

CCL Ref: 14806-200422-anderson

20 April 2022

Ms Jane Anderson
Selwyn District Council

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Dear Jane

**RC216016: Foodstuffs South Island (Properties) Limited:
Peer Review of Transportation Assessment and Supplementary Information**

Further to various correspondence, we have reviewed the Integrated Transport Assessment Report (ITA) provided in support of the above application by Abley. We confirm that we have read and reviewed all sections of the ITA, but in this letter we have generally only made brief comment on issues where we agree with Abley, and rather, we have focussed on areas of disagreement or where further information is required in order to fully assess effects.

For ease of reference, we have adopted the same numbering and headings as used by Abley in the ITA.

ITA Section 1: Introduction

This part of the report does not contain any technical information and we have therefore not commented further.

ITA Section 2: Existing Site Data

Section 2.1: Site and Locality

This part of the report sets out factual information and we have therefore not commented further.

Section 2.2: Zoning

While we agree that the land is zoned as Living Z, we highlight that this area is proposed to be zoned as General Residential within the proposed District Plan. It is also covered by also Rolleston Outline Development Plan 4, which shows a Secondary Road passing through the areas which would be occupied by the proposed supermarket, and also Plan Change 71 (for which we understand no decision has yet been made, as the hearing was only closed in late March 2022). We discuss this later in this report.

ITA Section 3: Existing Transport Data

Section 3.1: Frontage Roads

This part of the report sets out factual information and we have therefore not commented further. Of relevance however is Abley's comment that Levi Road is "*the main corridor*" between Rolleston town centre and the Weedons interchange on the Christchurch Southern Motorway, indicating its importance in the roading network. We discuss this subsequently, but at this stage



highlight that its importance means that any revisions to the road cross-section need to be carefully designed to recognise this.

Section 3.2: Existing Vehicle Flows

We have clarified with Abley that their assessment is based on traffic flows from the transportation model of Rolleston, rather than the vehicle flows set out in this section of the report. Rather, the volumes in this section of the report are provided for historical context only.

Section 3.3: Walking and Cycling Facilities

This part of the report sets out factual information and we have therefore not commented further.

Section 3.4: Public Transport Modes and Accessibility

This part of the report sets out factual information and we have therefore not commented further.

Section 3.5: Road Safety

At the time that the report was produced, the road safety assessment only included the partial records for 2021, and we have therefore taken the opportunity to review the crashes that have been reported in the same area since that time.

There have been three further crashes reported:

- At the Lincoln Rolleston Road / Levi Road roundabout, a westbound vehicle proceeded onto the roundabout, failed to see a southbound cyclist, and hit them. The crash resulted in minor injuries. The police report notes that the driver was emotionally upset at the time.
- At the Levi Road / Beaumont Drive intersection, a vehicle stopped to allow another to turn, and a vehicle ran into the rear of the stopped vehicle. The crash resulted in minor injuries.
- On Lowes Road, around 170m west of the Lincoln Rolleston Road / Levi Road roundabout, a crash occurred when an eastbound vehicle ran into the rear of a queue of traffic approaching the roundabout. The crash resulted in minor injuries. The police report notes that the driver was checking their cellphone at the time.

In the ITA, Abley noted that the number of type of crashes did not indicate any underlying road safety issues in the immediate area. The additional crashes above do not change this in our view, and we agree with their conclusion. We note though that two of the crashes are associated with heavy traffic in the area, suggesting that this part of the road network is under pressure at peak times, and extensive queuing is indicated in the police records.

ITA Section 4: Future Receiving Environment

Section 4.1: Urban Development

In this part of the ITA, Abley notes that the proposed supermarket lies within the area of Outline Development Plan 4. However no further comment is made in the ITA regarding this, nor the ability to give effect to Outline Development Plan 4 and its associated roading network if the supermarket was to proceed.



Section 4.2: Future Public Transport Opportunities

Abley notes that there is the potential for future bus services to operate along Lincoln Rolleston Road, and that if this progresses, it will provide enhanced public transport access to the site. While noting that the services are not yet confirmed, we agree that this would encourage patrons to travel to the supermarket by bus, and we also note that having a large trip generator/attractor such as a supermarket in this location means that this is an increased potential for new bus stops to be provided immediately adjacent to the site.

Section 4.3: Future Transport Infrastructure

In our view, the key issue highlighted by Abley in this part of the ITA is the potential improvement at the Lincoln Rolleston Road / Levi Road roundabout to traffic signals. Abley notes that this is expected to occur in 2025/26. However, discussions with Council's Transportation Asset Manager, Mt Mazey, have identified that while this is intended to occur, there is no certainty around this timing, and it may in practice take place at a later time. We return to this matter subsequently.

ITA Section 5: Proposed Activity

Section 5.1: Overview

This part of the report sets out factual information and we have therefore not commented further.

Section 5.2: Access Arrangements

Within this part of the report, Abley notes that it is "*recommended*" that the future shared walking/cycling route on Levi Road is located on the northern side. Following discussions, we understand that it is now proposed to be on the southern side of the report. Given that it is expected to connect to similar facilities to the east and west, and which lie on the southern side of the corridor, we consider that this provides a better outcome in terms of providing a continuous route for these road users. It also avoids the need for them to cross Levi Road twice.

A number of the details in this part of the report have been superseded through the provision of additional information, which we address below.

Section 5.3: On-Site Parking

Although the National Policy Statement on Urban Development has removed parking ratios from District Plans, we confirm that the number of spaces provided is adequate for the anticipated demand, meaning that it is extremely unlikely that there will be overflow parking onto adjacent roads and which could adversely affect their safety or efficiency. The dimensions of the parking spaces are appropriate, and the layout includes provision for pedestrian movements.

Section 5.4: Loading Requirements

A loading yard is proposed towards the southeast of the site, and in the ITA is noted that there will be up to 44 deliveries per day. We note that one-way operation of the accesses is proposed for larger vehicles (with semitrailers limited to entry via Access E and exit via Access A) but no condition of consent appears to have been proposed to enforce this. The matter of tracking curves is discussed below.

ITA Section 6: District Plan Standards Assessment

This part of the report is a summary of compliance with the operative District Plan.

We highlight that the exit from the site closest to the Lincoln Rolleston Road / Levi Road roundabout measures at 22m from the Levi Road / Beaumont Drive intersection and is therefore non-complying with Rule E13.2.2.1, which has not been identified by Abley (and hence no assessment of effects has been undertaken in the ITA).

We have previously highlighted to Abley that their application of Rule E13.1.10.1 is not correct – the queuing space is not divided by the number of accesses as they have done, but rather, the process is for the number of spaces expected to be served by an access to be found, and this is then applied to find the appropriate queuing space. The assessment of queuing space presented in both the ITA and the response to the Request for Further Information is therefore not correct.

The site is noted as having 517 parking spaces. Under Rule 5.5.1.4 this therefore requires the provision of 12 mobility spaces, whereas only 10 are provided. This is an additional non-compliance that has not been addressed by Abley, although in practice we do not consider that there will be any difficulties with providing the appropriate number of spaces.

ITA Section 7: Appraisal of Transport Effects

Section 7.1: Location of Site

We agree with the concept of pass-by traffic at supermarkets comprising up to a third of trips and agree that it is reasonable to apply this to the calculated traffic generation.

Section 7.2: Modelling Methodology

This part of the report sets out factual information and we have therefore not commented further.

We agree that the appropriate model to use for assessing the effects of the proposal is the Council's microsimulation model. We also agree that if there is any travel that occurs from Rolleston to Christchurch for the purposes of visiting a supermarket, this is less likely to occur if the proposed supermarket is consented. As such, there may be some slight reduction in traffic volumes on routes further afield.

We agree with the use of the weekday evening peak hour as the appropriate time to assess the transport-related effects of the proposal.

Section 7.3: Baseline Model

A particular aspect of the baseline model is the inclusion of the signalisation of the Lincoln Rolleston Road / Levi Road roundabout, and in order to do this, Abley has devised a notional layout for the purposes of assessing effects. This includes one traffic lane for each turning movement (meaning three lanes at each 'stop' line) with filter turns. As shown on Figure 7.3 of the ITA, this means that the kerblines of Masefield Drive and Lowes Road move very close to the edge of the legal road reserve on the northeastern and northwestern quadrants of the signalised intersection, and it appears unlikely that sufficient width remains for a footpath to be provided in these locations. As it is unlikely that the Council would wish to place itself into a position of acquiring additional land, in our view it is unlikely that it would be possible to provide three traffic lanes on the northern and western approaches to the intersection, and rather, just two lanes could be provided. However, no model runs have been included within the report at this stage that allow for such a configuration.

Moreover, as shown within the additional information subsequently provided, an area in the northwestern corner of the application site is required (that is, the southeastern quadrant of the intersection) for the formation of the signalised intersection. While this land is needed for the layout shown, no provision appears to have been made by the applicant to convert this land into road reserve or otherwise provide it to the Council.

Section 7.4: Trip Generation

We agree with Abley's assessment of the likely traffic generation rates for the supermarket, derives in this part of the ITA.

Section 7.5: Trip Distribution

As noted above, we agree with one third of the trips being pass-by trips, with one third being wholly new trips on the network. The remaining third are existing trips that divert, and so while they are not new trips per se, they are new to this part of the network.

We subsequently queried the specific numbers associated with the calculation, in that the ITA says that in the peak hour the supermarket will generate 1,013 vehicle movements and thus there should be a further 675 vehicles on the adjacent roading network. Abley advised that only 36% of the trips were expected to pass through the Lincoln Rolleston Road / Levi Road intersection with 19% using routes to the north and 44% using routes to the west and south. This equates to the following:

- 36% of the trips were expected to pass through the Lincoln Rolleston Road / Levi Road intersection (we calculate that this equates to 243 vehicles, although in the ITA Abley says that it equates to 274 vehicles)
- 170 trips would use Broadlands Drive Extension (south of the site)
- 70 trips would be made using Lincoln Rolleston Road (south)
- 65 trips would be made via the access to ODP 9/10
- 40 trips would be made using Beaumont Drive
- 25 trips would be made using Ruby Drive

This makes a total of 613 trips, and hence around 9% of the traffic generation of the site has potentially not been accounted for (61 vehicle movements).

Section 7.6: Other Transport Modes

We agree with the approach taken in the ITA of calculating trips made by other modes of travel. While this has an inherent degree of uncertainty, typically the capacity of the transportation networks for non-car modes of transport is greater than demand, and we expect that this will remain the case in this instance also.

Section 7.7: Intersection Performance

In this part of the report, Abley sets out modelling for the Lincoln Rolleston Road / Levi Road intersection, adopting an approach is assessing queues and delays in 2024 assuming that a roundabout is retained and 2033 with traffic signals.

As set out above though, information from the Council is that it is possible that the timing of the traffic signals will be delayed. In the response to the Request for Further Information, Abley sets out that the proposal is not reliant on the intersection being upgraded, but no assessment has been provided of the roundabout remaining in place beyond 2024, and thus the effects on queues and delays has not been presented.

Moreover, as we discussed above, it would appear to be difficult to implement the traffic signal layout devised by Abley on at least two of the four approaches, and thus the capacity of these approaches will be less than has been modelled (fewer approaches typically results in greater delays at traffic signals). In our view then, there is uncertainty regarding the veracity of the results presented for the signalised intersection due to the uncertainty around the layout.

Abley presents modelling outputs for other accesses serving the site, and also for the Levi Road / Beaumont Street intersection. Generally, we have no concerns with the levels of service provided at these, but as noted below, if the number of accesses was to change, then traffic loadings at the accesses would also change and with resultant effects on queues and delays.

In the response to the Request for Further Information, Abley provided details of queue lengths at the signalised Lincoln Rolleston Road / Levi Road intersection. This showed that even with three traffic lanes on each approach, an average queue of 43m would arise on Levi Road with a maximum queue length of around 120m. As such, even under the model presented, the maximum westbound queue would reach the supermarket access. We recognise that this arises without the supermarket in place, and that the changes associated with the supermarket appear to be modest, but it suggests that the results will be very sensitive to changes in the layout (such as reducing the number of traffic lanes on certain approaches, as noted above).

We highlight that we sought information regarding the queue lengths for all modelling shown in the ITA, but the response to the Request for Further Information only provided information about queuing at the Lincoln Rolleston Road / Levi Road intersection. We cannot therefore comment on whether the extent of queuing in the auxiliary right-turn bays for traffic turning into Beaumont Drive and the supermarket main access will compromise the function of Levi Road.

In the response to the Request for Further Information, Abley noted that they had not explicitly modelled any pedestrian or cyclist crossing phrases at the Lincoln Rolleston Road / Levi Road intersection. In the event that these are implemented, it is likely that either additional land will be required to allow pedestrians to cross each approach in two stages, or additional delays will be introduced for traffic.

Section 7.8: Vehicle Tracking

In addition to the swept paths provided in the ITA, we sought additional clarification as to how delivery vehicles could safely over-run the centreline of the road at the southeastern corner of the site. Abley confirmed that there will be “restricted access” in this location, which we anticipate as meaning that there will be no members of the public in this area. We are therefore comfortable with the arrangement, but we stress that if the public is not expected to be present, this roadway could not be extended any further eastwards in future.

Section 7.9: Consideration of Changes in Planning Environment

We agree that the extent of car parking provided will be appropriate (as discussed above) and that if Plan Change 71 is approved, then it will mean that a greater number of people are able to access the supermarket on foot or by cycle. However, part of Plan Change 71 shows roading links towards the eastern boundary of the supermarket, and it appears that these could not easily be formed without connecting to the service lane, or by extending the southern east-west route further eastwards (and as noted above, this cannot occur without eliminating the mitigation for larger vehicles crossing the centreline that Abley has relied upon)

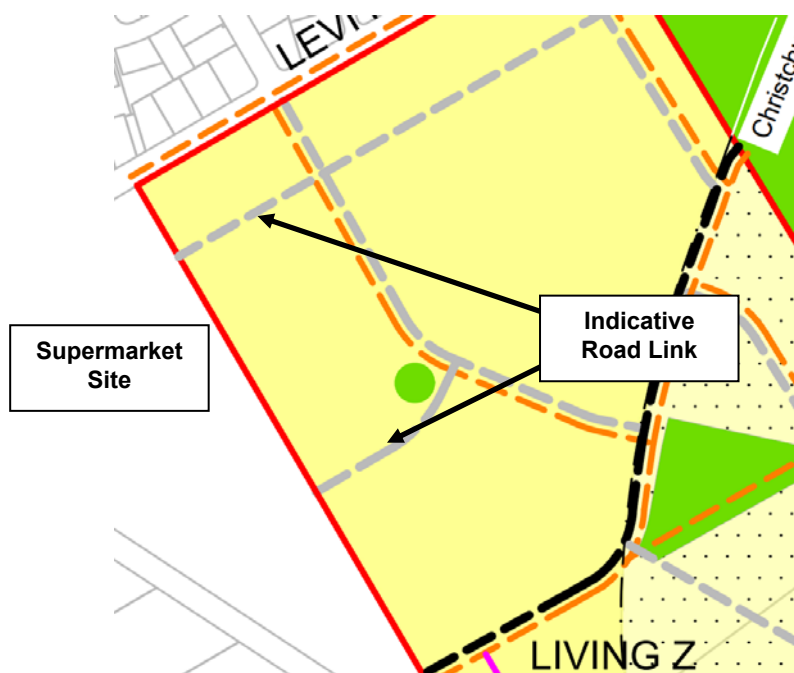


Figure 1: Extract from Plan Change 71 Updated Outline Development Plan

ITA Section 8: Assessment of District Plan Non-Compliances

As noted above, we consider that there are additional non-compliances with the District Plan that have not been addressed thus far.

Section 8.1: Rule 5.2.1.2

Although this Rule specifies that connections are only expected to roads that have the lowest classification in the roading hierarchy, for activities such as major traffic generators, we consider that there are advantages in locating them close to roads that are higher in the hierarchy subject to vehicle crossings being appropriately assessed and designed. Accordingly, we are able to support the non-compliance with this Rule in this case.

Section 8.2: Rule 5.2.1.4

In respect of the number of vehicles expected to be generated by the site, it is evidently more than the threshold of 100 movements anticipated in this Rule. The ITA has been prepared in order to fully address the effects of the additional traffic, and although we have a number of concerns with the detail of this (outline above), we consider that approach taken is appropriate. At this stage though, because of the matters set out previously, we do not consider that all relevant matters have been addressed to assess this non-compliance.

Section 8.3: Rule E13.2.4.2

This Rule limits the number of vehicle crossings to the site. In this regard, we have previously queried the need for the northwestern 'exit only' vehicle crossing (Access C), as it would largely appear to relocate the left-out traffic lane at the main access onto Levi Road. In our view, at this stage, it does not appear that this vehicle crossing is necessary. Moreover, it creates an additional point of conflict with pedestrians and cyclists, and it appears that at peak times, it will not be possible to move out of this exit and into the right-turn lane at the Lincoln Rolleston Road / Levi Road intersection (noting that this appears to be the movement that increases the most, as shown on Table 7.2 of the ITA). We are also concerned that in practice it will be difficult to limit

this vehicle crossing to 'left-out' only, and that right-turn movements or even entry movements may also arise.

We agree that there is benefit in separating the movement of delivery vehicles from customers, and therefore agree in principle with two points of access onto each frontage road. However, the northeastern vehicle crossing (Access E) is not only expected to accommodate heavy vehicles but also customer vehicles turning left-in only. It is not clear how this will be enforced, and we note that the car park access adjacent to this appears to suggest all turning movements are expected.

Section 8.4: Rule E13.2.4.5

This Rule relates to limiting the width of vehicle crossings, and the ITA notes that all vehicle crossings exceed the expected maximum of 7m. Correctly, Abley identifies that the critical matter relates to safety, although for the Levi Road frontage, both pedestrian and cyclist safety are relevant. One part of the mitigation related upon for the greater vehicle crossing width is the limitations on turning movements, but as noted above, we are doubtful how this will be achieved / enforced in practice. However, the general approach taken, of separating entry and exit movements and providing an area in-between for pedestrians to wait, is appropriate.

Section 8.5: Rule 10.8.1.3

See our comments under Rule 5.2.1.4.

Section 8.3: Rule 10.9.1.2

This Rule relates to the timing of vehicle movements. In our experience, the relevant matters are amenity rather than traffic-related per se, and we therefore have not addressed this further. However, we note that light-spill into various properties on the northern side of Levi Road may arise during hours of darkness.

Additional Information Provided

As indicated above, subsequent to the ITA, Abley has provided additional information relating to the proposal in response to a Request for Further Information. The information provided is generally addressed above, but there are several matters which we have set out below.

At a high level, there are a number of mitigation measures that are relied upon by Abley but there does not seem to be certainty that these would occur. Three examples of this include:

- The layout for the signalisation of the Lincoln Rolleston Road / Levi Road intersection that uses land within the proposed site, but where no indication is given that this will be provided.
- The shared route on the southern side of Levi Road deviates into the site, but there is no provision made as to how public access will be ensured
- There "may be" merit in providing pedestrian refuges on Rolleston Lincoln Road, but no specific provision is proposed for these.

It is also unclear what level of improvements are proposed to be made by the applicant in respect of upgrading the site frontages.

We consider that where a mitigation measure has been relied upon by Abley, there should be a condition of consent to ensure that the mitigation measure can be implemented with certainty.



This condition of consent will need to relate to the consent-holder, which means that mitigation that relies on third parties (for example, delivery drivers circulating through the site in a particular way) may be difficult to achieve.

However, within the available documentation, we have not been able to identify conditions of consent that underpin the mitigation relied upon by Abley.

Abley also provided a revised layout for the Levi Road frontage, showing more detail as to the provisions expected, including a shared walking/cycling route on the southern side, and road markings to create right-turn bays for traffic turning into Beaumont Drive and the main site access. In our view this is extremely helpful in showing how Levi Road would be upgraded (noting that Abley describes it as being *"the main corridor"* between Rolleston town centre and the Weedons interchange. No similar detail has been provided for the Lincoln Rolleston Road frontage however, meaning that it is not possible to consider how the functioning of this corridor may also be affected.

Conclusions

In the ITA, Abley concludes that the analysis shows that the proposed supermarket *"can be fully supported on transport grounds"*.

In our view, although the ITA provides a large amount of analysis, there are a number of assumptions made which we consider require further consideration. These include, but are not limited to, the performance of the Lincoln Rolleston Road / Levi Road intersection when signalised (taking into account whether the proposed layout can be achieved), reliance on mitigation which is not secured by way of conditions of consent, and how the vehicle crossings would operate in practice given that turning movements might not be limited.

Accordingly, at this time, we are unable to fully confirm the potential effects of the proposed development on the transportation networks.

Please do not hesitate to contact me if you require anything further or clarification of any issues.

Kind regards

Carriageway Consulting Limited

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