and hence why public transport solutions that might be appropriate for the Ōhoka community have been considered and proposed in this evidence.

106 Paragraph 48 references a Waka Kotahi research report from 2007 and suggests that Park and Rides that serve Christchurch are not well used because of an oversupply of car parking in Christchurch CBD. Waimakariri District Council has invested in 5 Park and Rides to link its main towns to Christchurch, Environment Canterbury has invested in new express bus services to link these Park and Rides to Christchurch destinations and Waka Kotahi and Christchurch City Council have invested in transit lanes and bus lanes to support these bus services with competitive and reliable travel times. It is considered unlikely that all this investment would have been made if Greater Christchurch authorities did not believe that Park and Ride would be a successful alternative to single occupancy car commuting. The proposed public transport initiatives for Ōhoka would build on the existing model by potentially extending the Kaiapoi service to a new terminus at an Ōhoka Park and Ride. The proposed on-demand public transport solution would link Ōhoka residents to Kaiapoi for onward travel on a range of existing bus services.

107 Paragraph 49 reconfirms Mr Binder's opinion that Ōhoka residents will not drive to a Kaiapoi Park and Ride for onward travel. For the reasons noted in the preceding paragraph, I do not support that conclusion. Furthermore, this evidence is proposing that public transport options could be brought to Ōhoka, with the PC31 site forming the platform of new residential community to provide the demand anchor for that service.

CONCLUSION

108 It is my opinion that the PC31 site and wider Ōhoka and Mandeville community can be provided with appropriate public transport services to link them to Rangiora, Kaiapoi and beyond to onward destinations in Christchurch. It has been noted in my evidence that the applicant is supportive of these initiatives and is willing to deliver both capital items and ongoing operational cost support for a period of time to trial services, so that they can be adjusted to work as best as they can in the longer term.

109 If PC31 is approved, it needs to have public transport services to support it. Whilst this is not currently in any plans or future funding programmes, this is because PC31 does not exist and the current Ōhoka community is not of a scale or density that would be able to support any form of viable public transport – the exception being existing Ministry of Education funded school services and private shuttle arrangements that take booking on an ad hoc basis.

110 It is my belief that PC31 and the proposed capital investment and potential initial operational funding support from the applicant would give local authorities the financial support to trial and then embed innovative public transport solutions to support this type of semi-rural community and also that this service could support residents in west Rangiora and west Kaiapoi with a better form of public transport than their current low frequency, fixed route bus services.

Dated: 7 July 2023

Simon Nicholas Milner