

Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Rob Lachlan Hay**

19 November 2019

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## Introduction

- 1 My name is Rob Lachlan Hay.
- 2 I am an Associate in the international acoustical consulting firm of Marshall Day Acoustics (**MDA**). I hold Bachelor and Master of Science degree from the University of Canterbury, majoring in Chemistry.
- 3 I have worked in the field of acoustics for over 15 years. I joined MDA in 2006, and I have been involved in many significant building and environmental acoustics projects throughout New Zealand. Of significance to the current application I have been involved in the design and consenting of several supermarkets including greenfield and brownfield sites, and extensions to existing supermarkets. I have also worked on numerous dwelling designs with a focus on protecting these against intrusive noise.
- 4 My role in Foodstuffs (South Island) Properties Limited's (**Foodstuffs**) application has been to provide acoustic advice. This has included liaising with other design disciplines and the client, review of calculations and reports and general supervision of the work conducted by MDA staff including the Acoustic Assessment to the Assessment of Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix H of the AEE.
- 5 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 6 In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) submissions relevant to my area of expertise;
  - (c) planning provisions relevant to my area of expertise; and
  - (d) section 42A report and in particular the memo prepared by Ms Isobel Stout attached at Appendix F of that report.
- 7 I have visited the Application Site on several occasions.

### **Code of Conduct for Expert Witnesses**

- 8 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence or work. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

### **Scope of Evidence**

- 9 I have prepared evidence in relation to noise generated arising from the construction and operation of a proposed PAK'nSAVE supermarket to be located at the Application Site. This includes:
- (a) the key findings of my assessment of effects;
  - (b) existing noise levels;
  - (c) matters raised by submitters to the Application; and
  - (d) matters raised in the Christchurch City Council's (**CCC**) staff report issued under s42A of the RMA.
- 10 I do not intend to extensively repeat content found in the MDA report prepared by my colleague Mr Gary Walton, except to summarise the relevant findings or clarify matters as appropriate. Instead I adopt the report as part of my evidence.

### **Summary of Findings**

- 11 I consider that potential adverse noise effects from the activity will be mitigated by the combination of the short duration of delivery vehicle noise arrival and departure, the use of noise control fences, enclosed loading bays and electric forklifts. I also consider that the existing high levels of traffic noise in the environment and the lower noise levels of the proposed activity will be similar in character. The existing environmental noise levels will therefore generate substantial and useful noise masking much of the time.
- 12 Overall, I expect that the levels of noise generated by the proposed activities will be acceptable in this context.
- 13 The existing noise environment is characterised and dominated by existing road traffic on Main North Road and Northcote Road that is significantly in excess of the relevant District Plan noise standards applying at neighbouring sites. This includes

a substantial number of heavy goods vehicles which form part of this existing environment.

- 14 Noise emissions from the proposed supermarket and related development will also be characterised by vehicle movements. Vehicle activity (customers and delivery/service etc) is predicted to generate levels of noise that exceed the relevant permitted activity Christchurch District Plan noise standards at some locations.
- 15 The highest noise levels at adjacent residential receivers north of the Lydia St ROW will be due to heavy delivery vehicles with noise levels exceeding the daytime noise standards during deliveries. Where deliveries occur at night, the night-time noise standards will also be exceeded.
- 16 Public/customer use of the Lydia St ROW may also marginally exceed the daytime noise standards during the peak hour (between 5 and 6pm).
- 17 Noise emissions from sources such as building services plant will be minimal and their installation can be designed to comfortably achieve compliance with the permitted activity noise standards.

### **The Existing Noise Environment**

- 18 Traffic noise is the dominant and controlling feature of the existing noise environment in the area.
- 19 There are significant existing heavy vehicle movements in the area associated with the adjacent Papanui Distribution Centre at 2 Lydia St, currently operated by Toll Group. I understand that Toll heavy vehicles use the Lydia ROW to access their site. In addition, there is general network traffic on both Main North Road (~40,000vpd) and Northcote Road (~27,000vpd).
- 20 This high level of traffic means that the closest dwellings to the road will be subject to existing levels of road traffic noise up to 70 dB  $L_{Aeq}$  (24 hr). During the night-time, we expect that all adjacent dwellings will receive road traffic noise levels of between 50 and 55 dB  $L_{Aeq}$  (15 min), even during the quietest period of the night.

### **Assessment of Noise Effects**

- 21 The primary generator of noise effects related to this activity is vehicle noise, including noise generated from customer and staff cars and delivery and service vehicles.
- 22 The predicted noise levels in Table 3 of the MDA report (page 13) indicate that there is the potential for vehicle activity to generate levels of noise that exceed the District Plan noise standards, although not by more than 10 dB at any time. The



status of the activity with respect to noise is therefore restricted discretionary. The most significant difference to the permitted standard is where deliveries occur at night, in which case the predicted level is up to 10 dB above the night-time noise standards at some locations (during the daytime period the exceedance ranges from 1 dB to 6 dB above the noise standards).

- 23 In my opinion the potential for adverse noise effects is reduced by the already high level of traffic noise and other activity in the area, including at night.
- 24 Predicted noise levels from heavy vehicle activity associated with the application do not exceed 50 dB  $L_{Aeq}$  (15 min) at night. I note that such events will occur infrequently and that it is unlikely that a high number of heavy vehicle deliveries will take place during the quietest, most sensitive, periods of the night.
- 25 Outside of these night-time heavy vehicle delivery times, existing road traffic will provide a sufficient degree of masking noise of similar character and substantially greater noise level to mitigate any potential noise effects.
- 26 I note that a 2m high noise control fence between the Lydia Street ROW and the neighbouring properties to the north is proposed. The report has accounted for the benefit of both this fence and a restricted vehicle speed on the application site in predicting received noise levels.
- 27 Turning to mechanical plant noise, it is my opinion such noise will not generate any notable adverse noise effects. Even where some of this plant is required to run through the night, it will be appropriately designed using standard engineering noise control principles and methods to ensure that noise emissions comply with the relevant District Plan noise standard when considered alone; and when in combination with delivery vehicles noise do not result in any cumulative increase.
- 28 The report also considers noise arising from the unloading of delivery vehicles and service vehicles. To ensure adequate control of such noise, especially at night, an enclosed bulk store and primary delivery area has been proposed. To be effective, it will be necessary to ensure that the roller doors at either end remain closed other than as required for access.
- 29 In addition, I understand that electric, rather than diesel or LPG, forklifts will be used, thus further limiting any noise from this area.
- 30 Regarding the external gated service yard, I consider it appropriate to only undertake noisy activities here during the daytime. This includes the collection of waste, management of skips, pallet disposal, etc.
- 31 Much of the noise associated with these back-of-house activities is due to the operation of vehicles, which has been included in the predicted noise levels

discussed above. I do not expect that the routine use of these areas will generate high levels of noise at nearby receivers.

- 32 I am of the view that additional controls around the operation of the loading bay and service yard are best addressed through a noise management plan (**NMP**), rather than conditions of consent which are too inflexible to allow for adoption of future best practice, changed circumstances or unforeseen events. I note that the applicant has accepted a number of conditions relating to an NMP.

### **Matters Raised by Submitters**

- 33 I understand that 21 submissions were received, with one submission subsequently withdrawn. I have reviewed the six submissions opposed to the application, especially those that raised noise or a related matter, such as traffic movements, forklifts or speed bumps.
- 34 Of the six submissions opposed to the application, the Christchurch Citizens Collective and D Wagstaff opposed on the grounds of traffic lights and traffic congestion. No specific mention of noise was made, and I have not addressed these submissions further.
- 35 J Sinclair (172 Main North Road) expressed concern that the application would increase noise and that would reduce comfort and result in adverse health effects. D Beck (15 Northcote Road), S Steel (21B Northcote Road) and J Jones (153 Main North Road) also raised concerns about noise generated by the Application, although in more general terms (except as addressed below).
- 36 In addressing Mr Sinclair's specific concern (and the other listed submitters' more general concerns) I wish to highlight two points. Firstly, there are no cumulative noise effects arising from the proposed application that could result in health concerns, or indeed significant comfort (amenity) concerns.
- 37 Existing noise levels in the area are already quite elevated, and the additional noise arising from the Application will not increase this level, when assessed against the time base for averaging used by the World Health Organisation.
- 38 Secondly, even at night, and for those properties closest to the enclosed loading bay and receiving the highest predicted noise levels, the noise generated by the Applicant will not result in noise exceeding typically accepted guidance in bedrooms where windows are ajar for ventilation. As discussed below, Ms Stout (CCC) agrees with this assessment.
- 39 Mr Sinclair also asks that the Applicant make provision for sound insulation to affected neighbours' dwellings. I note that the District Plan already requires that any new or substantially altered dwelling adjacent to either road would already

have to meet a minimum standard of sound insulation in recognition of the existing noise environment. This does not apply to existing dwellings.

- 40 Given that noise generated by the proposed activities on the applicant's site would not trigger a requirement or recommendation to provide neighbours with sound insulation, I can see no justification for this request.
- 41 In other words, taking the existing environment into account, the application will not increase the likelihood of adverse amenity and health effects. Alternatively, even ignoring the existing noise environment, the proposed activity does not generate enough noise to cause such adverse amenity and health effects in and of itself.
- 42 Turning to some specific noise matters raised by submitters, D Beck requested that the north side of the Lydia St ROW be planted with a green belt. While this would not reduce the noise level, there is evidence to suggest that such planting has a positive outcome on people's perception of noise. If planting in this area is viable, I consider it useful on that basis, but this is not strictly a noise matter and may raise other issues of which I am not aware.
- 43 Ms Steel raised concern regarding the use of reversing beepers on forklifts unloading trucks. Although this activity should occur indoors, this is a valid concern, especially if such activity occurs at night. I recommend fitting forklifts with broadband reversing alarms, which have proven to be highly effective at reducing annoyance arising from these devices.
- 44 Ms Steel also mentions a speed bump (presumably on the Lydia St ROW). Provided that the traffic engineers are comfortable with removing traffic calming devices, I can see benefit in removing such obstructions from the road surface as they do cause noise and vibration. However, in the event that the traffic engineers are not comfortable with the removal, then I consider that the adverse effects of the speed bump would be minimal overall.

#### **Matters Raised by CCC Staff Report**

- 45 I have read the Officer's Report prepared by Mr Harris and the environmental noise memo attached to that report prepared by Ms Stout.
- 46 At paragraphs 112 and 113 Mr Harris notes Ms Stout's report and her recommendations and adopts these as his own. At paragraph 221 Mr Harris concludes that the application is consistent with the relevant policy framework around noise matters. I agree with Mr Harris on both these matters.
- 47 Turning to Ms Stout's memo (Appendix F, page 187 of the Officers Report), Ms Stout concludes that much of the time noise arising from the activity will be "...an

acceptable level at times when environmental conditions actually allow for it to be noticed." I agree.

- 48 Ms Stout has proposed some consent conditions related to noise, which Mr Harris has adopted. I turn to these below.

### **Proposed Consent Conditions**

- 49 Proposed consent condition 42 relates to the establishment of a noise control fence along the boundary between residential neighbours to the north of the site and the Lydia St ROW. I am supportive of this condition.
- 50 Proposed conditions 43 through 46 inclusive relate to the establishment, content, certification and review of a noise management plan (**NMP**). I am supportive of these conditions.
- 51 In order to address Ms Steel's concern regarding forklift reversing beepers, I propose that a consent condition be added requiring that forklifts be fitted with broad-band reversing alarms. Alternatively, this requirement could easily form part of the mitigations captured by the NMP.

### **Conclusion**

- 52 I have considered the level, character, timing and duration of noise predicted to arise from the establishment of a supermarket at the Application Site. Taking these matters into consideration, along with the existing noise environment, in my opinion no significant adverse noise effects will arise and the noise level generated will be acceptable.
- 53 The Application embodies appropriate noise mitigation measures and additional conditions of consent are proposed that provide a high level of security that noise effects will be in accordance with the noise assessment conducted by Marshall Day Acoustics.

**Rob Lachlan Hay**  
**19 November 2019**

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**Statement of Evidence of Roger John Davidson for Foodstuffs (South Island) Properties Limited**

19 November 2019

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## Introduction

- 1 My name is Roger John Davidson.
- 2 I am the General Manager of Property and Retail Development for Foodstuffs South Island Limited. I confirm that I am authorised to give evidence on behalf of the Applicant, Foodstuffs (South Island) Properties Limited (**Foodstuffs**) which is wholly owned by the parent company Foodstuffs South Island.
- 3 I have been employed by Foodstuffs South Island in my current role since 2003. My role extends from the purchase of land through to the full suite of management responsibilities for completed property projects.
- 4 Prior to this I was employed as the Retail Support Manager, where my sole responsibility was ensuring that our retail outlets were meeting the constantly changing demands of the modern consumer. I have significant experience in the supermarket industry, particularly in the South Island.
- 5 Foodstuffs South Island is a retail owned co-operative. The members operate supermarkets and grocery stores trading under the Foodstuffs owned brands: PAK'nSAVE, New World, Four Square, Raeward Fresh, Pams Pantry, and On the Spot. Foodstuffs also own a variety of properties throughout the South Island from which many of its retail members undertake their businesses.
- 6 Foodstuffs stores account for a significant share of the domestic retail market for fresh produce, meat, seafood, and milk. We have objectives to support local growers, reduce food poverty by supplying healthy and affordable food, and support New Zealand's transition to a low carbon economy.
- 7 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 8 In my evidence I address the background to the Application Site and the proposed relocation of the PAK'nSAVE store currently at Northlands Mall. Ms Parish outlines supermarket requirements in her evidence and provides further detail on the unique character of the proposed use of the PAK'nSAVE building, existing Head Office and the surrounding sites in times of an emergency.

## The Application Site

- 9 Foodstuffs South Island's Head Office is located at 165 Main North Road and was first established in 1969, and there has been administrative support in this

location in various forms for over 60 years along with associated warehousing and a wholesale cash and carry.

- 10 Foodstuffs purchased 171 Main North Road, Papanui (next to its Head Office) in 1997 and it has been used for various manufacturing and industrial activities. Prior to purchase by Foodstuffs, the Application Site was used for a manufacturing facility for Helene Curtis.
- 11 The Application Site currently contains several industrial and office buildings having a gross floor area of approximately 5,500m<sup>2</sup>. The existing industrial buildings and infrastructure are no longer fit for purpose. The Trents/Murdoch Manufacturing building, located centrally on the site, has remained primarily vacant since 2011 as a consequence of earthquake damage. Currently, the main building car park can only be used for limited storage as the building is too earthquake prone. Some budget softdrink manufacturing occurs in the back of one of the buildings, which is intended to be relocated to Foodstuffs Hornby Distribution site in the near future. Foodstuffs have no requirement for industrial activities in this location. Redeveloping the site for industrial activities is not considered viable, due to the high land value.
- 12 More recently, an opportunity arose for Foodstuffs to purchase the Commercial Local centre at the corner of Northcote Road and Main North Road (7, 7A and 7B Northcote Road). It comprised a vacant Harvest Market store, a vacant Mad Butchers shop, and an Oil Changers workshop. It is proposed that the vacant buildings be used during the construction phase for the Proposal as construction offices/site sheds. In the longer term, it is intended that the Commercial Local centre buildings will remain and be reinstated as retail activities.
- 13 The Head Office and Commercial Local centre properties have been included in the Application Site on the recommendation of consultants who saw an opportunity to create an improved environment with quality integration between adjoining uses.

#### **The proposed relocation of the PAK'nSAVE store at Northlands**

- 14 It is proposed to relocate an existing PAK'nSAVE store from Northlands Mall to a dedicated, stand-alone building on the Application Site. Foodstuffs has proposed to include a New World branded supermarket in the established Mall, therefore continuing to provide a supermarket offering at the shopping centre.
- 15 Northlands PAK'nSAVE currently operates from within the Kiwi Property Northlands Mall complex. The PAK'nSAVE is located to the rear of the existing established shopping centre. It shares its carpark with the mall retailers, and neighbours to Papanui High School and Christchurch City Council Graham Condon Aquatic Centre.

- 16 Operationally, Northlands PAK'nSAVE is frustrated by the limited parking to service the PAK'nSAVE which is insufficient for an operation of this size. Further, the current carpark configuration is often utilised by other retailers within the Mall and patrons of the Aquatic Centre for parking.
- 17 There is limited room for expansion within the Mall, both at the retail front of house end and also the back-of-house loading and service areas. Foodstuffs are frustrated further by the lack of engineering autonomy we have when operating within an older mall complex at the time of a natural disaster. During the Canterbury Earthquakes the PAK'nSAVE was unable to resume operations until the entire mall complex had Council and Engineering sign-off. This was an operational challenge and unacceptable when retailing essential food products to a community in need. The "stand-alone" style of operation is common now for PAK'nSAVE as we respond to customer demand for accessibility and convenience.
- 18 PAK'nSAVE stores tend to draw from wider geographical areas than full service New World supermarkets, as customers are prepared to travel a significant distance in order to take advantage of the reduced prices. Many Papanui PAK'nSAVE customers will undertake their shopping as they travel home after work and many customers will be destined to the north of the Application Site. There are five PAK'nSAVE stores within Christchurch, spread across the City in order to capture catchment via geography. Future sites must be commercially viable in their own right, but also not undermine the operating performance of other supermarkets.
- 19 There is a need for a PAK'nSAVE within this catchment which has been identified by Foodstuffs as a growth area. Foodstuffs considered several possible locations when reviewing site selection. However, because PAK'nSAVE is such a large store and has such strict operational requirements, the pool of feasible locations was small. The Application Site fulfils these strict operational requirements. It also sits adjacent to Foodstuffs South Island Head Office and will strengthen the future resilience of Foodstuffs business and the local community. This is addressed in the evidence of Ms Parish.

## **Conclusion**

- 20 There is a need to locate the existing PAK'nSAVE store at Northlands to a dedicated, stand-alone building. Foodstuffs have no requirement for industrial activities on the Application Site and redeveloping the site for industrial activities is not considered viable due to the high land value.
- 21 Foodstuffs have not chosen the Application Site lightly. It is located within a growth area and can cater for strict operational requirements of a PAK'nSAVE



supermarket, while also strengthening the future resilience of Foodstuffs' business and the local community.

- 22 Foodstuffs consider the Proposal on the Application Site will substantially improve the quality of the existing environment of which Foodstuffs have been part for over 60 years. We are excited to be part of that (should consent be granted).

**Roger John Davidson**

**19 November 2019**

Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Rebecca Jayne Parish for Foodstuffs (South Island) Properties Limited**

19 November 2019

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## Introduction

- 1 My name is Rebecca Jayne Parish. I am the Property Development Manager for Foodstuffs (South Island) Limited. I confirm that I am authorised to give evidence on behalf of the Applicant, Foodstuffs (South Island) Properties Limited (**Foodstuffs**).
- 2 I have approximately 23 years' experience as a resource management, project management, and project consenting specialist. I have been employed by Foodstuffs for 17 years. I have a Post-Graduate Diploma in Resource Studies, Bachelor of Resource Studies, Diploma in Business Management and a Diploma in Human Resource Management. I have completed the three year post-graduate Governance New Zealand Professional Development Programme and am a Chartered Secretary. I am also a Justice of the Peace for New Zealand.
- 3 I have extensive experience in the property investment, development and supermarket industry, particularly in the South Island. My role at Foodstuffs includes being responsible for all aspects of planning, consenting and land development matters for Foodstuffs South Island.
- 4 It is proposed to relocate an existing PAK'nSAVE store at Northlands to a dedicated, stand-alone building with ancillary offices and self-service fuel facility at 171 Main North Road, Papanui (the **Proposal**), and to establish carparking and access, and an Emergency Coordination Facility (the **Application**). My evidence addresses:
  - (a) the requirements of supermarkets that influence design, layout, and location;
  - (b) the trading characteristics of a discount supermarket;
  - (c) access and parking;
  - (d) energy efficiency;
  - (e) security initiatives;
  - (f) community emphasis; and
  - (g) co-location to surrounding schools.
- 5 I also discuss the unique proposed use of the PAK'nSAVE building, existing Foodstuffs South Island Head Office and the surrounding sites in times of an emergency.

## **Supermarket requirements**

- 6 Supermarkets provide an essential community service and open extended hours weekly for 362 days per year. Supermarket shopping patterns have changed significantly over the years and customers now shop on multiple occasions during the week and in a wider spread of hours across the day and week. The vast majority of supermarket customers necessarily travel by car and in most cases make single purpose trips to the supermarket. Supermarkets operate at very high customer and transaction levels which means they generate particularly high levels of traffic.
- 7 In addition, a supermarket building must contain secure loading facilities and have access suitable for large delivery vehicles. Good accessibility from the roading network and residential catchment is required, as are sufficient setbacks and buffers for amenity and acoustic purposes. These are all factors that influence the design, layout, and location of a supermarket.

## **Trading characteristics of a discount supermarket**

- 8 The PAK'nSAVE brand provides a more basic level of fit out than full service stores and carry a reduced range of product lines, albeit in larger quantities. Products are stored in warehouse-style racks above the aisles rather than separate storage areas, and customers pack their own groceries at the checkout. The trade-off for this reduced range of goods, fit out and staffing is considerably lower prices than those charged at full service supermarkets.
- 9 PAK'nSAVE supermarkets are geared to higher sales volumes than full service supermarkets. In addition, their trading areas function as part of the storage areas and the products are sold directly out of the cartons. For these reasons, PAK'nSAVE supermarkets typically require a larger space than full service supermarkets.
- 10 Supermarket shoppers are motivated to shop at a supermarket by various factors. The strongest of these tend to be price, range, and convenience. On different occasions, one or two of these factors can be more dominant than others. A customer may visit different supermarkets on different occasions depending on the circumstances.
- 11 Decisions as to which supermarket to visit can be a function of:
  - (a) whether the customer is seeking to undertake a small "top up" purchase or weekly/fortnightly "main order" shop;
  - (b) customer travel patterns at the time;
  - (c) the amount of time they have available; and

- (d) preferences between supermarkets with particular lines of goods and the trade-off between the price and range.
- 12 For example, a customer intending to carry out a weekly food and grocery shop may be prepared to compromise on range and convenience and travel some distance to save money on that purchase. This benefits PAK'nSAVE supermarkets. On other occasions, a customer wishing to purchase a lesser number or value of food and grocery items may compromise on price for the convenience, range, and experience of shopping at a full service supermarket like a New World.
- 13 To ensure operationally the PAK'nSAVE can cater for the tens of thousands of customers that frequent the site each week, the building location, site design and size must be fit-for-purpose.

### **Site location**

- 14 Typically, PAK'nSAVE customers are most likely to access the store via car. Very few customers are expected to access the store via walking. It is acknowledged that public transport is used by customers as an alternative mode of transport. For traffic efficiency reasons, Foodstuffs generally locate PAK'nSAVE stores on main roads, where there is convenient road access and to cater for "pass-by" traffic. To avoid conflicts between pedestrians and vehicles (including service vehicles), we seek to locate most of our PAK'nSAVE supermarkets in traffic orientated locations, rather than in pedestrian focused areas such as the core of many town centres or malls.
- 15 Foodstuffs' experience is that supermarket customers are very sensitive to differences in the convenience or inconvenience involved in using different competing supermarkets. While customers may have preferences with respect to supermarkets (they may prefer the range of goods on offer at one store or the amenity within the supermarket), the reality is that a customer will be able to purchase an acceptable basket of goods at any full service or discount supermarket.
- 16 As a consequence, issues of convenience (represented by matters such as: the convenience of the location relative to the customer's travel route or home location; the ease of entering or leaving the store by car; the availability of suitably sized and located shopping baskets; and the extent to which the supermarket checkouts are adequately manned or generate delay) can easily overwhelm any of those preferences.
- 17 It is therefore essential to Foodstuffs that it minimise or avoid any aspects of design or location that would impinge on the convenience of the customer experience.

## Site design

- 18 Supermarket operations are complex in design. They need to be both practical and functional while achieving quality amenity outcomes. Designs must ensure customer convenience, delivery safety, site placement, convenient and safe car parking, and security. Internal treatments include back of house screening and protection of perishable goods from the sun. Architectural and sustainability merit is important to Foodstuffs and we are proud of the awards we have received for our supermarket designs in recent years. Foodstuffs also recognises the critical role that food distribution stores have in a post-disaster recovery phase for communities, and the business strategy seeks to ensure new stores are designed and constructed with resilience for natural disaster events.
- 19 Delivery vehicles will be frequenting the internal and external delivery sides of the PAK'nSAVE. Ambient and chilled and frozen goods will be delivered through the internal delivery dock which will remain secure and separate from customers while butcher products will be delivered externally to the rear of the building within the separately contained rear loading area. Separation of the public areas from the service delivery vehicles is essential to meet health and safety legislation requirements, for good operational ethical practice on site and to ensure customers are clear where their areas of public access are demarcated on site.
- 20 PAK'nSAVE staff are equally an important design consideration. Staff vehicle parking, and cycle parking form part of the site design. Internal within the building are lockers spaces, separate toilet facilities and a well-designed staff room. When staff leave the premises at the end of their shift, the site will be well lit and meet CPTED<sup>1</sup> principles in terms of safety and design. Staff carparks are not marked for safety reasons. This is consistent across Foodstuffs supermarkets within the city.
- 21 The fuel facility operates as an un-manned fuel operation selling petrol and diesel only. Payment is made by customers via machine, and the incentive to utilise the fuel site is determined by the loyalty discount offered through the PAK'n SAVE. As almost all fuel facility customers are incentivised to purchase fuel with the discount they do not purchase fuel until after they have shopped in store, purchasing fuel as they exit the site. Consequently, for the site to function well it is important that the fuel facility is positioned near a controlled and prominent exit point on site. In addition, heavily fuel vehicles need to access the fuel facility for refuelling of the tanks and there needs to be practical and clear queuing space areas for the fuel facility customers within the PAK'nSAVE car park. The proposed fuel facility location has considered these operational requirements.

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<sup>1</sup> Crime Prevention Through Environmental Design

- 22 Foodstuffs recognises that there are competing priorities when designing the most optimal site configuration. At the heart of all Foodstuffs designs is the customer response to the level of investment that has occurred. In other words, Foodstuffs seeks to ensure that this proposal maximises the best site and building design possible to ensure the best customer experience for people who frequent the site.

### **Supermarket size**

- 23 The PAK'nSAVE is the product of intensive refinement of a tested commercial model. As the PAK'nSAVE aims to meet all customer needs in one place, the interior layout provides clear direction for the customer – this limits queues within the store, and limits frustration to customers.
- 24 As the grocery industry is very competitive, the viability of any store needs to be carefully considered at the outset. Store layout and size are key to store turnover, as are car parking configurations and ease of entering and exiting the Site. There is a fine balance within the supermarket industry of getting the ratios right.
- 25 If Foodstuffs is not able to configure the supermarket in the best possible way to ensure customer satisfaction and general efficiency, the store is likely to underperform, and both the business and customer will suffer.
- 26 The size of the supermarket is dependent on various factors including type of store, catchment size, shape of site, and relationship between retail trading areas and back of house operations.
- 27 If the store is too small, it is likely to either not be popular because it is not large enough to cater for a variety of brands; or it will overtrade for the size of the store. The consequences of overtrading are that there are hold-ups and logistical issues with staffing, restocking and storage. In addition, overtrading can result in difficulties for customers in finding available car parking space with the potential for flow-on effects on the adjacent roading network. In the longer term, this is not good for Foodstuffs' brand image and ultimately results in a drop-off of customer service. Overtrading will eventually get to a point where customers become frustrated by the negative effects attributed to overtrading, which ultimately compromises customer needs. Customers will then look for alternatives.
- 28 The size of the Papanui PAK'nSAVE is designed to optimise the site and to fit best within the surrounding residential environment and catchment. Any larger and we will run the risk of having too large a store, or/and holding excessive stock for customers. Any smaller and we run the risk of not only overtrading, but also having a disproportionately large back of house area and too small a retail area which makes the store unviable and inefficient. To put the Papanui PAK'nSAVE

in context, it equates similarly to Rangiora PAK'nSAVE which is a good example of a regional supermarket operating successfully in a mixed use area on a corner site with access to a strategic road network.

### **Access and parking**

- 29 Due to the high private vehicle usage of supermarket customers, access and car parking arrangements are designed to allow customers to get in and out of the supermarket as quickly and safely as possible. The most efficient and safe way of doing this is by providing at grade parking at the front of the supermarket. Customer safety and security is also an important consideration with a large amount of supermarket shopping occurring outside daylight hours. Customers require well-lit car parks and close and easy access to and from their vehicle to the store entry/exit. If car parking is positioned behind or remote from the building, safety issues can arise as the carpark is not visible from the street or integrated with the front-of-house supermarket activity.
- 30 Foodstuffs have a practice of separating the goods service delivery access from its customer access points. This separation provides a safer environment by preventing any conflict between delivery vehicles and customer vehicles, and promotes a more attractive supermarket frontage that is not "cluttered" with service vehicles or fork-lift moving stock (the back-of-house operations). This separation of service vehicles and customer vehicles is a key operational and customer safety requirement when designing our stores.
- 31 Our neighbours are our customers. Delivery access to the supermarket is designed in such a manner to ensure deliveries are quick, convenient and safe. Foodstuffs design their supermarkets to ensure that goods can be unloaded as quickly as possible without adversely affecting neighbours or customers. Delivery trucks will be unloaded in approximately 15 minutes and will enter the site from Lydia Street. Night-shift staff will arrive outside of peak parking demand, and be encouraged to use the non-allocated parking spaces closer to the building as these are not required for customers from 11pm until 7am.
- 32 As logistics continue to advance, truck deliveries are becoming more efficient. With the exception of the bread deliveries all other truck movements will be confined to a daily delivery schedule, as well as smaller more specialised rigid trucks, such as the milk supplier. All heavy vehicle deliveries would occur outside the hours of 3pm and 6pm and typically deliveries will comprise a mixture of heavy truck and trailers, semi-truck and trailers, medium trucks, light trucks and vans. Fuel tanker deliveries would only occur outside the proposed supermarket operation hours (7am-11pm).



## **Energy efficiency**

- 33 Foodstuffs takes energy efficiency very seriously. PAK'nSAVE has been designed to use natural daylight and ventilation, passive designed LED lighting and exclusive CO2 Refrigeration. The building has been designed to create efficient air flow movement and includes superior insulation. The management and conservation of water is included in the design through rainwater collection and rain water gardens within the car park area.
- 34 Electric car charging stations would be provided on-site to encourage electric car usage. The environmentally friendly design of the carpark will provide an opportunity to show the public what Foodstuffs is doing to help improve both the aquatic and terrestrial environment within our city. Placards will be incorporated into the landscape design to illustrate how rain gardens and grass swales work to improve water quality, while providing valuable habitat for wildlife.

## **Security initiatives**

- 35 Foodstuffs propose a number of security and crime prevention strategies for Papanui PAK'nSAVE. Foodstuffs will install high definition megapixel CCTV cameras to provide complete surveillance coverage of car parks and external entry and exit access points. These cameras are mounted externally and operate and record 24 hours a day in both day and night conditions. Camera signage will be erected within the car park advising of the presence of security cameras. Where residential housing borders store boundaries we ensure that our cameras do not invade the privacy of residents.
- 36 Foodstuffs do not believe that there are any entrapment stops within the designed car park, including in the area proposed for staff carparking. However, in the unlikely event that this should arise, Foodstuffs will provide specific CCTV coverage and additional protection to reduce any risk as well as the internal management of staff carparking (as noted earlier in my evidence at paragraph 28). Past peak trading hours, and later at night, staff will be encouraged to park closer to the supermarket building. Safety of the staff, customers and neighbourhood is important to Foodstuffs. Balanced with this, the car park will have security lights installed to comply with the appropriate standards for car park areas.
- 37 Foodstuffs' CCTV strategy is to reduce risk in our stores through the installation of a visual and extensive CCTV system which protects all entry and exit points, all cash collection and sales points, any blind spots, and trading and operational areas. We also install electronic article surveillance anti-theft systems and have integrated our CCTV with our eftpos transaction data for early fraud identification. Whilst these are internal risk prevention steps, coupled with store design

concepts, we believe they minimise the potential for undesirables to be regularly drawn into our stores to commit crimes.

- 38 Foodstuffs deploy sophisticated and reliable intruder alarm and access control systems that are an effective deterrent to prevent burglary and other crimes being committed on the premises. This system will be integrated with Foodstuffs' extensive internal CCTV system. The alarm will be monitored remotely with backup systems.
- 39 Foodstuffs have designed the store to include ram raid burglary prevention through the placement of pole barrier gates preventing after hours vehicle access. Foodstuffs' security objective is to eliminate risk, minimise other risks, and promptly identify and action risk causing events and incidents. Lighting will be provided within the carpark and along the Lydia Street entrance at night in order to discourage loitering. The basement carpark and Lydia Street access will also be gated. The company adopts a proactive approach to such matters as a normal part of running a good business.

### **Community**

- 40 The Papanui PAK'nSAVE supermarket will behave as a fundamental service for the community. It will complement the existing residential neighbourhood by providing essential food services without the need to travel by car. Customers at times shop twice daily, daily, or several times a week. It is important to our business that the store is accessible, welcoming and inviting. We have found that a PAK'nSAVE acts not just as a grocery store but also as something of a community hub and a meeting point for local people, particularly the elderly.
- 41 Foodstuffs carefully considered the placement of the PAK'nSAVE on the site and were mindful of the location of adjoining well-established residential homes. It is intended that the proposed development will be a better outcome for the neighbourhood in terms of residential amenity when compared with the existing environment, and also when compared with many other industrial or commercial uses. The appearance of the site is proposed to be enhanced through improved landscaping and a convenient high amenity car park area, a high level of maintenance and site management, a sophisticated architectural design and hard stand areas. Foodstuffs have also made amendments to its design and layout based on feedback received throughout this application process. This is detailed in the expert evidence.

### **Co-location to surrounding schools**

- 42 The proposed PAK'nSAVE is positioned in a location with two existing established schools in close proximity being St Bedes Boys High School and St Josephs Primary School. A third Catholic Integrated School, being Marian

College Girls High School on industrial land directly behind the PAK'nSAVE site, is proposed for future development and establishment. The three schools will form an integrated Catholic schooling hub in the northern part of Christchurch.

- 43 Foodstuffs are very mindful of the unique opportunities such close schooling operations have on the PAK'nSAVE operation and the movement of students throughout the neighbourhood. Supermarket and school operations work well together. Peak demand for school movements fall outside of peak supermarket demands. Additionally, there are close synergies between parents dropping students to school and then undertaking their grocery spend all inclusive within one vehicle trip. Part-time employment opportunities are also available for high school students which would flow through to future careers within the retail industry.

### **Emergency provisions**

- 44 It is essential that the PAK'nSAVE can operate at times of emergency in order to provide basic grocery needs in high volumes to the community. Christchurch residents on average have only some 3 days' worth of food provisions within their home pantries before they need to top up further on food supplies. Lack of fresh available potable water supplies are more likely to be less than this per household.
- 45 As experienced in the Canterbury earthquakes and the following Kaikoura earthquake, food distribution became a very sensitive human need. Deployment to Kaikoura New World from Foodstuffs Hornby Distribution Centre was administered between the New Zealand Army, Red Cross, Civil Defence and Foodstuffs. Helicopters were able to land in the site adjacent to the Kaikoura New World (this was a more simple exercise as the supermarket was a stand-alone entity not connected to a complex mall structure) and water and food items were able to be deployed quickly. Foodstuffs' distribution networks were also able to quickly respond with deliveries into the Kaikoura community once infrastructure was confirmed. Foodstuffs' response to the Kaikoura earthquake was a very real example of how valuable a supermarket operation was to the community in need and how Foodstuffs hold the knowledge base on how to distribute food within New Zealand most efficiently.
- 46 This proposal is a significant investment to Foodstuffs and does not come without a level of risk relating to resourcing, time commitment, most optimum use of the site and return on investment. The level in investment and commitment to the site has meant that Foodstuffs have turned their mind to designing a project that will withstand natural disasters and to accommodate and support civil and national defence emergencies. Natural disasters are predicted to continue to occur within

Canterbury and the South Island, with the likely Alpine Fault Earthquake anticipated within our lifetimes.

- 47 The proposed supermarket building will be designed to IL4<sup>2</sup> design requirements, with only a few buildings in Canterbury built to this standard, one of which is the Justice Precinct in the CBD. The Proposal has been designed to provide business continuity for the PAK'nSAVE and fuel facility for three days at the time of a power and service outage. This includes three water services as well as power. The site will include a generator, emergency well supply and pumping, tanking for sewer, water and stormwater and power supply services for the building and fuel facility to continue functioning. Critically, the site and buildings are independent (as opposed to being located within a mall or multiple ownership situation), which means Foodstuffs are not dependent on adjacent buildings, or primary store owners to validate building safety prior to opening.
- 48 At times of national disaster, the building has been designed to allow national and regional civil defence operations to integrate with PAK'nSAVE (and the existing Head Offices) to ensure that food needs can continue to serve and be distributed throughout Canterbury, especially Northern Canterbury. This includes using a strong distribution network, strong supplier engagement, emergency community water source, power for both fuel pumping and to continue the operation of the PAK'nSAVE operations. The PAK'nSAVE has large chiller and freezer spaces within the building able to store large amounts of bulk goods. Helicopters are able to land within the Foodstuffs Head Office site, or in adjacent open space areas. At times of severe emergency events this site may be one of the only operating food distribution services in Canterbury which we consider a very valuable asset to the Christchurch community.
- 49 Foodstuffs seek to provide a critical care life line providing service from Papanui PAK'nSAVE during the times of adversity. The Papanui PAK'nSAVE design provides this level of design and service. This is a unique situation where the potential of the Proposal is realised due to its co-location with Foodstuffs South Island Head Office. The Head Office provides strategic support to all South Island supermarkets which will ensure consistency with logistics, management and operations. It contains the offices for retail specialist staff, all the IT functions for over 60% of food distribution and retail sales in the South Island, and support provisions. It is supported by its own separate load-shedding generators to ensure a seamless operation of this essential service during times of disaster. In this regard, co-location is a strategic move to reduce the risk of logistical failure at the time of a natural disaster and increase the organisation's own resilience.

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<sup>2</sup> Importance Level 4

## **Conclusion**

- 50 This Proposal has been carefully considered. Supermarket operations are complex in design, needing to be both practical and functional while also achieving quality amenity outcomes. The Proposal is intended to improve the amenity of the Application Site and surrounding environment.
- 51 The building has also been designed to allow national and regional civil defence operations to integrate with PAK'nSAVE to ensure that food needs can continue to serve and be distributed throughout Canterbury, especially Northern Canterbury during times of national disaster. This unique situation can only be realised due to the co-location with Foodstuffs South Island Head Office and surrounding environment.

**Rebecca Jayne Parish**

**19 November 2019**

Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Fraser James Colegrave**

19 November 2019

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**anderson  
lloyd.**

## Introduction

- 1 My name is Fraser James Colegrave.
- 2 I hold a first-class honours degree in economics from the University of Auckland.
- 3 I am currently employed as the managing director of Insight Economics and have held that position since 2013. Prior to that, I was a founding director of another economics consultancy – Covec – for 12 years.
- 4 I have successfully led and completed over 450 consulting projects. My main fields of expertise are land-use and retail property development. I have worked extensively in these areas for dozens of the largest developers in New Zealand. In addition, I regularly advise Local and Central Government on a range of associated policy matters.
- 5 My role in relation to Foodstuffs (South Island) Properties Limited (**Foodstuffs**) application has been to provide advice in relation to the likely economic effects. I drafted the economics report to the Assessment of Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix G of the AEE.
- 6 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 7 In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) section 42A report, particularly appendix B, which contained a peer review of my economic assessment by Mr Tim Heath; and
  - (c) relevant sections of the Christchurch District Plan.
- 8 I have visited the application site several times over the last few years.

## Code of Conduct for Expert Witnesses

- 9 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my

evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

### **Scope of Evidence**

- 10 I have prepared evidence in relation to the likely economic effects of the Proposal. This includes:
- (a) the existing environment of the Application Site;
  - (b) the key findings of my assessment of effects; and
  - (c) matters raised in the Christchurch City Council's (**CCC**) staff report issued under s42A of the RMA, including the assessment of Mr Heath.

### **Executive Summary**

- 11 My evidence begins by identifying the location of the Application Site and briefly describing its receiving environment. Then, it explains the economic rationale for the Proposal, which includes that:
- (a) The Application Site has remained (mostly) vacant for more than 8 years, during which it has contributed almost nothing to local GDP, incomes and employment. The Proposal fixes this and finally enables this scarce urban land to be put to a higher and better use, while also making a positive economic contribution to local incomes and employment;
  - (b) The Proposal is a natural market response to ongoing increases in demand;
  - (c) The Application Site is an excellent fit with site and location criteria, which are particularly strict for supermarkets given their combination of large floorplates and high transaction volumes (which, in turn, creates a unique need for both high visibility and accessibility); and
  - (d) The Proposal helps to optimise the local network of PAK'nSAVE stores while also helping to plug a notable spatial gap in supermarket supply between Papanui and Northwood, where significant residential growth is planned.
- 12 Next, my evidence analyses the impacts of the Proposal on the city's supply of industrial land. It shows that the land's current valuation is out of reach for many prospective industrial uses, and that significant costs will also be required to clear the land and remediate it for future development. At the same time, there are 70 other similarly-sized and identically-zoned vacant land parcels that provide



cheaper alternatives. Consequently, the loss of the Application Site for industrial purposes will have no practical impacts on the city's industrial sectors.

- 13 For the sake of completeness, however, I also reconcile likely future industrial land demand with current supply (of 575 hectares). I show that this industrial land supply will be more than enough to cater for any plausible future demand scenario, which confirms that the loss of the Application Site will have no material impact.
- 14 Next, I consider likely impacts on the health, vitality, and strategic role of the city's centre network, particularly the nearby Papanui/Northlands District Centre. I first describe the economic rationale for enabling some supermarkets to locate out-of-centre and briefly review the impacts of an out-of-centre PAK'nSAVE store in Auckland. It was eventually consented after an 18-year legal battle over concerns about impacts on other centres, but it has had no discernible impact on them despite significant concerns to the contrary.
- 15 Notwithstanding the insights provided by that example, I then perform a retail distribution assessment for Papanui/Northlands. I show that this centre is one of the largest shopping areas in New Zealand, which serves a wide range of roles and functions. Moreover, according to recent data published by the Council, Papanui/Northlands performs highly on all criteria, particularly social amenity. As a result, it is well-placed to absorb any competitive effects of the proposal.
- 16 Coupled with predicted strong growth in retail demand, and because the Proposal will not have any effect on most of Papanui/Northland's core roles and functions, I conclude that the Proposal poses no risk of significant retail distribution effects.
- 17 Before responding to the Council staff report, I briefly comment on the likely effects of the Proposal on the adjacent local centre, which is performing poorly and hence not fulfilling its intended role and function. I show that the proposed new supermarket will generate about 30,000 visits per week and that, even if only a small proportion of those visitors also frequent the adjacent centre, it will significantly assist to restore its strategic role in the centres network. However, at the same time, it will not fundamentally alter the convenience role and function of the adjacent local centre.
- 18 Finally, I comment on economic issues addressed in the CCC staff report, including the peer review by Mr Tim Heath. I note that Mr Heath and I both agree that the proposal will have no adverse effects on either industrial land supply or the health, vitality, role or function of the city's centre network. As Mr Heath notes, the Proposal simply represents the relocation of an existing activity which, by definition, has limited scope to create adverse economic effects. I agree.

- 19 I also respond to concerns by the Council's planner, Mr Nathan Harris, and conclude that the site represents an efficient use of a site that as remained vacant for a prolonged period.
- 20 In summary, given the significant positive economic benefits of the Proposal – and noting the absence of any material adverse effects – I strongly support it on economic grounds.

### **Summary of the Existing Environment and the Proposed Development**

- 21 The Application Site is located at 159-171 Main North Road, and 3-7 Northcote Road, Papanui, Christchurch. It is bound by residences to the north, Main North Road to the east, St Joseph's School to the south, and warehousing to the west. The site itself is flat and square, but some of its buildings were badly damaged by the quakes. As a result, large parts of it have remained idle since 2011.
- 22 A significant proportion of the Application Site is zoned Industrial General under the operative Christchurch District Plan, which enables a wide range of non-residential uses to establish as of right. However, supermarkets are not a permitted activity, so resource consent is required.
- 23 At the time of writing, the Application Site housed the following activities:
- A commercial local centre comprising a vacant Harvest Market store, a vacant Mad Butchers shop, and an Oil Changers workshop;
  - Vacant and earthquake damaged Trents Wholesale and industrial manufacturing buildings of approximately 5,500m<sup>2</sup> GFA;
  - A bottling plant;
  - Foodstuffs South Island's head office; and
  - Carparking.
- 24 The proposed redevelopment of the Application Site seeks to:
- Establish, operate and maintain a supermarket and associated fuel facility, ancillary offices, car parking, access, signage and landscaping;
  - Provide an emergency coordination facility;
  - Alter the existing site access and relocate existing car parks for Foodstuffs' head office; and
  - Alter access arrangements for the retail and commercial tenancies located at 3-7 Northcote Road.

## **Economic Rationale for the Project**

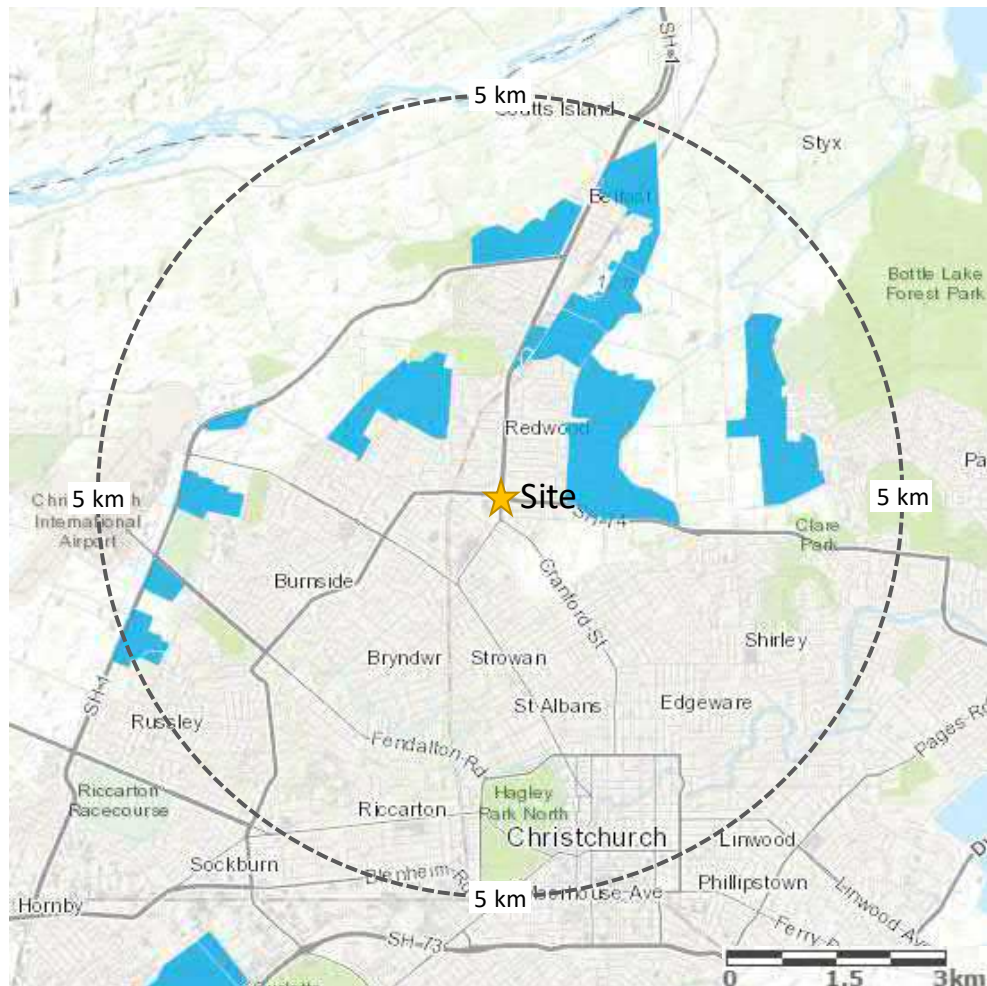
- 25 The economic rationale for the project is manifold, as briefly discussed below.
- 26 The first key driver of the project is that the Application Site has remained largely idle for more than eight years, during which it has made little contribution to local GDP, incomes, or employment.
- 27 As a 1.5-hectare site fronting an arterial road in New Zealand's second-largest city, and with a valuation of nearly \$3.8 million, the Application Site should be home to valuable and sustained economic activity. Accordingly, the prolonged lack of economic activity on the Application Site represents a significant opportunity cost to both its owner and the wider community.
- 28 While the Application Site enables a wide range of industrial uses as permitted activities, it is probably prohibitively expensive compared to the relatively abundant supply of cheaper industrial sites available elsewhere across the city.
- 29 For example, the site's registered valuation in 2016 was \$3.8 million. Given that it is now late 2019, I expect that it has appreciated and could now possibly exceed \$4 million. If so, its effective current market value translates to about \$250 per square metre, which is relatively expensive for many prospective industrial uses.
- 30 However, the site also requires significant work before it is ready for development, which will add considerable cost. For example, according to CoreLogic data, the site currently houses 5,570m<sup>2</sup> of quake-damaged buildings. The cost of clearing and disposing of this is likely to be very costly. In addition, the underlying land is likely to require significant remediation to make it ready for future development.
- 31 While I am not availed of detailed estimates for these costs, I would not be surprised if the full costs of demolition, removal, and remediation was several hundred thousand dollars. Coupled with the current valuation of approximately \$4 million, this inflates the total cost of acquiring and preparing the site at (say) circa \$4.5 million. Dividing that cost by the site's land area of just over 1.5 hectares returns an estimated overall land price of roughly \$300 per square metre, which is well out of reach for most possible industrial uses.
- 32 The Proposal seeks to fix this ongoing issue and finally put this scarce urban land to a higher and better use, while also making a positive economic contribution via the provision of ongoing incomes and employment for locals.
- 33 Not only does the Proposal put the land to a higher and better use than is currently enabled by its existing zoning, but it also reflects a natural market

response to ongoing increases in supermarket demand. To illustrate this point, I projected growth in food retailing (including supermarkets) for the Greater Christchurch to 2043 using my *Integrated Retail Model* to estimate the growth in supermarket floorspace arising.

- 34 In summary, my model predicts food retailing expenditure in greater Christchurch to increase from approximately \$2.3 billion in 2017 to almost \$3.7 billion in 2043. Assuming that supermarkets retain their current market share of total food retailing, which I consider likely, this ongoing growth in spending will require an additional 27 supermarkets to be developed over time, which is approximately one per annum. The Proposal acknowledges and responds to this market opportunity by seeking to provide ongoing increases in supermarket supply to keep pace with ongoing growth in demand.
- 35 Not only does the Proposal respond to significant ongoing growth in demand, but it also reflects the site's ability to satisfy exacting supermarket operational requirements of supermarkets, particularly for larger floorplate PAK'nSAVE stores (which are roughly double the size of other supermarkets, on average).
- 36 These exacting requirements, in turn, reflect the unique nature of supermarkets, which are not only the retail store that we visit most often, but also the only type of large format retail store that provide convenience retail shopping, rather than comparison shopping.
- 37 This combination of large floorplates and high transaction frequency means that supermarkets not only generate a lot of visits, but that those visits tend to be made by car. Consequently, supermarkets need a lot of dedicated, nearby, and at-grade parking to facilitate the safe and efficient movement of customers. In addition, they need enough space in and around the store to facilitate continual deliveries from suppliers.
- 38 Moreover, because supermarkets are visited so frequently, customers demand that they be easily accessible, otherwise they will seek to shop elsewhere. And, while the required level of accessibility can sometimes be achieved at in-centre locations, stand-alone stores often enable supermarkets to better meet the exacting needs of customers without impinging on the needs and rights of other stores and their customers.
- 39 Finally, because PAK'nSAVE is a low-cost supermarket, it tends to attract a higher proportion of "main order" shopping visits than Countdown or New World. These main-order shopping visits involve the predictable purchase of grocery items to keep the cupboards stocked with essentials and are almost invariably made by car given the larger-than-average basket size. This, in turn, makes adequate levels of parking even more important for PAK'nSAVE stores than any other type of supermarket.

- 40 The Application Site fits all these operational requirements, plus it provides an ideal location with excellent visibility and accessibility along Main North Road. In addition, it helps fill a notable spatial gap in supermarket supply between Papanui and Northwood (a 4.5km drive through an increasingly dense residential area), where there are currently no other stores.
- 41 At the same time, the Application Site is accessible to several key growth areas, which will collectively provide a growing pool of future customers to sustain the proposed new store. This is illustrated in the figure below, which confirms that the Application Site is within five kilometres of every priority growth area north of the CBD.

Figure 1: Priority Growth Areas Within 5 Kilometres of Site

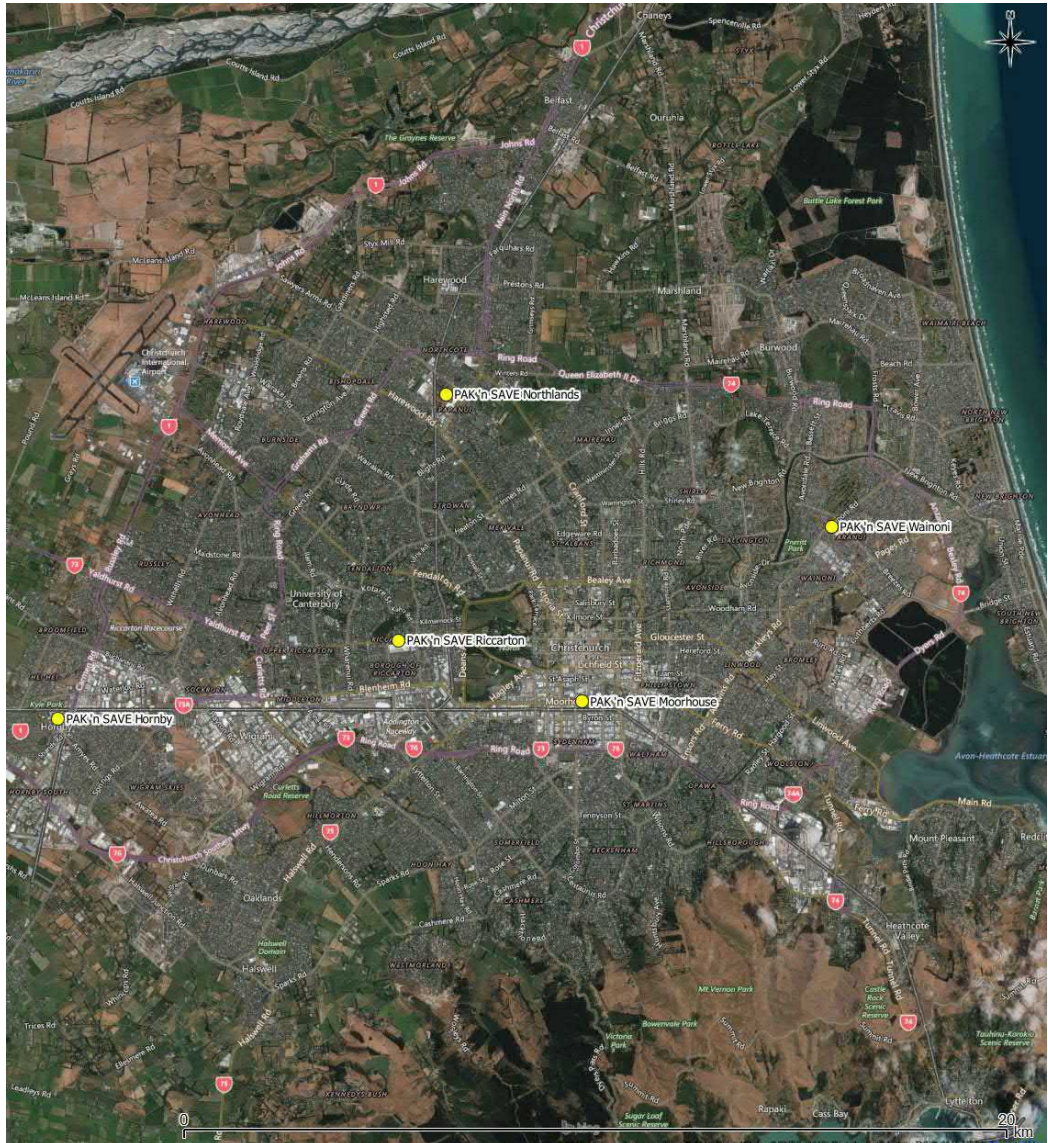


- 42 Finally, the proposed location helps to optimise Foodstuffs' network of PAK'nSAVE stores by avoiding excess cannibalisation of existing PAK'nSAVE store sales. This is illustrated in the map below (Figure 2), which shows that – once the store at Northlands Shopping Centre closes – there are no other PAK'nSAVE stores north of the CBD to serve the growing local population in that area.



43 This is a critical consideration, because opening another PAK'nSAVE store too close to an existing one would undermine the long run efficiency of both and lead to inferior economic outcomes. I understand that no other currently available, affordable land meets all of Foodstuff's site and location criteria, including the need to avoid overlaps with the catchments of other PAK'nSAVE stores, which underscores the core economic rationale for the Proposal.

Figure 2: Map of Existing PAK'nSAVE Stores in Christchurch City

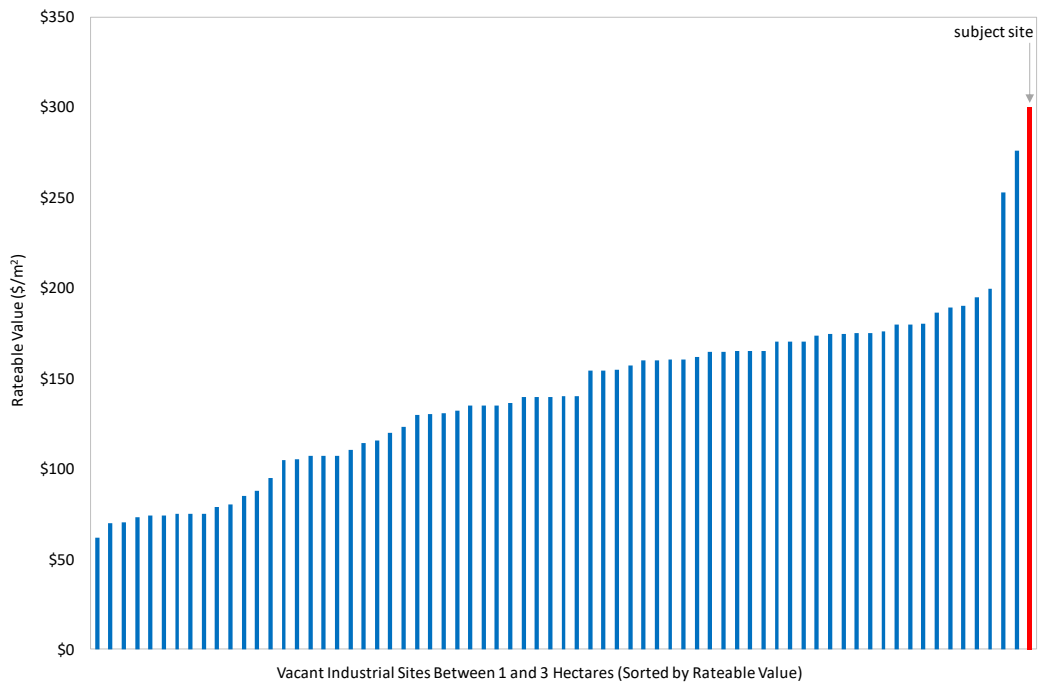


### Impacts on Industrial Land Supply

44 Because the Proposal seeks to occupy industrial-zoned land for non-industrial purposes, it raises the risk that it will have adverse effects on the city's industrial sectors and the underlying industrial land market. Accordingly, I now consider possible adverse effects of the Proposal on the city's industrial land supply.

- 45 To begin, I reiterate that – in my view – the site is likely to be poorly-suited to industrial uses due to its relative proximity to residential areas, which raises the risk of reverse sensitivity issues.
- 46 Moreover, as noted earlier, the significant costs of clearing and remediating the site, coupled with its relatively high valuation, is likely to further render it uneconomic for many industrial uses. To put this in context, I compared my estimated overall land cost for the Application Site with the current valuations of 70 currently vacant, industrial-zoned sites in the city that had between 1 and 3 hectares of land. These sites are considered close substitutes for the Application Site given their similar size and matching zoning.
- 47 As noted earlier, the Application Site’s current valuation is just under \$3.8 million, and a significant sum will also be required to clear and fully remediate the site for future development. For the purposes of this exercise, I assume that the overall cost of purchasing and preparing the site for development is \$4.5 million, which translates to a land cost of \$300 per square metre.
- 48 The following chart compares the Application Site’s implied land price to the current valuations of the 70 similarly-sized and identically-zoned, vacant land parcels in the city as at November 2019. The Application Site is shown as the red bar on the right.

Figure 3: Comparison of Application Site Value to Similar Vacant Sites in the City



- 49 Figure 3 shows that the estimated cost of clearing and acquiring the Application Site implies a land value that is higher than all other similarly-sized and identically-zoned vacant land parcels in the city. While I accept that the costs of

preparing the site may be less than I estimated, the site would still be more expensive than most, if not all, of the other sites in my sample even if those costs were notably lower.

- 50 Given the relatively high cost of this land, which I expect partly reflects its sought-after locational attributes, I consider it unviable for most prospective industrial uses (including trade suppliers, which are permitted activities). As a result, the loss of this land for traditional industrial purposes is unlikely to give rise to any material impacts on the city's industrial sectors, with plenty of cheaper options available across the city.
- 51 Notwithstanding the strength of this conclusion, I considered it important to take a step back and consider the ability of the city's industrial-zoned land supply to cope with likely future demand. In short, I used CoreLogic's Property Guru tool to extract information on every land parcel within the city's general industrial zones. Then, I filtered the data to include only vacant land. The results of this exercise showed that there is currently about 575 hectares of vacant industrial land across the city.
- 52 Next, I estimated the likely future demand for industrial land using the following basic process:
- (a) Identify projected increases in the city's working age population.
  - (b) Translate growth in working age population to growth in city employment.
  - (c) Estimate the share of additional city employment going to industrial sectors.
  - (d) Convert additional industrial employment to additional industrial floorspace.
  - (e) Convert extra industrial floorspace to additional demand for industrial land.
- 53 Table 1 shows the results of applying this process to three possible future scenarios – low, medium, and high.<sup>1</sup>

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<sup>1</sup> These scenarios differ slightly from those in our original assessment, as here I am focussing on industrial land supply and demand for Christchurch City only, rather than greater Christchurch.



Table 1: Projected Demand for Additional Industrial Zoned Land

Reference	Steps in the Analysis	Low	Medium	High
a	Projected growth in the working age population <sup>2</sup>	18,170	24,230	30,290
b	Future employment rate	65%	70%	75%
c	Share of extra employment in industrial activities <sup>3</sup>	30%	33%	35%
d = a * b * c	Projected future increase in industrial employment	3,540	5,600	7,950
e	Average industrial floorspace per employee <sup>4</sup>	100	100	100
f = d * e	Total additional industrial floorspace	354,000	560,000	795,000
g	Average floor area ratio for industrial uses <sup>5</sup>	0.3	0.3	0.3
h = f * g/10,000	<b>Additional demand for industrial land (ha)</b>	118	187	265

54 In summary, I project demand for an additional 118 to 265 hectares of industrial land to 2043, with a most-likely (medium) scenario of 187 hectares. By contrast, my analysis of currently vacant industrial zoned land revealed a possible future supply of 575 hectares, which is more than triple my medium estimate of demand, and more than double my high estimate.

55 Accordingly, not only is the Application Site poorly suited to industrial uses, but there is also a relative abundance of other industrial zoned land available to meet any possible future demand scenario. Moreover, the estimates of future industrial land supply described above excluded the Application Site anyway, as it was not deemed vacant in the CoreLogic data due to the presence of (quake-damaged) buildings.

56 As a result, I conclude that the Proposal will have no impact on the city's industrial sector, nor its underlying land market, either now or in the foreseeable future.

### Impacts on Centres - Introduction

57 As noted previously, the Application Site is mostly zoned as Industrial – General, with a small portion zoned as Commercial – Local. Further, as also noted above, while some commercial land uses are permitted activities in the Industrial General Zone (such as gymnasias, food and beverage outlets, trade suppliers, and second-hand goods stores) supermarkets are not. This raises the important issue of whether the Proposal might adversely affect the health, vitality, and strategic

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<sup>2</sup> The medium scenario equals the Stats NZ medium population projections, while the low scenario is 25% lower than the medium scenario, and the high is 25% higher.

<sup>3</sup> This fell between 2000 and 2009, but has since increased again to 33% because of the rebuild.

<sup>4</sup> This depends on the types of activity, but the value used is toward the upper end of the range.

<sup>5</sup> This is a conservative estimate, with actual values typically ranging between 0.3 and 0.5.

role and function of existing centres across the city due to its out-of-centre location.

58 I now address that issue below. For ease of exposition, I break the discussion down into several discrete chunks as follows:

- (a) A brief overview of the economic rationale for enabling supermarkets to locate out of centres;
- (b) A review of the impacts of one recent out-of-centre PAK'nSAVE store;
- (c) An analysis of the likely impacts of the Proposal on the city's centres; and
- (d) Summary and conclusion.

### **Economic Rationale for Enabling Supermarkets to Locate Out-of-Centre**

59 Earlier parts of this evidence noted that supermarkets have special attributes that distinguish them from other retail stores (including trade retailers). They include that supermarkets:

- (a) Are the most frequently visited retail stores, which are usually accessed by car due to the bulky and sometimes perishable nature of goods sold. In fact, detailed national electronic transaction data from 2014 showed that supermarkets processed more electronic transactions that year than all other retail store types combined.
- (b) Are constantly receiving new supplies, which generate ongoing streams of heavy vehicle movements that need significant land for circulation purposes; and
- (c) Sell largely homogeneous products, which mean that new stores must not locate too close to existing stores, otherwise they will be competing for the same customers. This is particularly true within a specific brand. For example, a new New World store will not locate too close to an existing New World store because they will cannibalise each other's sales.

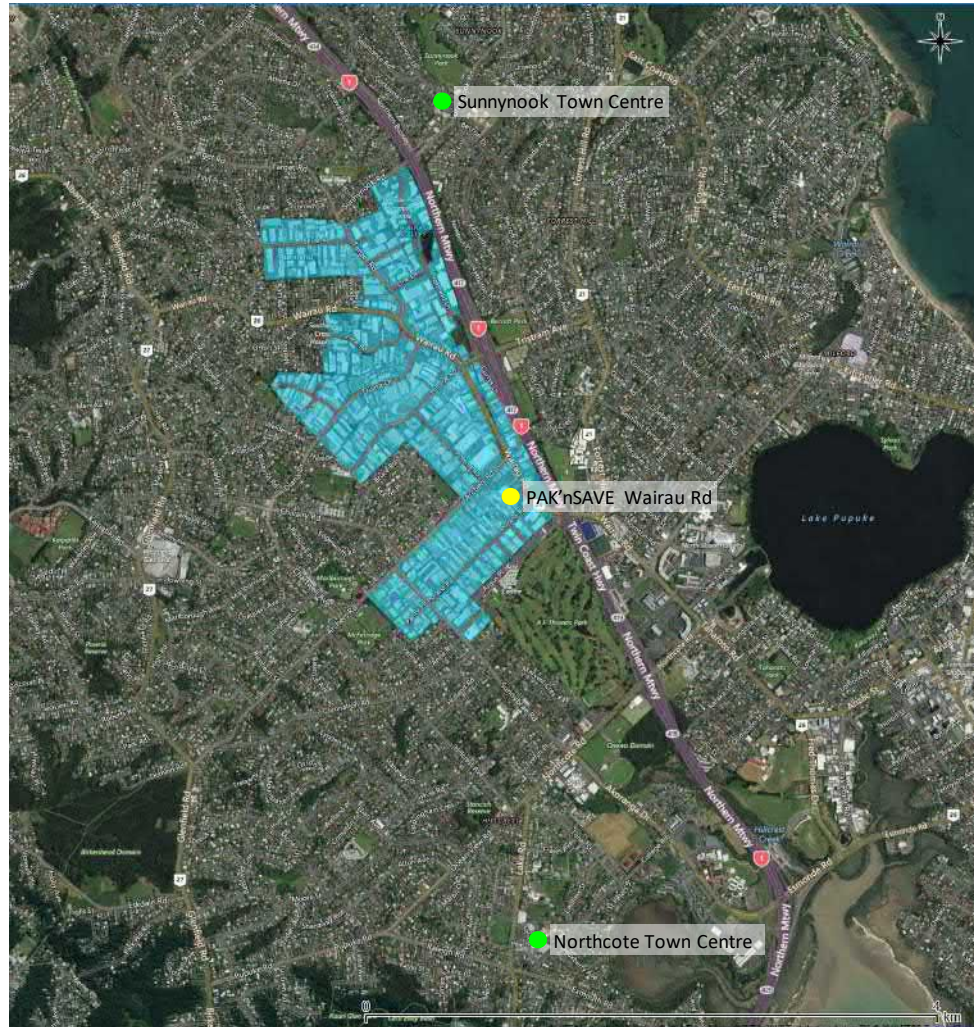
60 Together, these unique attributes mean that supermarkets have more exacting and specific site and location criteria than other types of retail store. At the same time, because many centres already have a supermarket, and noting that supermarkets often do not wish to locate too close to existing ones, the pool of potential in-centre locations is limited from the outset.

- 61 Thus, to accommodate the growth in supermarket floorspace supply required to keep pace with ongoing growth in demand, out-of-centre locations may be required.
- 62 For example, earlier I estimated that ongoing growth in food retailing demand would equate to the need for an additional 27 supermarkets across greater Christchurch. If half of these can find a suitable in-centre location, this still leaves about 13 or 14 supermarkets that may need to locate out-of-centre.
- 63 Accordingly, while I acknowledge that supermarkets can make valuable additions to the health and vitality of centres, the large number of additional supermarkets required over time – coupled with their very specific site and locational criteria – mean that a significant proportion will invariably need to be accommodated in out of centre locations.

### **Review of an Out-Of-Centre PAK'nSAVE Store**

- 64 To help examine the likely impacts of the Proposal on the health and vitality of the city's centres network, I reviewed the impacts of a relatively high-profile out-of-centre PAK'nSAVE store - PAK'nSAVE Wairau on Auckland's North Shore.
- 65 PAK'nSAVE Wairau was at the centre of a costly and protracted (18-year) legal battle between Foodstuffs and its main competitor (Woolworths), which operates the Countdown, SuperValue, and Fresh Choice brands in New Zealand.
- 66 The site itself falls within a large industrial area, known as the Wairau Valley, as indicated by the blue-shaded area in Figure 4 below. Also shown on the map are the two town centres that some perceived were at risk of significant adverse (retail distribution) effects because of the proposed PAK'nSAVE store.
- 67 In short, while Woolworths (and others) opposed the new PAK'nSAVE store on several grounds, one of the central planks of their case was that it would have significant adverse retail distribution effects on two nearby centres - the Sunnynook Town Centre and the Northcote Town Centre (i.e. the green dots in Figure 4).
- 68 However, the passage of time has shown those fears to be ill-founded. Indeed, despite the spirited case advanced by opponents, the PAK'nSAVE store has not had any material effect on the health or vitality of either centre. Rather, both continue to perform the same role and functions as they did prior to the new PAK'nSAVE store opening, despite strong concerns voiced to the contrary.

Figure 4: Location of PAK'nSAVE Wairau in an Industrial Zoned Area



69 While this example is not exhaustive, I consider it illustrative of the likely impacts of the Proposal on surrounding centres. However, for completeness, I now perform a retail distribution assessment of the Proposal.

#### **Retail Distribution Assessment**

70 Following are the steps in my retail distribution assessment:

- (a) Define retail distribution effects;
- (b) Identify at-risk centres;
- (c) Profile their current role, function, health, and vitality;
- (d) Assess the likelihood of retail distribution effects; and
- (e) Reach overall conclusions

### *Definition of Retail Distribution Effects*

- 71 Under the Resource Management Act 1991, decision makers must ignore the effects of trade competition when evaluating Proposals, and instead may consider only flow-on (retail distributional) effects. Such effects may arise if a new store or centre affects existing stores so badly that some of them close, causing the centres of which they formed a part of to also decline significantly overall.
- 72 A strong body of case law confirms that trade impacts must be very high to go beyond those ordinarily associated with trade competition, and that effects on individual stores are irrelevant.

### *Identification of At-Risk Centres*

- 73 Having defined retail distribution effects, I next identify the most at-risk centres. While the trade impacts of the Proposal will be spread across several stores and centres, I consider Papanui/Northlands to be the only centre that could possibly experience retail distribution effects because:
- (a) It is the closest centre that contains a supermarket.
  - (b) It is a District Centre - Key Activity Centre that sits near the top of the centres hierarchy, and
  - (c) The Proposal causes a reshuffle of its major tenants.
- 74 Conversely, while Cranford (Neighbourhood Centre) is very close, it does not contain any stores that will directly compete with the proposed new PAK'nSAVE. Similarly, while Bishopdale (Neighbourhood Centre) does contain a supermarket, it is twice as far away as Cranford and Papanui/Northlands, so any effects will be muted. Accordingly, the rest of my analysis focuses only on the potential adverse effects of the Proposal on Papanui/Northlands.

### *Current Role, Function, Health, and Vitality of Papanui/Northlands*

- 75 Papanui/Northlands is a District Centre that is also identified as a Key Activity Centre. It is located about one kilometre south of the Application Site. It effectively comprises two parts:
- (a) Northlands Shopping Centre, and
  - (b) A long ribbon of commercial activity extending south from Northlands.

- 76 Northlands Shopping Centre accounts for more than half of Papanui/Northlands' total GFA, and more than 80% of its retail GFA. It is the third-largest retail area in the city, and the 8<sup>th</sup> largest in NZ by retail area (according to the Property Council's 2016 Shopping Centre Database). Interestingly, Papanui/Northlands has more supermarket GFA than any other shopping centre in New Zealand, except Sylvia Park in Auckland (11,300m<sup>2</sup> vs 11,000m<sup>2</sup>).
- 77 To better understand the market pitch of Papanui/Northlands, I used the latest detailed employment data from Statistics New Zealand to identify its core retail mix. This is summarised in the table below.

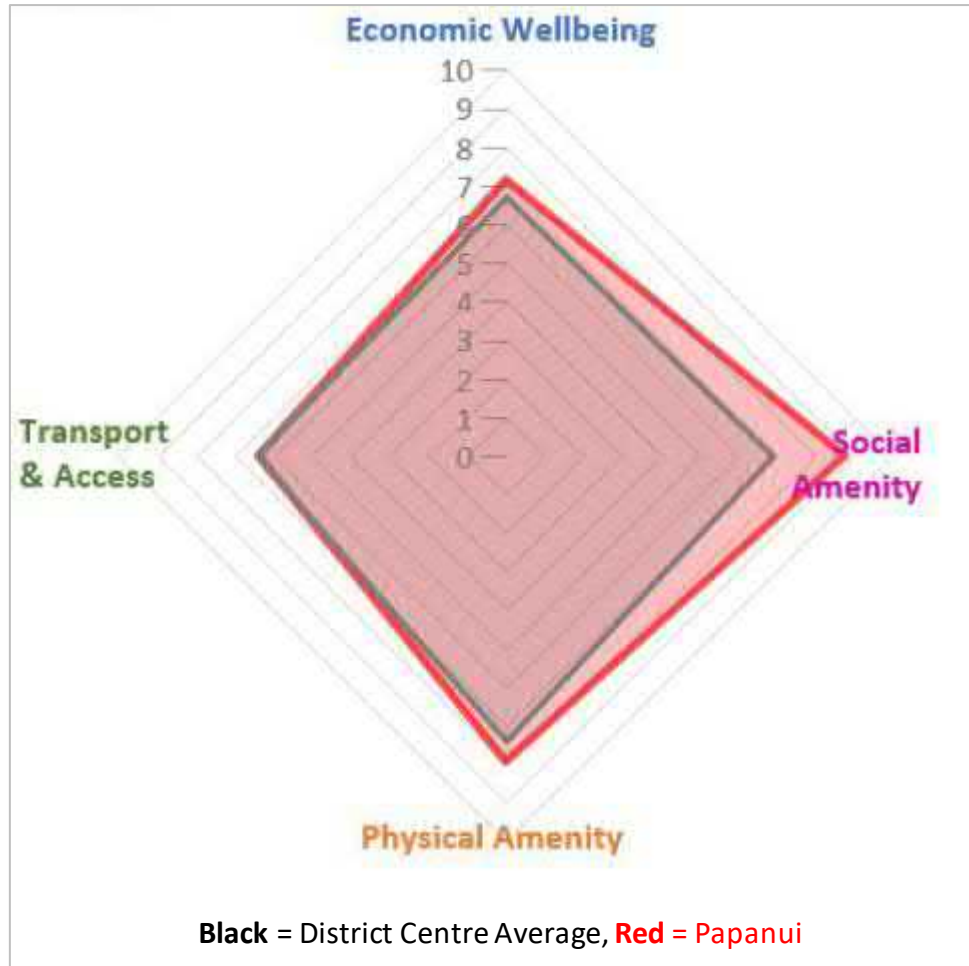
Table 2: Papanui/Northlands Retail Employment in 2017

Core Retail Store Types	Employees	Shares
Cafes, Restaurants and Takeaway Food Services	160	14%
Clothing, Footwear and Personal Accessories Retailing	250	23%
Department Stores	95	9%
Electrical and Electronic Goods Retailing	21	2%
Furniture, Floor Coverings, Houseware and Textile Goods Retailing	18	2%
Pharmaceutical and Other Store-Based Retailing	120	11%
Recreational Goods Retailing	45	4%
Specialised Food Retailing	35	3%
Supermarket and Grocery Stores	360	33%
<b>Totals</b>	<b>1,104</b>	<b>100%</b>

- 78 Table 2 shows that Papanui/Northlands has a diverse retail offer with significant employment in most categories. Perhaps most importantly, it has a strong offering in fashion, with clothing, footwear and accessories accounting for nearly a quarter of shopping centre retail employment. This is almost four times higher than the national average. At the same time, the shopping centre has a relatively weak offering in traditional bulk retailing categories like furniture and hardware, which confirms that its market pitch is oriented towards discretionary, fashion-led shopping visits. This is further cemented by the presence of cinemas and a foodcourt, which are often key components of such shopping visits.
- 79 To further understand the possible impacts of the Proposal on Papanui/Northlands, I searched for other information to gauge its health and vitality. This is important because, all other things being equal, the likelihood of retail distribution effects occurring depends on the health of at-risk centres, and hence their ability to withstand likely competitive effects.
- 80 Fortunately, Christchurch City Council (**CCC**) recently published factsheets for each of its major centres, including Papanui/Northlands. According to that information, Papanui/Northlands is a strong and diverse District Centre/ Key Activity Centre that performs well on most criteria. For example, the following

“spider chart” compares Papanui/Northlands’ performance (in red) to the average for all district centres (in black).

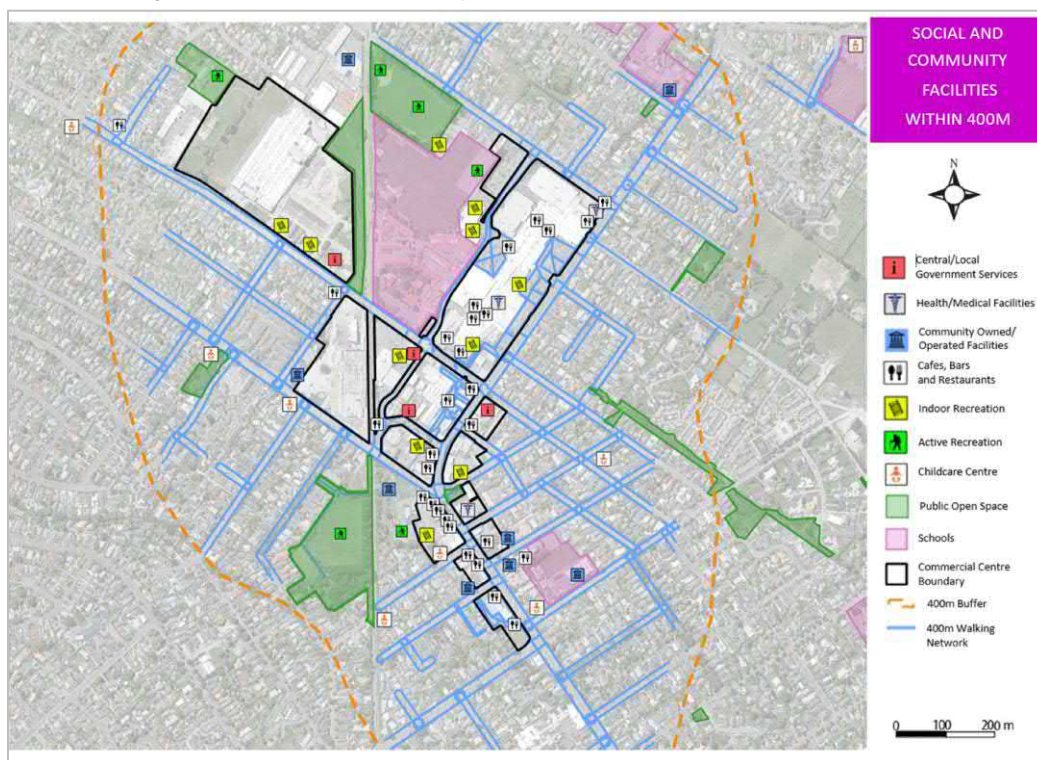
Figure 5: Comparison of Papanui/Northlands to District Centre Averages



81 Figure 5 shows that Papanui/Northlands performs better than the District Centre average on all attributes except transport and access, where it is equal. Perhaps most importantly, it shows that Papanui/Northlands plays an integral role in providing social amenity to the local community. This is further illustrated by the following excerpt from the same fact sheet, which identifies the various social and community facilities within 400 metres of the District Centre.



Figure 6: Social and Community Facilities Provided at Papanui/Northlands



- 82 In my view, the strong performance of Papanui/Northlands on all criteria, and its outstanding social amenity score, are likely to mean that it is healthy, vital, and well-placed to absorb any competitive effects of the Application. With that in mind, I now consider the likelihood of the Application causing retail distribution effects on Northlands Shopping Centre, and the rest of the Papanui/Northlands District Centre, separately and respectively.

#### *Impacts on Northlands*

- 83 Based on my experience, which includes providing advice on this Proposal since 2014, I do not expect Northlands Shopping Centre to experience any significant adverse effects from the Proposal because:
- It is a large and successful shopping centre with high footfall and no existing vacancies. Accordingly, it is resilient and more than able to absorb any competitive effects.
  - There will be limited competitive impacts on the shopping centre's own supermarkets anyway, with the newly established PAK'nSAVE competing mostly with other PAK'nSAVE stores across the city.
  - City supermarket expenditure is also predicted to grow steadily in future, so not only will trade impacts be minor, but they will also be short-lived.



- (d) The proposed supermarket will operate in a stand-alone manner and not be part of a wider retail development. As a result, it will not provide any direct competition for in-centre specialty retailers. Further, given the limited size and scope of the adjacent Commercial Local zone (itself identified by the District Plan as a Local Centre), there is little (if any) scope for cumulative adverse effects to arise in conjunction with the proposed supermarket development.
- (e) Moreover, people who previously shopped at specialty stores at Northlands before or after their supermarket visit will return to those centres even if they no longer frequent that centre's supermarket, because those retailers remain the best way to meet those specific retail needs.

#### *Impacts on the Rest of Papanui/Northlands District Centre*

- 84 Similarly, I do not consider the Proposal to have any meaningful impact on the rest of the Papanui/Northlands District Centre because:
- (a) It does not contain any stores that will compete directly with the Proposal, and
  - (b) The existing PAK'nSAVE at Northlands is unlikely to generate much cross-shopping for stores outside the shopping centre, so the loss of that anchor tenant will have little – if any – impact.
- 85 Accordingly, and based on the discussion above, I do not consider the Proposal to create any material risk of retail distribution effects. Nor do I consider the Proposal to challenge or undermine the strategic integrity of the city's centre network, nor the relative roles and functions of the various centres that comprise said network.

#### **Impacts on the Adjacent Local Centre**

- 86 In addition to considering potential adverse effects on other centres, for completeness I also briefly considered potential positive impacts on other centres. In my view, and notwithstanding possible benefits to the Northland's Shopping Centre of enabling a more cohesive anchor tenant to locate there, I consider the Proposal to potentially have positive impacts only on the adjacent local centre.
- 87 Currently, the adjacent local centre comprises a vacant Harvest Market store, a vacant Mad Butchers shop, and an Oil Changers workshop. Long term, I understand that these buildings will remain and be used for retail. However, in the meantime, the vacant nature of these tenancies strongly indicates that the centre is not fulfilling its intended role and function.

88 According to Policy 15.2.2.1, the District Plan seeks to “maintain and strengthen the Central City and commercial centres as the focal points for the community and business through intensification within centres that reflects their functions and catchment sizes.” Table 15.1E elaborates by defining the expected role and function of local centres as follows:

“Local centre - a small group of primarily convenience shops and, in some instances, community facilities. Accessible by walking, cycling from the area served and on a bus route in some instances. Also includes standalone supermarkets serving the surrounding residential community. Size is up to 3,000m<sup>2</sup>.”

89 Given that the adjacent local centre contains only one active tenancy that provides oil changing services (which seems more akin to an industrial activity than a commercial one), I consider it to not be fulfilling its intended role and function.

90 While the proposed development is next to, rather than part of, that local centre, I consider that it will play an important part in helping to restore it to its intended function and hence helping achieve the District Plan’s intentions for the centre network. This is because the proposed supermarket will generate a significant number of trips to the general location of the local centre, which will provide an opportunity for future stores there to capture some spend via cross-shopping opportunities.

91 To demonstrate the potential positive impacts of the proposed development on the local centre, I calculated the number of annual visits generated to the general vicinity. In my experience, stores like the proposed new PAK’nSAVE tend to generate annual turnover of approximately \$100 million with an average basket size of (say) about \$65. This equates to more than 1.5 million visits per annum or around 30,000 visits per week.

92 I acknowledge that most supermarket visitors will not visit the adjacent local centre before or after their supermarket shop, but some will. For the sake of illustration, if we assume that just 5% of supermarket shoppers frequent the local centre, they will generate nearly 1,500 transactions at the local centre each week. Hence, even with only a modest share of future supermarket visitors choosing to frequent the nearby local centre, they will create a strong pool of demand to help reinstate it to its intended role and function. In doing so, the Proposal will help to foster and support the strategic role and function of the city’s centres network and help give effect to the District Plan’s objectives and policies for commercial areas.

#### **Matters raised by CCC staff report**

93 I have read the relevant sections of the CCC staff report for this application and wish to make the following comments in response.

- 94 First, I wish to acknowledge that the Council's economic expert (Mr Heath) has agreed with the conclusions of my assessment, namely that the Application will not affect the city's industrial land supply, nor the health and vitality of its centres network.
- 95 Indeed, as noted by Mr Heath, the Application merely represents the relocation of an existing activity that is already "in the market", so there is limited scope for adverse effects to occur. I agree.
- 96 I also agree with Mr Heath's point that there is no scope for adverse effects to be experienced by the closest and most at-risk centre, Papanui/Northlands, because it is a large and successful District Centre/ Key Activity Centre with hundreds of successful tenants. As a result, the departure of one store will have no notable impact. In fact, as Mr Heath notes, the departure of PAK'nSAVE from Papanui/Northlands creates a coveted opportunity for another anchor tenant – with a more similar customer market – to establish there. Thus, overall, the Proposal may strengthen Papanui/Northlands' place in the market, not weaken it.
- 97 I also acknowledge and agree with Mr Heath's assessment that the Application will not affect other centres, including the Central City or the Belfast Northwood District Centre/ Key Activity Centre. Moreover, I agree with Mr Heath's statement that the proposed store would be unlikely to work optimally in a more suburban area and that a main road location like the Application Site is a better fit.
- 98 I also agree with Mr Heath's assessment that it would be difficult finding a suitably large in-centre site that meets all the Applicant's site and location criteria.
- 99 Finally, I acknowledge and agree with Mr Heath's economic analysis of the Application against the various objectives and policies as set out in his report.
- 100 Regardless of Mr Heath's findings, I note that the Council's planner (Mr Harris) seems to be concerned that the Proposal will nonetheless create an adverse precedent. As an economist, and based in my experience, I do not share that concern.
- 101 I also note Mr Harris' apparent concern about the size of the resulting built form (coupled with Foodstuff's existing head offices and the adjacent local centre), which places it within the range of a neighbourhood centre. In my opinion, the Proposal simply enables an out-of-centre convenience facility (i.e. the supermarket) to operate near to an existing commercial area. It does not result in the creation of a neighbourhood centre, because it will have very limited roles and functions compared to those expected of a neighbourhood centre.
- 102 Indeed, while the size of the built form enabled by the Proposal may meet one criterion for a neighbourhood centre, I do not believe that the Proposal meets

many – if any – of the other criteria. This is reinforced by the expert assessments by Mr Heath and myself, that this Proposal will not result in adverse effects such that the role, function, vitality or growth potential of any centres will be undermined.

103 In my view, the Proposal represents an efficient and effective use of a site that has remained idle for an extended period, and whose location and other natural attributes appear to defy its underlying zoning. As stated by Mr Heath, the loss of the Application Site would not result in any meaningful adverse implications on industrial land supply and capacity in the city.

104 Accordingly, I consider the Proposal to have very little risk of creating an undesirable precedent for commercial activity to occur *en masse* outside the centres network.

### **Conclusion**

105 This evidence has considered the likely positive and negative economic impacts of the Proposal and found that it represents an efficient use of scarce urban land that has remained vacant for several years. Coupled with the lack of any material adverse effects, I strongly support the Proposal on economic grounds.

**Fraser James Colegrave**

**19 November 2019**

Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Mark James Taylor**

19 November 2019

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**anderson  
lloyd.**

## Introduction

- 1 My name is Mark James Taylor.
- 2 I am an ecological consultant in respect to aquatic values. I hold the qualification of a Bachelor of Science (Zoology) from the University of Canterbury.
- 3 I am currently the managing director of my own company, Aquatic Ecology Limited (**AEL**) and have held that position since 2001. My previous work experience includes 34 years' experience in ecological impact assessment. I worked for nine years with MAF Fish (Ministry of Agriculture and Fisheries), and eight years with NIWA (the National Institute of Water and Atmospheric Research). Over my long career, I have prepared numerous ecological reports, science papers, and prepared evidence for consent hearings throughout New Zealand. I am a member of the Limnological Society of New Zealand (now NZSFS), and was a member of the Styx River Living Laboratory Board of Management for 10 years (2002-2012). I have prepared a number of ecological reports on the Styx River catchment, when I worked for MAF Fisheries, NIWA, and under AEL.
- 4 It is proposed to establish and operate a PAK'n SAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 5 My role in relation to Foodstuffs (South Island) Properties Limited's (**Foodstuffs**) application has been to provide an ecological assessment of the effects of piping Lydia Street Drain.
- 6 After consultation with Ms Belinda Margetts at the Christchurch City Council (CCC), I also agreed to:
  - (a) assess the baseflow contribution from Lydia Street Drain in respect of habitat values downstream of Main North Road; and
  - (b) consider how site stormwater design and treatment could maximise protection of instream values in the receiving environment of Lydia Street Drain and further downstream receiving waters – Kruse's Drain and the Styx River.
- 7 I prepared the Ecological Assessment Report to the Assessment of Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix Q of the AEE.
- 8 In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) section 42A report;

(c) the statement of evidence of Keegan Brogden(Civil Engineer); and

(d) Stormwater Design Drawings by Keegan Brogden.

9 I have personally visited the Application Site and downstream habitats on two occasions (17/9/18 and 22/9/18), with an AEL flow gauging crew visiting on 18/9/18.

### **Code of Conduct for Expert Witnesses**

10 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

### **Scope of Evidence**

11 The Application proposes to culvert a length of waterway, Lydia Street Drain, for an approximate distance of 225m. I have prepared evidence in relation to the ecology of this waterway and the potential baseflow reduction impacts on downstream aquatic values in Kruse's Drain. This includes:

(a) the Proposal;

(b) the existing environment of the Application Site, including the existing drainage network;

(c) key findings of my assessment of effects;

(d) proposed mitigation, including stormwater design and treatment;

(e) matters raised in the CCC staff report issued under s42A of the RMA; and

(f) conditions of consent.

### **Summary of evidence**

12 I consider that:

(a) any impacts of the Application, including the implementation of some piping, will have less than minor adverse impact on the aquatic ecology and instream habitat of Lydia Street Drain and downstream waterways;

(b) there is so much toxic, shallow groundwater in the vicinity of Lydia Street Drain that the recommended approach is to protect values downstream, and this supports the proposed piping as a better ecological outcome in this situation;

- (c) the proposed mitigation measures, including stormwater treatment design and ecologically sensitive landscaping, is the appropriate response for aquatic ecology at the Application Site;
- (d) given the present total absence of stormwater treatment for the current area, and the clear indication of groundwater pollutants entering the waterway, I consider that the receiving waterway health will only improve with the benefits provided by this Application.

### **The Proposal**

- 13 The Application proposes to pipe Lydia Street Drain to provide the required vehicle access width, connectivity and safe pedestrian access along the existing Right of Way Access to Lydia Street. Lydia Street Drain is proposed to be piped, using a 525mm or 750mm diameter pipe, from Main North Road upstream for 225m. The remainder of the existing 305m box drain that runs through the Application Site is to be retained as open timber boxed drain.
- 14 The Application originally sought to pipe the full length of the Lydia Street Drain (305m). However, at the request of the CCC further design work was undertaken.
- 15 There are a number of culverts downstream of the development area which would significantly compromise access for sea-migrant fish. These include the 90 m culvert directly downstream under the Northcote Road/Queen Elizabeth II Drive intersection, the culvert under Grimseys Road and through private property in Redwood ( approx. 204m) and, immediately downstream, the Kruse's Drain will be culverted under the new northern bypass highway east of Redwood (approx. 65m).
- 16 An alternative design was proposed in October 2018, which reduced the extent of piping to 65m, with approx. 240m remaining as a boxed drain and a boardwalk placed over the top to provide safe pedestrian access along the path of the open drain. I viewed this as positive from an ecological perspective. In December 2018, the Council as asset owner confirmed that they would not accept a boardwalk option due to insufficient access for maintenance pursuant to the Water Supply, Wastewater and Stormwater Bylaw.
- 17 The design was further refined to retain an 80m length of the existing boxed drain and pipe the remaining 225m length, instead of the original 305m. This revised design is an appropriate response for this site and is assessed in my evidence below.

### **The existing environment**

- 18 In September 2018, AEL undertook an evaluation of the ecological values of the waterway which borders the Application Site to the north, known as Lydia Street Drain. Lydia Street Drain is a tributary of the Kruse's Drain Network. It rises from groundwater approximately 360m west of Lydia Street (in the vicinity of 77 Northcote Road), from which it flows eastward for 770m to Main North Road. The drain is subject to direct untreated stormwater inputs from residential



and commercial land at Lydia Street and Northcote Road (including the Head Office which is part of the Application Site).

- 19 Lydia Street Drain is culverted under the Main North Road/Northcote Road intersection, where it joins the northward piped flow of Kruse's Drain. Flowing then eastwards, Kruse's Drain flows through the grounds of St Bede's College where most of its length has been converted from boxing to a naturalised waterway. Downstream of St Bede's College the channel reverts back to a boxed drain to Grimseys Road, and then it is culverted again until it opens up on undeveloped pastureland. The drain flows through pastureland as an open channel with battered banks to the confluence with Horners Drain.
- 20 In the Christchurch District Plan (CDP), Lydia Street Drain drains Residential Suburban Zone land to the north (towards Northcote Road), whereas to the south, the Application Site is Industrial General Zone. Lydia Street Drain is classified as a "network waterway" and Kruse's Drain through St Bede's College is categorised as an "environmental asset waterway" (Appendix 6.11.5 Water Body Classifications and Interpretation, CDP).
- 21 I assessed the following:
  - (a) the baseflow of Lydia Street Drain was very low and ungaugable. It did appear to gain slightly along the Application Site boundary flowing east. But this gain was visually in the order of about 250 mL/s.
  - (b) the surface water in the channel was too shallow to fish, even with an electric fishing machine, and being only a few centimetres deep, had virtually no vascular aquatic plants (some duckweed was present on one of the visits). Some short reaches had no surface water, with the baseflow passing through the bed. It is quite possible that the channel dries completely when groundwater is low.
  - (c) hydrocarbon leachate was observed in the channel by me in May 2018, and my colleagues in the following month near the stormwater pipe rising from Lydia Street. Lydia Street Drain also currently receives direct untreated stormwater from hardstand areas from the Site, but there were no films associated with these piped inputs.
- 22 Currently, the area of the Application Site is composed of approximately 25% pervious (gardens, lawns, and gravel borders), and 75% impervious (27% in old roofing material and the remaining 48% is mostly car parking and truck loading). None of the existing stormwater runoff is treated before discharge into Lydia Street Drain or Kruse's Drain, nor is stormwater from the surrounding catchment.
- 23 Instream ecological values in urban environments are routinely reported as being compromised by stormwater contaminants within their catchments, with water quality, and ecological values decreasing as the proportion of impervious area increases. This is especially so with very high levels of impervious area, as in this case.

24 While sampling ecological values was not possible due to the extreme shallowness, I consider aquatic values in Lydia Street Drain to be quite poor for the following reasons:

- the conspicuous hydrocarbon pollution;
- the lack of mixing baseflow;
- significant impervious area; and
- poor fish and invertebrate colonisation routes due to a number of long culverts downstream, as described in para 14.

### **Assessment of effects**

25 Lydia Street Drain was found to have significant point-pollution sources outside of the Application Site, which has led to shallow-ground and surface water contamination along the reach proposed to be culverted, and consequently Kruse's Drain further downstream. Consequently, the proposed culverting of the baseflow through the contaminated reach would be beneficial to downstream ecology by preventing enduring contaminants in the soil from infusing into the baseflow.

26 The ecological benefit from isolating the culverted baseflow from contaminated land outweighs the reduction in baseflow along the reach when stormwater treatment is implemented. Leaving the upstream 80 m (i.e. the reach downstream of Lydia Street) un-piped will minimise baseflow loss to less than an estimated 0.25 L/s. This level of baseflow loss is considered to result in less than minor effects, especially in the context of the resilience of local aquatic fauna in Kruse's Drain to baseflow loss and taking into account that further downstream this loss is further ameliorated by natural surface water gain and habitat remediation.

27 Under Rule 6.6.7.1 (e) of the CDP, the Council can consider beneficial effects for the function of the water body (partial piping) where these beneficial effects are consistent with protecting the ecological health of the water body.

28 As noted previously, the CDP classifies Lydia Street Drain as a "network waterway", and Kruse's Drain, which is fed by Lydia Street Drain, as an "environmental asset waterway" downstream of Lydia Street Drain, but only through the naturalised reach through St Bede's College. Therefore, effects on the St Bede's College reach and other categorised waterways downstream (e.g. Styx River) can be considered in respect to alterations of Lydia Street Drain. This was done in the underlying AEL report.

29 Specifically, ecological data was obtained a short distance downstream, on the east side of Main North Road, at which point Lydia Street Drain is now joined to Kruse's Drain. Kruse's Drain ultimately flows into the wider Horners Drain and the final receiving water, the lower Styx River, upstream of Radcliffe Road. Therefore, my ecological assessment is conservative, based on higher ecological values than those of Lydia Street Drain.

- 30 Earlier ecological studies are also available from lower Kruse's Drain and Horners Drain. While both waterways are largely channelised, with compromised ecological values, there are well-developed plans to naturalise lower Horners and Kruse's Drains in the foreseeable future. I consider that a high level of stormwater treatment from the Applicant's land will reduce the risk that the ecological response from the naturalisation further downstream will be limited by poor stormwater quality.

### **Proposed Mitigation - Stormwater Design and Treatment**

- 31 The lack of any stormwater treatment of such a heavily trafficked sub-catchments provides an opportunity for significant environmental gains to be made if effective stormwater treatment is utilised.
- 32 From early on in this proposal, AEL worked with the Applicant's design team to get an appropriate stormwater and landscape response to the Application Site to ensure water quality within the downstream waterways (Kruse's Drain and ultimately, the Styx River) would be maintained and improved. The finalised stormwater treatment system, customised for treating toxic dissolved heavy metals and hydrocarbons effectively, will exceed the treatment performance of a typical proprietary filter system, and what is required by the Council's bylaws. The stormwater treatment system will maximise protection of instream values in the receiving environment of Lydia Street Drain, but in particular the downstream receiving waters; Kruse's Drain and the Styx River.
- 33 The best stormwater treatment systems for urban environments, including that recommended for this development, use media which facilitate the natural biodegradation of toxic dissolved metals and hydrocarbons (i.e. oils, greases, and low molecular weight compounds). These treatment systems, which include rain gardens and biological filtration systems are consistent with CDP Policy 8.2.3.4.
- 34 Toxic metals are shed from car-parking hardstand from tyre and brake wear (i.e. lead, zinc and copper). With the notable exception of copper cladding, stormwater runoff from modern roof and building claddings has usually low levels of toxic materials, and this volume can be used for stormwater attenuation.
- 35 For the Application, most (approximately 70%) of the runoff from the carpark, will be treated by several modern "Filterra®" stormwater treatment cells. These units are effective at removal of dissolved metals and hydrocarbons and are characterised by their small size in respect to the treated catchment area and a high flowrate of stormwater through the treatment media. The "Filterra®" units are bottom-sealed from ground infiltration. However, they require maintenance of the top mulch, which by all accounts is a simple exercise. Without maintenance of filter media, treatment of contaminants, especially metals, is reduced. Regular maintenance applies to all filtration stormwater treatments, both biological and cartridge-type.
- 36 Foodstuffs propose to treat the remaining 30% of the customer carpark and half of the northern access road by connecting infiltration rain gardens in the small green spaces in the north-

eastern corner of the development. It was originally proposed to utilise the north-east roundabout for a rain garden, however subsequent design changes have been required to allow for fuel tanker movements. I understand that there is enough stormwater treatment capacity in adjacent stormwater infiltration basins to accommodate the loss of stormwater volume in the roundabout (Refer to paragraph 50 of Mr Brogden's evidence).

- 37 Cartridge filters (of the type Stormwater 360 Stormfilter or Hynds Upflo) will be used to treat the forklift operation area to the west of the proposed supermarket area, only because it is not possible to direct this area into a biological filtration system. No treatment is possible for a small proportion (approximately 12 %) of the total catchment area. This is comprised of the western half of the access road to the north, and the down-ramp to the proposed supermarket basement. Stormwater runoff from the supermarket roof is considered clean, and will discharge to attenuation tanks alongside the building.
- 38 I have reviewed the evidence of Mr Keegan Brogden, and the stormwater treatment schemes upon which it is based. The proposed on-site stormwater treatment of existing hardstand areas will exceed the minimum treatment standards required, benefitting the ecological values further downstream (Kruse's Drain and Horners Drain) where historic contaminant levels of metals are high. The proposed bioretention and infiltration devices (swales, rain garden, Filterra®) will provide an effective stormwater treatment system for this catchment. I am satisfied that the proposed high-performance stormwater treatment system provides an appropriate stormwater treatment such that ecological impacts on the receiving waters are less than minor.
- 39 Moreover, given the present total absence of stormwater treatment for the current area, and the clear indication of groundwater pollutants entering the waterway, it is certain that the receiving waterway health will improve under this proposed treatment proposal.
- 40 Proposed ecological mitigation is not limited to stormwater. Existing shading trees will be retained, but native shrubs will be added to provide refuge and habitat for birds. Many aquatic invertebrates have ecological links to native bankside (i.e. riparian) vegetation. Accordingly, AEL worked with Landscape Architects (Rough and Milne), to arrive at a plant list which will benefit local biota, both terrestrial and aquatic. The CCC has since modified the plant list in respect to surrounding local landscape, but it is my understanding that the plantings will still be comprised of a significant native component.
- 41 Finally, the Applicant proposes interpretation signs to describe the aquatic and terrestrial life in the receiving waters, and explain how the stormwater treatment functions to clean the water running off the site.

#### **Matters raised by the CCC staff report**

- 42 Ms Harris in the Officers s42a Report (para 108, Conclusion with Respect to Urban Design and Visual Amenity) refers to the CCC ecologist's view that partial piping would not mitigate adverse effects of point-source pollution because the pollution "still has to go somewhere" (sourced from an email by Dr Burrell, CCC ecologist). I disagree with this position as hydrocarbons are more

effectively broken down and assimilated by bacteria and microorganisms within the soil, rather than entering an adjacent waterway where it is toxic to fish and invertebrates, especially when the mixing baseflow is near zero (attached Appendix I, Figures i & ii).

- 43 Indeed, the cultivation of microorganisms and bacteria in biological stormwater treatment devices used on this site forms the cornerstone of their effectiveness at treating hydrocarbons and other urban contaminants. I still consider that the advanced on-site treatment of stormwater, over and above what is required by the CDP, along with the prevention of hydrocarbon leachate entering the channel, will have significant flow-on ecological benefits for the receiving waters, and will mitigate the impacts of this development on the aquatic environment.
- 44 Piping runs contrary to the Council's current policy of 'daylighting' waterways, and one which I almost always advocate. However, in this particular situation, it is my opinion that isolating the baseflow from ground contaminants is the best solution. The proposed culvert would not compromise fish passage, as there is almost no significant aquatic habitat upstream of the Applicant's development, and the aquatic habitat lost by culverting is in a poor polluted state, and visually unappealing.
- 45 To offset natural habitat lost through piping, the Applicant has agreed to supply the native planting in slight excess of that specified by Dr. Burrell (para 109 of s42A report), with a planned area of approximately 1400 m<sup>2</sup>.
- 46 While differences in professional opinion remain concerning the ecological benefits of the partial piping, the Council agrees with the ecological benefits of riparian native planting along Lydia Drain. The Applicant has agreed to establish a native riparian strip to the Council specification (of approximately 1400 m<sup>2</sup>), and as a result the Council considers that the adverse ecological impact of the development will be minor (para 110). I acknowledge that Dr. Burrell and Ms Tredinnick (for CCC) have since recommended consent conditions for the retention of shading from existing trees within the waterway setback, some of which are exotic. The Applicant has accepted these conditions.

### **Conditions of consent**

- 47 I have read the Council's recommended Consent Conditions listed in Appendix U (CCC s42a report). Three conditions are recommended relating to waterway ecology (CCC memo prepared by Emily Tredinnick (Appendix I – Waterways Assessment)), and I would endorse these recommendations, but especially in respect to the importance of native plants in waterway setbacks.
- 48 I would also recommend that:
- (a) Stormwater treatment systems are fully maintained to the specifications outlined by the manufacturer. as regular maintenance of stormwater treatment devices is a key determinant on their performance;

- (b) Condition 38 of the Recommended Consent Conditions (Sec. 42a report) currently states that no water used to wash down machinery (e.g. concrete mixers) that is likely to contain concrete or fuel be disposed of on the root plant of any street tree. I consider that this condition should be extended to include the wash down water does not enter any channel (incl. stormwater channel) that connects to a waterway.

## **Conclusion**

- 49 I consider that any impacts of the Application, including the implementation of some piping, will have less than minor adverse impact on the aquatic ecology and instream habitat of Lydia Street Drain and downstream waterways. The proposed mitigation measures, including stormwater treatment design and ecologically sensitive landscaping, is the appropriate response for aquatic ecology at the Application Site. Over time, the Proposal, and its proposed mitigation, will benefit the health of receiving waterways.

**Mark James Taylor**

A handwritten signature in black ink, appearing to read 'M. Taylor', with a long horizontal flourish extending to the right.

**18 November 2019**



**Appendix I. Photographs of Lydia Drain.**



**Figure. i.** Hydrocarbon films in Lydia Drain, near Lydia Street (18/9/18).



**Figure. ii.** Pollution of ground adjacent to the reach of Lydia Drain (7/9/18).

Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Keegan Geoffrey Brogden**

19 November 2019

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**anderson  
lloyd.**



## Introduction

- 1 My name is Keegan Geoffrey Brogden.
- 2 My qualification is Bachelor of Engineering (BE) (Hons.) attained from University of Canterbury in 2006.
- 3 I am currently employed by Powell Fenwick as a Civil Engineer and have held that position since 2008.
- 4 My previous work experience includes siteworks and drainage design of numerous site developments of the scale of this project, including for Foodstuffs (South Island) Properties Limited's (**Foodstuffs**): Prestons New World, Queenstown PAK'nSAVE, and Wainoni PAK'nSAVE.
- 5 Foodstuffs proposes to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 6 My role has been to provide advice in relation to Civil Engineering Design. I drafted the Stormwater Design Memorandum to the Assessment of Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix R of the AEE and other information related to stormwater and siteworks which appear in Appendices L, S, U, and V of the AEE. In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) section 42A report;
  - (c) the statements of evidence of Mr Mark Taylor, Mr Niko Young and Mr Tony Milne; and
  - (d) Environment Canterbury's Listed Land Use Register Report and Geotechnical Review and Options Report for the Application Site.
- 7 I have visited the Application Site in September 2018, October 2018, and March 2019.

## Code of Conduct for Expert Witnesses

- 8 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this

evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

### **Scope of evidence**

- 9 I have prepared evidence in relation to Civil Engineering Design. This includes:
- (a) siteworks and drainage constraints;
  - (b) preliminary finished site levels;
  - (c) partial piping of Lydia Street Drain;
  - (d) proposed stormwater design and attenuation;
  - (e) stormwater treatment (in cooperation with Mr Taylor); and
  - (f) matters raised in the Christchurch City Council's (**CCC**) staff report issued under s42A of the RMA (**Section 42A Report**).

### **Summary**

- 10 The Application Site currently has no stormwater treatment or attenuation present. Following redevelopment, the overall Application Site stormwater discharge will be greatly improved for quality and marginally improved for flowrates.
- 11 The quality of stormwater first flush treatment proposed is greater than the minimum requirement. This is due to prioritising a bio retention treatment system which will provide greater performance for hydrocarbon and heavy metal retention than other systems.
- 12 The provision of stormwater attenuation required to match existing runoff for all rain events up to the 1:50 year 48 hour event will slightly reduce the flow rate from the Application Site into the CCC system for all rain events up to the design storm.
- 13 The proposed piping of Lydia Street Drain has a minimal impact on interception of base flows, provides the space required for site manoeuvring and Right of Way requirements, and removes a current smaller pipe constriction in the existing box drain where it leaves the site at Main North Road.

- 14 Proposed site levels will have no detrimental effect on the existing residential properties on Northcote Road, and may reduce the risk of flooding in the 1:200 year flood event.
- 15 Building wastewater and freshwater storage provisions are accommodated within the Application Site to allow the Proposal to continue to operate during an emergency.
- 16 The proposed civil engineering design for siteworks and drainage is supported by CCC. The Section 42A Report assesses that the effects will be “no more than minor” and “less than minor” for the civil elements of the Application.

#### **Siteworks and drainage – constraints**

- 17 Civil design for the Application Site required taking into account the following elements and constraints for siteworks and drainage:
  - (a) the site is a brownfield site with current buildings which will have to be removed;
  - (b) it is located in a Christchurch District Plan Flood Management Area (**FMA**) so the building finished floor levels are raised by about 800mm above existing ground levels to be above the 1:200 year flood level;
  - (c) surface levels surrounding the elevated floor also needed raising compared to existing levels to provide safe grades and surfaces for customers with shopping trolleys;
  - (d) despite the site levels requiring raising, existing secondary flow paths from the neighbouring residential sites were to be retained;
  - (e) new secondary flow paths for stormwater are required to protect all property;
  - (f) stormwater inundation of the proposed basement had to be considered;
  - (g) a high level of stormwater attenuation was required to maintain runoff flows from the site to no more than the present levels (up to the 1:50 year 48 hour design storm event);
  - (h) both the existing and proposed (Lydia Drain) stormwater pipework to Main North Road are 750mm diameter so have capacity for the proposed development, but are also located at shallow depth;
  - (i) the water table is relatively shallow, affecting the overall depth of basin type treatment systems;

- (j) piping of Lydia Street Drain had to be sized to suit the extended upstream catchment and include easements for future maintenance; and
  - (k) keep as much of Lydia Street Drain running through the site as a box drain;
- 18 The Application includes an Emergency Coordination Facility and the Proposal is required to continue to operate during an emergency. Civil design for the Application Site required taking into account the following elements and constraints:
- (a) wastewater and freshwater storage tanks, to be located in the basement, have been provisioned for three day emergency supply. Three 30,000L tanks located in the basement have been provided for each of these services;
  - (b) the water tanks will be connected to the CCC water supply and also the onsite well for when required in an emergency situation;
  - (c) three days provisional supply for these services provides an initial buffer until the well (for freshwater supply) and sucker truck (for sewerage removal) can be set up following an emergency; and
  - (d) the sewer tanks will only ever be in use if the CCC piped sewer system becomes unavailable. Sewerage from the building will in an emergency situation discharge into the tanks, to be later emptied by sucker truck.

#### **Preliminary site levels**

- 19 Appendix L of the AEE shows the preliminary site levels for the completed development. The building finished floor level (**FFL**) has been stipulated by CCC to be no lower than Reduced Level (**RL**) 19.49 relative to the Christchurch Drainage Datum. The proposed FFL is RL19.50.
- 20 Preliminary site levels are designed to provide Building Code compliant stepdowns (level differences between FFL and outside surfaces for cladding protection), level thresholds and grades that are also safe for customer trolleys while still providing surface drainage. Sumps and channels where required for surface runoff drainage are also located to minimise the impact on trolley manoeuvring for the PAK'nSAVE customers.
- 21 All stormwater surface water generated up to the 1:50 year flood event is designed to be managed and disposed from the site without impacting on the building or neighbouring sites. Surface water from rarer rain events (greater than 1:50) is designed to discharge directly to Main North Road and the right of way (**ROW**) to Lydia Street without detrimentally affecting neighbouring private properties.

- 22 The basement is protected from flooding up to the 1:200 year flood event with the top of the ramp to be minimum RL19.50. It will be equal to or higher than the building FFL.
- 23 Lydia Street Drain is an open boxed drain providing secondary flow paths from the rear of the existing residential sites on Northcote Road. Appendix V sketch C44A of the AEE considers the impact of the new finished ground levels within the Application Site and partial piping of Lydia Street Drain, and how this work might affect those existing secondary flow paths. Where the box drain is to remain unaltered, and in areas of the Application Site where only slight level raising is required, existing secondary flow paths are not affected. Most of these properties will not be affected by the proposed changes to the Application Site.
- 24 The residential sites most at risk of being impacted by the development are 9A, 11, and 11A Northcote Road, which are located directly opposite the north face wall of the new supermarket. In this location the open drain is to be piped, therefore cutting off the drain for secondary flow, and the proposed driveway ground levels will be raised approximately 300mm.
- 25 At the common boundary, 9A, 11, and 11A Northcote Road have ground levels that are approximately 100mm to 150mm higher than the current site levels (refer to photos on C44C Appendix V). 11A and 9A Northcote Road will still have secondary flow available across the ground into the Application Site.
- 26 For 11 Northcote Road a sump connected to the new 750mm diameter pipe is proposed to be located in the landscape strip between the boundary and new footpath to maintain that property's secondary flow. Finished levels for the footpath and landscape strip beside the driveway will be locally lowered as required to maintain secondary flow from this site.
- 27 The Application Site is in the Christchurch District Plan's 1:200 year FMA. Appendix V Sketch SK1 of the AEE shows the Application Site is located at the tip of a "peninsula" within the FMA. SK1 shows the developed site will be built up and any secondary flow directed to the roads. Building the site up at the "tip of the peninsula" reduces its proximity to the residential sites, buffering those sites further from the 1:200 year flood event.

#### **Partial piping of Lydia Street Drain**

- 28 Appendix S of the AEE illustrates the proposed partial piping of some of Lydia Street Drain, with 225m of the existing open box drain proposed to be piped.
- 29 At a meeting to discuss the Lydia Street Drain held at CCC offices, on 27 November 2018, Ms Sheryl Keenan (CCC planning engineer) advised that CCC's preference was to retain the full extent of the box drain, citing base flow function.

Mr Mark Taylor confirms in his evidence that there would be minimal baseflow loss from the proposed piped extent of the box drain.

- 30 An option was proposed to keep the open drain and build a boardwalk over it for the required pedestrian access. CCC did not support this option due to concerns with maintaining the box drain.
- 31 Naturalising Lydia Street Drain was also considered. The drain is close to the common legal boundary behind the residential properties of Northcote Road and is approximately 800mm deep. To naturalise the drain would require battering of the bank (or banks) requiring more width than there is available for the footpath and driveways. This is the case even without the proposed redevelopment of the Application Site.
- 32 The shallow existing grade of the box drain and its upstream catchment result in a 750mm diameter pipe being required. Appendix S of the AEE details the proposed piping of Lydia Street Drain and includes a proposed pipe long section showing pipe grades, cover, and manhole locations, as well as the catchment assessment.
- 33 Piping Lydia Street Drain also requires work in the street upsizing an existing 375mm diameter outlet connected to the piped Kruse's Drain located in Main North Road to 750mm diameter. This work will remove an existing pinch point improving the effective flow capacity of the open box drain.
- 34 Piping Lydia Street Drain is required to provide space for ROW access, truck manoeuvring, landscaping and other vehicle and pedestrian connectivity to Lydia Street.
- 35 Mr Taylor's evidence addresses the positive effects of piping Lydia Street Drain. From an engineering perspective, piping Lydia Street Drain provides the space required for vehicle and pedestrian access facilities associated with the proposed development, without affecting the functionality of the drain, and from this perspective will have positive effects. The location of the proposed piping of the drain is in a portion of the Application Site where there is likely to be quite high levels of pedestrian traffic. Piping the drain in this location will also reduce the opportunity for rubbish disposal by littering pedestrians walking from the site and using the open drain as a rubbish receptor.

### **The proposed stormwater design and attenuation**

- 36 The proposed stormwater design considered the following: stormwater attenuation and treatment, available outfalls, and maintaining existing legal rights to drain for the sites immediately west of the Proposal.

- 37 The design memo in Appendix R of the AEE describes in-depth the proposed stormwater catchments and stormwater treatment design for the Application Site.
- 38 For stormwater attenuation, refer to Appendix S drawing C42A of the AEE. C42A does not specifically show the intended drainage scheme for attenuated roof water, but does show the location of the proposed attenuation tank, to which roof water will discharge and be released into the drainage system toward a site outfall at a restricted rate. The drainage design will not have any roof water, which is considered clean, connected into stormwater pipework serving untreated pavement stormwater.
- 39 CCC requires attenuation to be provided on site such that stormwater flows post-development do not exceed stormwater flows pre-development for all rainfall events up to and including 1:50 year 48 hour storms.
- 40 Calculations in Appendix U of the AEE show that to achieve the required level of attenuation a minimum 2270m<sup>2</sup> of roof area catchment, discharging to a minimum 225m<sup>3</sup> storage tank discharging, at 0.7l/sec is required. CCC have agreed that this level of attenuation is appropriate.
- 41 The architects have nominated the attenuation tank to be located on the south side of the building integrated into the architecture as shown on drawing C42A in Appendix S of the AEE.
- 42 The proposed attenuation tank is 29.5m long x 2.5m wide x 3m high. For architectural reasons, to reduce the visible height of the tank, the base of the tank will be built onto a platform lower than the surrounding ground, as hydraulic constraints allow.
- 43 Collection of roof water alone is sufficient to cater for the attenuation required for all the Application Site hardstand (roof and pavement) that is required. Some attenuation/detention of stormwater would occur in the proposed stormwater treatment basin but this has not been allowed for in the calculations in Appendix U.

#### **Stormwater treatment**

- 44 The stormwater treatment design from hardstand areas for the Application Site focuses on providing a greater quality than the minimum level of stormwater treatment usually required for new commercial development sites.
- 45 First flush stormwater treatment is required for all vehicle trafficked hardstand areas. CCC requires this at a minimum to be the first 25mm depth of water that lands on a surface area for stormwater treatment devices that treat runoff by collection stormwater volumes prior to disposal, (such as an infiltration basin) or

5mm/hr for stormwater treatment devices designed to treat stormwater by flow rate (such as a grassed swale or proprietary treatment devices).

- 46 Some proprietary cartridge type filter systems (in manholes) are approved stormwater treatment devices accepted by CCC, such as Hynds Upflo, and Stormwater360 StormFilters.
- 47 The ecological assessment by Aquatic Ecology confirmed that Bio-Retention /Raingardens generally provide superior treatment ability for oils and heavy metals compared to the proprietary cartridge type filter systems.
- 48 Following Aquatic Ecology's recommendations the stormwater treatment design prioritises natural systems for stormwater treatment. The priority for the design then became as follows: infiltration basins, proprietary raingardens (Stormwater 360 Filterra), and finally Proprietary Filter Systems (Stormwater 360 StormFilters).
- 49 The design for stormwater treatment is reflected in the design memo and sketch C39 in Appendix R of the AEE.
- 50 Since the Application was lodged, an amendment to design is required due to fuel delivery trucks periodically driving across the roundabout proposed to become an infiltration basin as shown on sketch C39. This roundabout cannot therefore be an infiltration basin as currently shown. The surface of this roundabout will have a surface such as "Gobi blocks" to enable the surface of the roundabout to be both trafficable and landscaped. The loss of this roundabout being available for a first flush treatment basin requires the currently proposed on-site stormwater catchments to the stormwater treatment devices to be slightly altered to ensure the total site paved catchment receives full first flush treatment. This is a matter of detailed design.
- 51 Area D on sketch C39 is shown without stormwater treatment. This area is a ramp between the elevated back of house and existing levels in the Foodstuffs Head Office site. The depth of available stormwater infrastructure in the area is too shallow for a proprietary filter or other treatment device.
- 52 CCC (personal communication, Victor Mthamo) requires at a minimum that this area should have an "oil and grit interceptor", capable of providing a coarse level of stormwater treatment. During detailed design the catchment of Area D, will be reduced if possible to direct the remaining catchment to a full first flush treatment device.
- 53 I consider that the revised design can be appropriately accommodated on the Application Site.



### **CCC staff report**

- 54 CCC (Ms Keenan, Mr Mthamo and Mr Dray) in the Section 42A Report have assessed the civil engineering design elements including finished floor levels, general earthworks, piping of Lydia Street Drain and the overall stormwater system. The Section 42A Report concludes that the proposed development will have effects that are “no more than minor” and “less than minor” for civil matters following the works. No additional specific matters for the Civil design have been raised by CCC staff that cannot be addressed by resource consent conditions.

### **Conclusion**

- 55 The Proposal design and treatment of stormwater will improve the quality of stormwater currently discharging from site into the Kruse’s Drain, and marginally reduce stormwater runoff flow rates into the Christchurch City Council (**CCC**) drainage system compared with the existing environment. The improvement on water quality that will occur due to the development is particularly relevant for downstream health as is addressed further in the evidence of Mr Taylor. The preference for natural systems for treatment adds to the landscaping value as addressed in the evidence of Mr Milne. The Application Site development levels will also reduce the risk of the 1:200 flood year event on the surrounding residential sites without impacting on their current secondary flow paths.



**Keegan Geoffrey Brogden**

**19 November 2019**

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## APPENDIX A

# Papanui PAK'n Save – Post-Conferencing Transport Modelling Assessment

**Prepared for:** Foodstuffs SI Ltd  
**Job Number:** FSIL-J047  
**Revision:** V3  
**Issue Date:** 19 November 2019  
**Prepared by:** Jared White, Senior Transportation Engineer  
Chris Blackmore, Transportation Modeller  
**Reviewed by:** Dave Smith, Technical Director

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## 1. Background

This technical note supercedes the Transport Modelling Assessment chapter (Chapter 8) from the notified ITA, and replaces the results and discussions within the ITA chapter and corresponding conclusions. This is due to the extensive additional analysis and changes in methodology agreed during the four transport modelling conferencing sessions held with NZTA, CCC and CTOC in September and October 2019.

The key modelling assumptions from the conferencing which differ from the ITA are as follows:

- a) The 2021 and 2031 permitted baseline includes traffic volumes which are consistent with the existing Toll operations on the 2 Lydia Street site which is consistent with the current industrial zoning. This differs from the 2031 ITA modelling which assumed the existing consent for a Sports Facility was implemented which would generate higher traffic demands in the evening peak period. This assumption did not have an impact on the 2021 modelling which assumed the consent was not implemented.
- b) The phasing and cycle times for the operation of the Main North Road / Northcote Road / QEII Drive intersection and other signals are all fixed at 85 seconds which is consistent with current network operation. The signal phase times at the intersection have been modified to accommodate pedestrian crosswalk movements with full pedestrian protection ensuring the phase time meets the minimum pedestrian movement crossing time when the usual traffic demands of the phase would not require this amount of time
- c) The layout and phasing of the Main North Road / Northcote Road / QEII Drive intersection without the development has been modified to be consistent with that which was proposed in the ITA as mitigation. The reallocation of the turning movements from the Main North Road southern approach to enable a dual right turn and the introduction of split phasing from the two Main North Road approaches and removal of filter right turns. This treatment is now considered by experts to be beneficial irrespective of the development and is included in the base (without development) models
- d) The morning and interpeak periods were tested and reviewed by NZTA, CCC and CTOC experts and it was agreed that the critical period is the PM peak. The reporting in this technical note focuses on the PM period only
- e) There are changes to the way delays are calculated and reported in the intersection performance tables as there have been refinements to the prior process for calculating minimum free flow travel time. Longer paths have also

been used to calculate the general intersection movement delays which gives a better representation of the delay offset against not measuring the delay of every vehicle turning at an intersection. This provides a more reliable assessment of delays as agreed among experts

- f) The phase times were manually optimised to ensure that the Northcote Road/QEII Drive corridor and Main North Road corridors operated to support east-west vehicle movement and north-south public transport movement respectively. This intends to work in a similar manner to how the SCATS system operated by CTOC would function in practice.

## 1.1 Introduction

The section of Main North Road adjacent to the site is heavily congested in the northbound direction during the evening peak period and is one of the issues that the CNC is proposed to remedy. The queuing on the section between Cranford Street and Northcote Road is essentially the bottleneck for commuting trips leaving the City in the evening and once the queue extends back to Cranford Street the other approaches to the intersection breakdown due to reduced downstream capacity.

To enable the adequate assessment of effects of the road network to be understood a microsimulation model has been set up in s-Paramics (Paramics). The model covers an area large enough to reasonably reflect the current extents of congestion and to enable realistic route choice to and from the existing site from the surrounding areas noting the restrictive left in and out configurations on the existing Main North Road access points.

The Paramics model has been developed with the following scenarios:

- 2018 Base
- 2021 Base (includes CNC and existing industrial activity at 2 Lydia Street)
- 2021 with Proposed Development
- 2031 Base (includes Northcote Road four laning and existing industrial activity 2 Lydia Street)
- 2031 with Proposed Development

The critical evening peak period has been analysed and reporting in this technical note which is formed by the following two periods:

- Evening warm-up period (3pm to 4pm)
- Evening peak period (4pm to 6pm)

The setup of the models and calibration is described in more detail in Appendix A of the notified ITA. This includes how the demands for the model have been developed for the base year. The future (2021 and 2031) demands or trip matrices for the peak periods were obtained from the Christchurch Assignment and Simulation Traffic Model (CAST) by way of a sub-area extracted from the wider CAST model. The CAST model assumptions were aligned to be consistent with the Paramics network operations assumptions as far as possible including consistent network infrastructure, intersection layouts, cycle times and phasing. Appendix A provides more detail on this.

The Abley team undertook an extensive review of the validation of the base year CAST model in the vicinity of the proposal as well as a review of the robustness of the future forecast models. This involved providing feedback to the Council modelling team and several elements of the CAST model were corrected, improved and refined to ensure that it is fit-for-purpose to inform the Paramics model supporting this assessment.

Council and Abley agreed that the CAST model is appropriately calibrated and validated in the vicinity of the site to support this assessment although the CAST base year model has too much traffic in the evening peak turning right from Main North Road into Cranford Street. This means that the cordons passed to Paramics will over-predict the demand for this movement and the subsequent modelled performance of the Main North Road / Cranford Street signals in both CAST and Paramics model will be worse than is likely to occur in practice. This provides for an overly conservative set of modelling results with respect to delays at the Main North Road / Cranford Street signals in the evening peak.

Paramics model outputs will vary from one model run to the next because of the inherent stochastic assignment process. The modelling assessment has been based on three consecutive model runs. The demands from CAST show that the

evening peak hour is from 4:30pm to 5:30pm and has been deemed by the modelling experts to be the critical scenario. This section provides a summary of key intersections' performance for the evening peak hour for the five model scenarios. The key intersections are:

- Main North Road / QEII Drive/ Northcote Road
- Main North Road / Cranford Street
- Main North Road / Vagues Road
- Main North Road / Sawyers Arms
- Northcote Road / Lydia Street
- Northcote Road / Vagues Road
- New signalised site access on Main North Road (for scenarios with the proposed development)

One of the key metrics reported is the Level of Service (LOS) at an approach level and overall at each intersection. A general description of level of service is shown in **Table 1.1**.

**Table 1.1** Level of Service (LOS) general descriptions

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

In conjunction with the network performance, the model operation has been reviewed to assess the impact of the proposed changes and identify any operational issues such as queue propagation on intersection approaches affecting capacity and queue discharge at nearby intersections. Performance of the road network in each of the scenarios is described below with a summary at the end of the section.

## 1.2 Traffic Signal Optimisation

The Main North Road / Northcote Road / QEII Drive intersection phasing has been altered to split the northern and southern approach in to separate phases for all future scenarios. The lanes on the southern approach are remarked so the centre lane is a shared through and right lane. This treatment was considered by the experts to be beneficial irrespective of the development due to changes in traffic flow patterns after the CNC is operational. The proposed layout changes also remove right turn filtering from the north and south approaches which is expected to deliver a significant safety improvement in safety acknowledging that there is currently a history of right-turn-against crashes at the intersection.

Inclusion of this in the base means the right turn bay from the Main North Road southern approach can be reduced enabling more storage for vehicles turning right into the site at the proposed signals. This overcomes a key safety concern that was picked up in the Road Safety Audit (RSA) included as Appendix D to the ITA.

As requested by CCC, vehicle tracking was undertaken to investigate the viability of two vehicles turning right simultaneously. A 23m B-Double truck side by side with an 8m medium rigid truck was tested. Preliminary tracking shows that that the two vehicles can turn side by side with adequate clearance (refer to Appendix B to the ITA). However, it is noted that tracking was undertaken on an aerial image and that it should be undertaken on a topography survey for accurate results.

### 1.3 Treatment of Northcote Road / Lydia Street Intersection

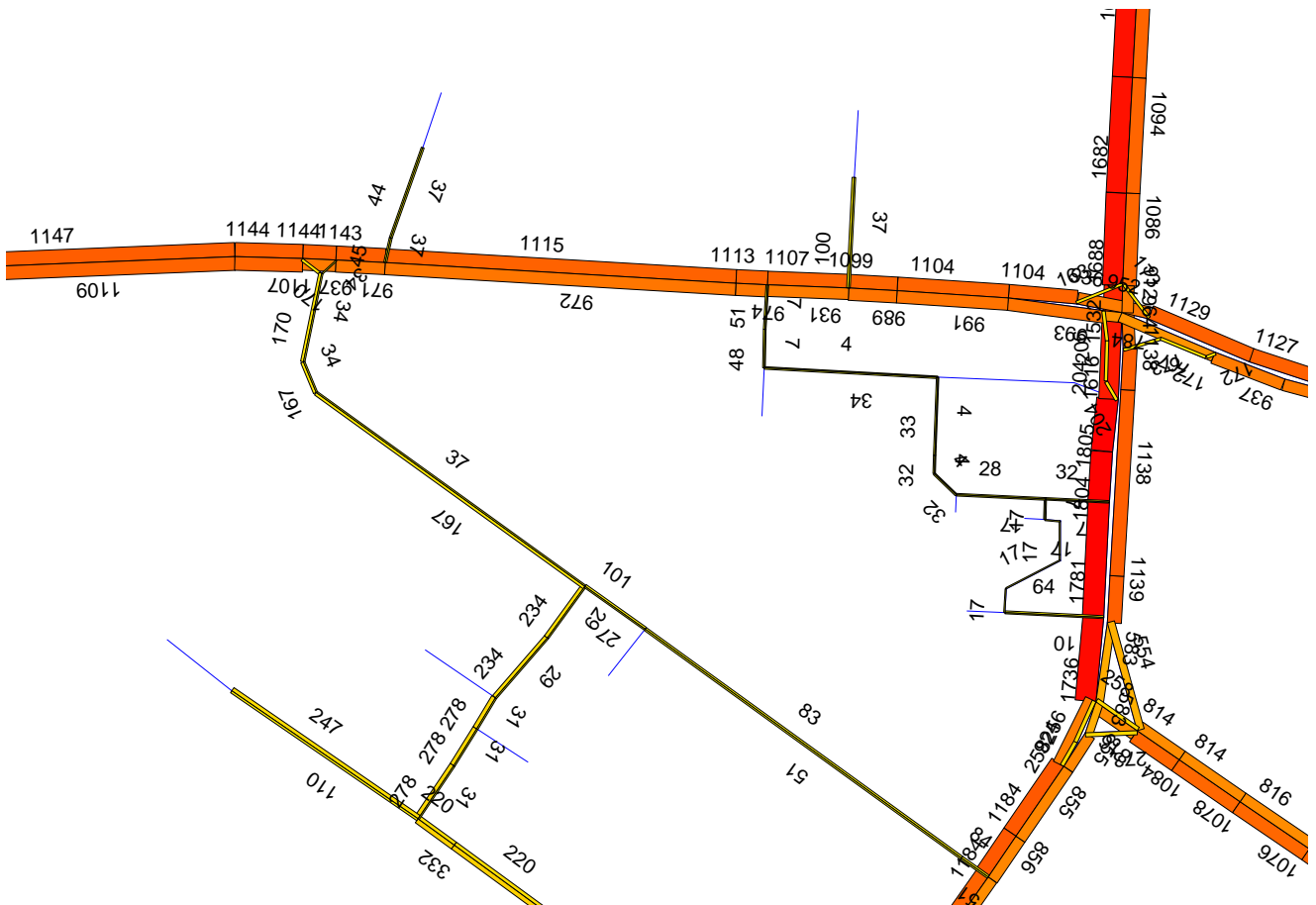
Preliminary modelling demonstrated that delays for right turning traffic out of Lydia Street were unacceptable and that the right turn out should be banned or a controlled intersection introduced at Northcote Road / Lydia Street.

The supermarket activity will have direct access to Main North Road with full turning movements available at the new signalised intersection adjacent to the supermarket. On this basis it is recommended that supermarket traffic using the right of way to access the wider network be limited to vehicles turning left out of or right into Lydia. Banning the right turn out of Lydia Street is the only treatment required at the Lydia Street and Northcote Road intersection to support this proposal. This turning restriction is also considered to be appropriate in light of Council’s proposal to enhance the Northcote Road corridor in the near future.

## 2. Modelling Results

### 2.1 2018 Base Year

The general operation of the base network has been described in the calibration section in Appendix A of the ITA. This part of the Christchurch road network is well known for long delays and queuing associated with the weekday commuter peak periods. The PM peak hour volumes on the network are shown in **Figure 2.1** with peak hour traffic volume on Main North Road, within the site frontage, at approximately 2,900 two way vehicles per hour (vph). The operational metrics of the key intersections of are detailed further in this section.



**Figure 2.1** 2018 Base volumes - PM peak hour

The travel times along key routes are shown in **Table 2.2**. The main northbound movements suffer the worst excess travel time of 2 minutes and 46 seconds extra on the Main North Road route and an additional 4 minutes and 20 seconds on the Cranford Street Route. The westbound movement does not fare much better with 2 minutes and 17 seconds excess travel time for the route along Northcote Road.

**Table 2.2** 2018 Network Travel Times

Route	Movement	Average Travel Time (seconds)	Modelled Minimum Travel Time	Average Excess Travel Time
Main North Road to the North	Northbound	245	79	166
	Southbound	165	72	93
Cranford Street to the North	Northbound	352	92	260
	Southbound	112	50	62
QEII Drive – Northcote Road	Eastbound	136	76	60
	Westbound	246	109	137

Queue propagation of northbound traffic on Main North Road at the Main North Rd / QEII Dr / Northcote Rd intersection affects capacity and queue discharge at downstream intersections resulted in poor LOS for northbound movements on Main North Road and turning movements onto Main North Road from the side roads. Poor LOS is expected for eastbound movements on Northcote Road during the evening peak hour. This is due to the eastbound queues on Northcote Road extending from the Main North Road / QEII / Northcote intersection beyond the Northcote Rd / Lydia St intersection and reaching the Northcote Road / Vagues Road intersection at times

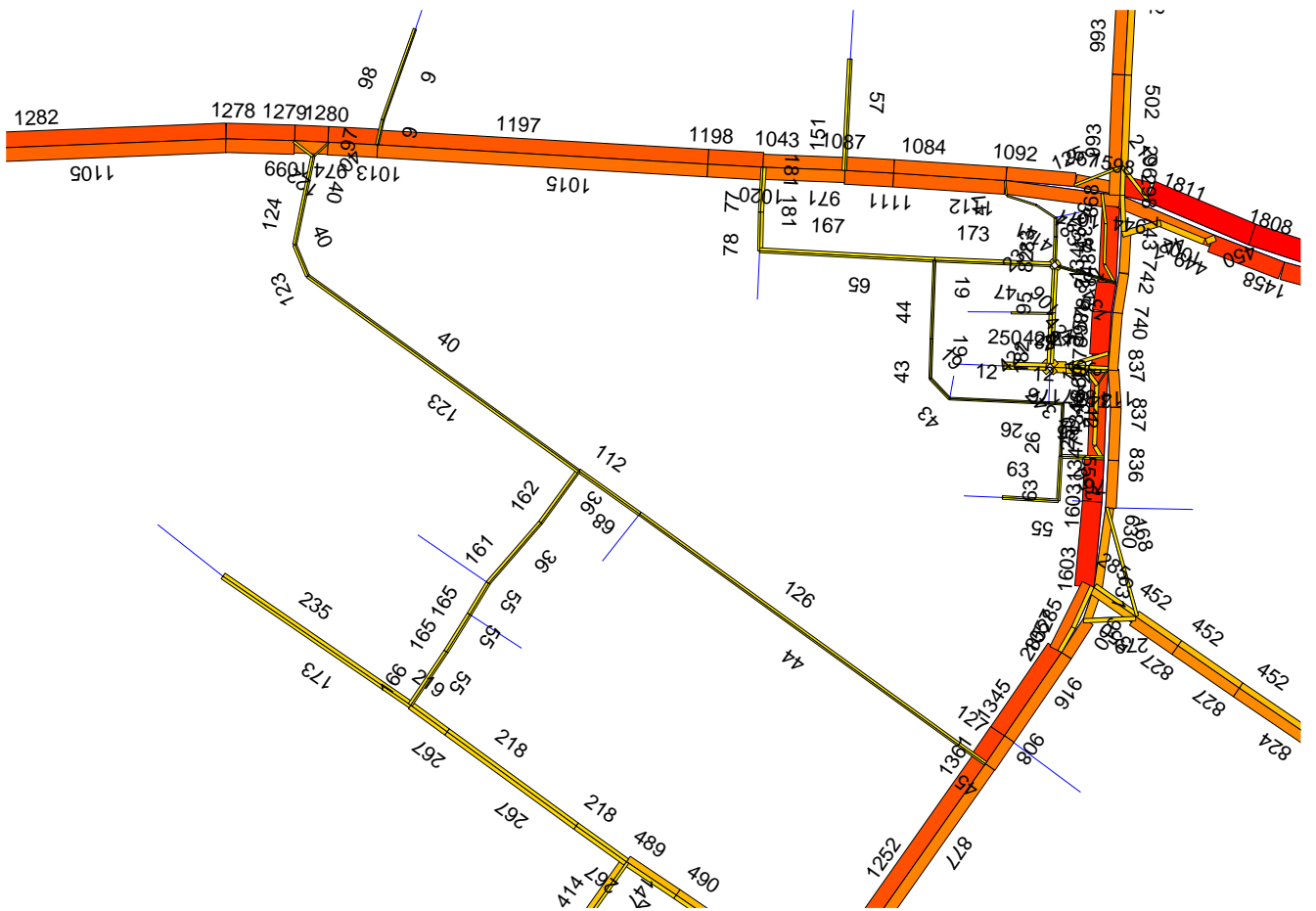
## 2.2 2021 Future Year

The 2021 future network assumes the CNC will be operating reducing the traffic demands on the Main North Road and Cranford Street corridors. The 2021 base evening peak period (4pm to 6pm) demands show a total of 12,216 trips on the network. This is a marginal increase when compared to the 2018 evening peak period (4pm to 6pm) demands of 12,206 trips.

There are significant improvements from the 2018 base with the overall intersection delay per vehicle decreasing from 87 to 57 seconds at Main North Rd / QEII Dr / Northcote Rd intersection and 74 to 26 seconds at the Main North Rd / Cranford St intersection during the PM peak hour. This demonstrates the effectiveness of the CNC in relieving congestion along Main North Road. The PM peak hour volumes on the network are shown in **Figure 2.2**.

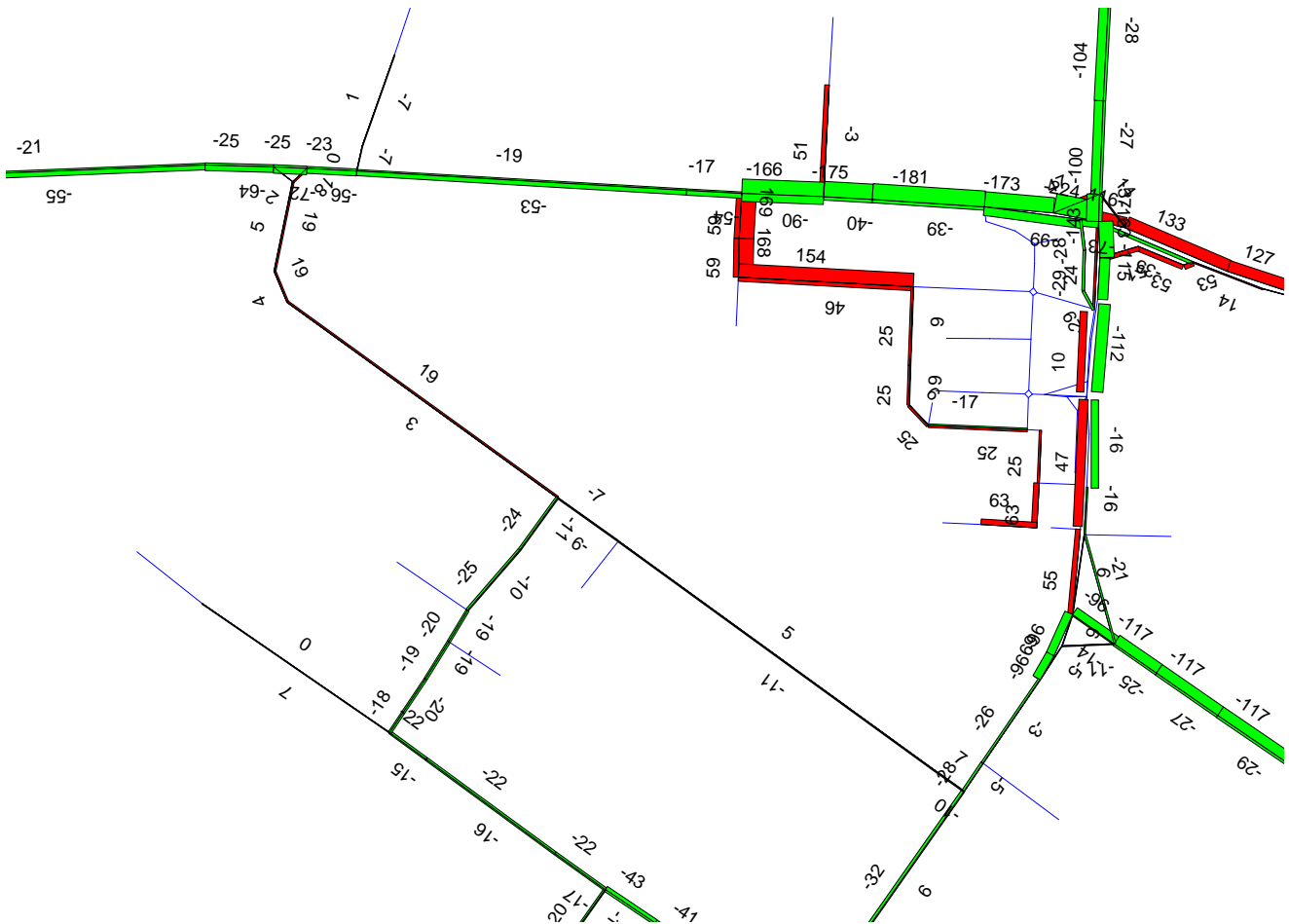






**Figure 2.3** 2021 with development volumes – PM peak hour





**Figure 2.4** 2021 with development - 2021 Base volume changes - PM peak hour

Note that a limitation in the software display properties is that flow difference cannot be shown where network/ links between scenarios differ

**Figure 2.4** shows that there is a minimal change overall in traffic volumes on the network. Changes are generally due to changes in traffic distribution in the local area such as vehicles turning right into QEII Drive instead of taking Cranford Street or going northbound on Main North Road. This is due in part to the new phasing improving the potential throughput of the right turn into QEII Drive and some underlying redistribution in the CAST model. There is also a reduction in the right turn on Northcote Road into Main North Road with development traffic utilising Northcote Road access point for the supermarket.

## 2.4 2031 Future Year Operation Summary

The 2031 Base scenario includes the Cranford Basin housing development. The four laning of Northcote Road is one of Council's planned but not committed projects. Therefore, the design of the road corridor is not confirmed at this stage however, the likely form of the four laning of Northcote Road has been discussed with the Council.

Delays increase on parts of the road network in 2031 compared to the 2021 scenarios and some roads are forecast to be heavily congested such as Northcote Road. The forecast PM peak hour traffic volumes on the network are shown in **Figure 2.5** and a comparison with the volumes in the 2021 Base scenario is shown in **Figure 2.6**.

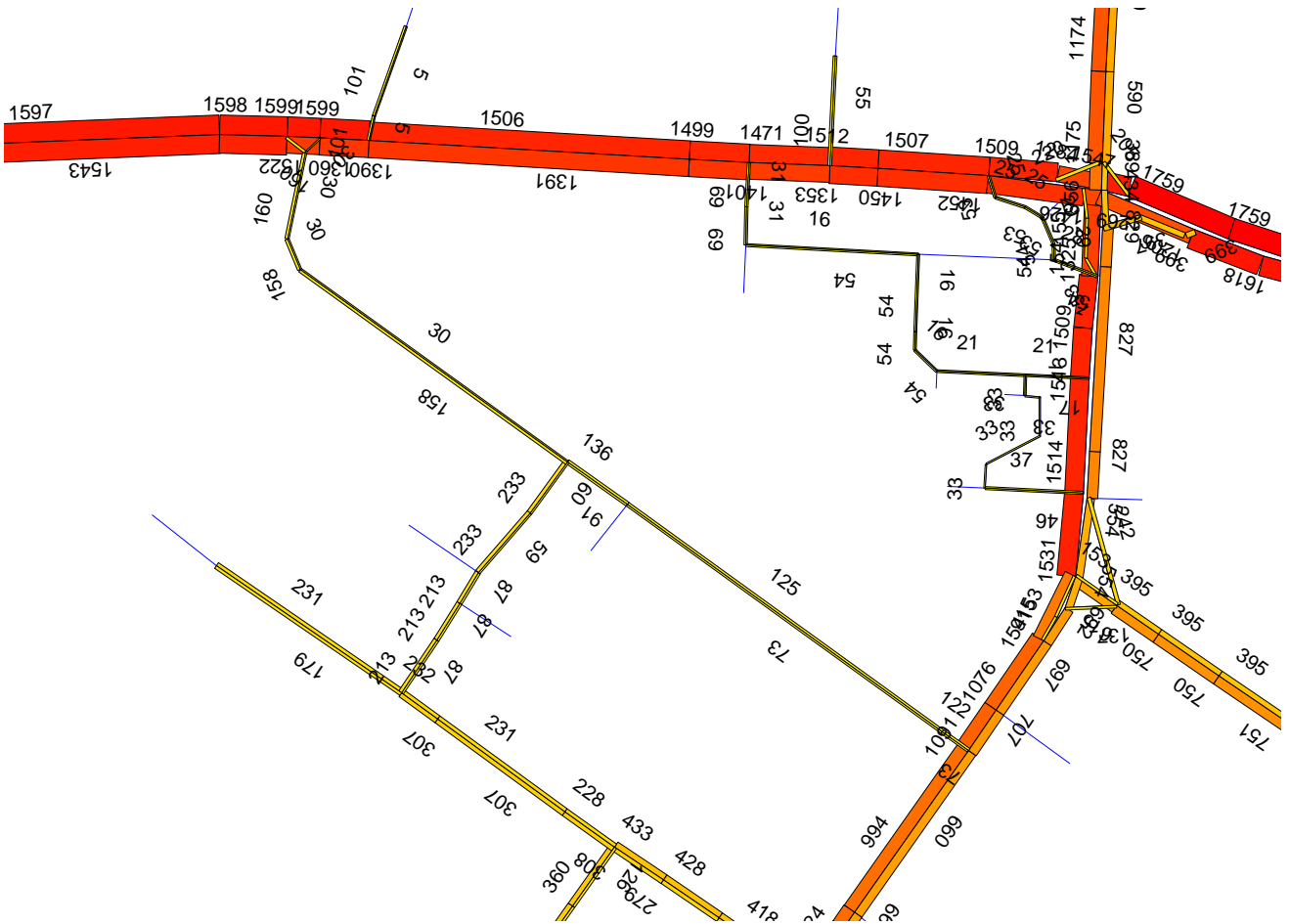
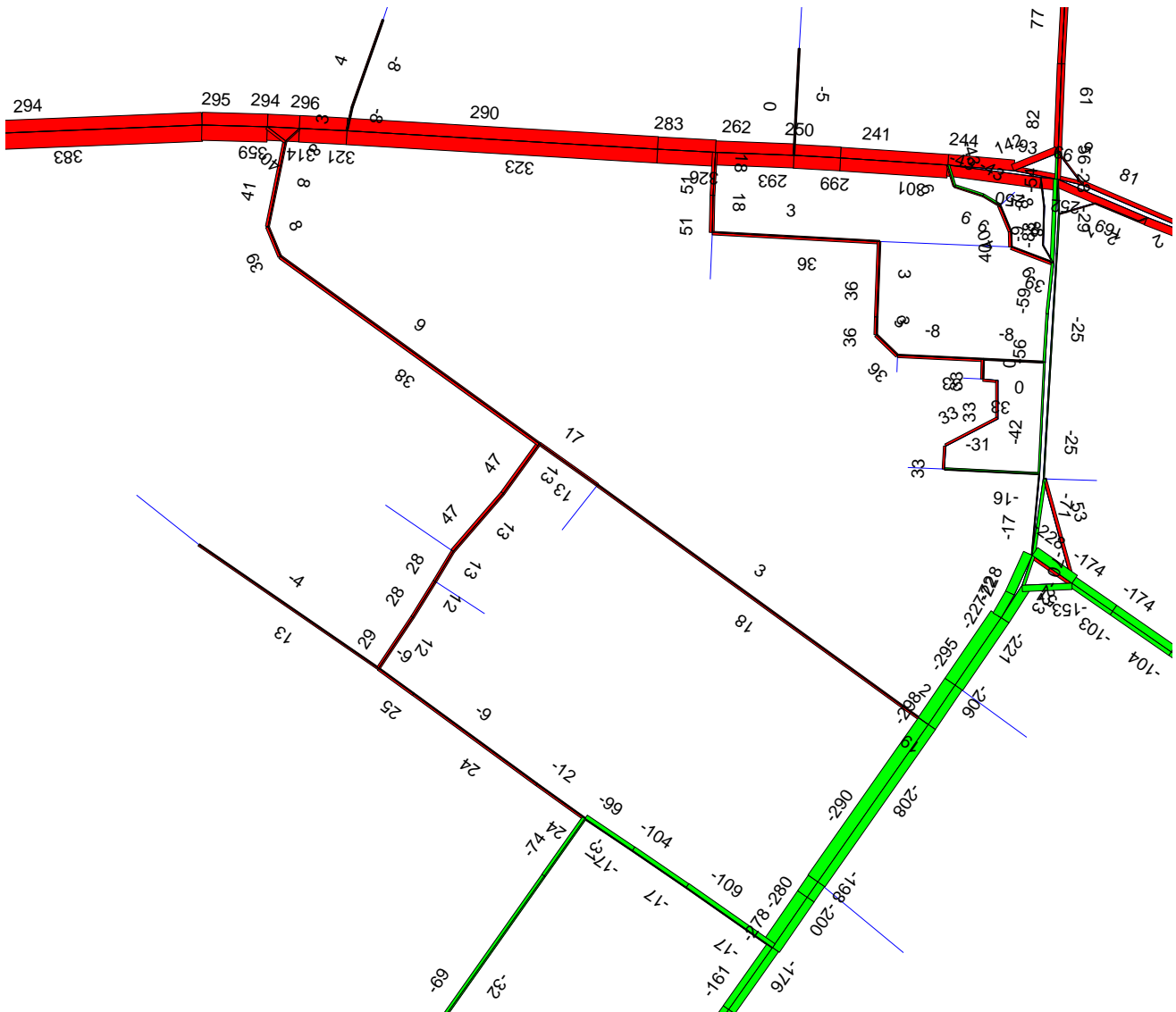


Figure 2.5 2031 Base volumes - PM peak hour



**Figure 2.6** 2031 Base - 2021 Base volume changes - PM peak hour

**Figure 2.6** shows reduction in traffic on Main North Road (south of Cranford Street) and Cranford Street. This could be attributed to the Cranford Basin development being included in the 2031 Base scenario. As part of the Cranford Basin development, a link will be provided to Cranford Street and will be used by through traffic to avoid Main North Road. The other key change are volume increases on Northcote Road which are induced by the proposed four laning of the corridor.

## 2.5 2031 with Development

In general, the key intersections have a similar level of operation with the development in place. The forecast PM peak hour traffic volumes on the network are shown in **Figure 2.7** and a comparison with the volumes in the 2031 Base scenario is shown in **Figure 2.8**. A key difference is with the increase in right turn from Main North Road into QEII Drive. Traffic is drawn from south on Main North Road right through the study area in the order of 125 vehicles per hour in the evening peak. There is also a reduction in traffic on Northcote Road eastbound as development traffic utilises Lydia Street which eases the delays on the western approach to the intersection slightly. There is also a small reduction in traffic from the north on Main North Road to the west on Northcote Road.





**Table 2.3** Main North Rd / QEII Dr / Northcote Rd intersection operation comparison – PM peak hour

Approach	Turn	2018 Base					2021 Base					2021 with development					2031 Base					2031 with development				
		Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS
Main North Rd (North)	L	172	24	C	65.8	E	196	14	B	37.2	D	207	21	C	41.6	D	205	14	B	62.0	E	192	16	B	49.2	D
	T	730	63	E			207	50	D			219	59	E			197	55	D			229	71	E		
	R	160	123	F			112	54	D			63	51	D			176	126	F			91	64	E		
QEII Dr (East)	L	164	14	B	41.5	D	389	20	C	50.9	D	441	18	B	43.4	D	393	22	C	49.0	D	475	20	B	41.2	D
	T	607	44	D			907	52	D			879	52	D			1102	49	D			998	44	D		
	R	152	59	E			126	137	F			122	72	E			116	139	F			128	102	F		
Main North Rd (South)	L	192	82	F	103.0	F	156	39	D	65.8	E	133	31	C	64.5	E	155	119	F	153.3	F	185	65	E	100.1	F
	T	1272	103	F			882	69	E			736	63	E			822	161	F			729	98	F		
	R	160	126	F			522	68	E			679	72	E			468	151	F			675	112	F		
Northcote Rd (West)	L	161	103	F	121.7	F	79	47	D	68.5	E	125	29	C	50.9	D	216	143	F	145.5	F	264	70	E	78.7	E
	T	757	134	F			960	73	E			921	55	D			1079	148	F			1013	82	F		
	R	198	91	F			216	57	E			55	34	C			205	136	F			76	60	E		
Intersection		4728			87.0	F	4752			59.0	E	4578			52.2	D	5133			108.0	F	5055			70.6	E

**Table 2.4** Main North Rd / Cranford St intersection operation comparison – PM peak hour

Approach	Turn	2018 Base					2021 Base					2021 with development					2031 Base					2031 with development				
		Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS
Main North Rd (North)	L	566	11	B	21.9	C	188	8	A	29.7	C	168	8	A	26.0	C	244	8	A	25.1	C	280	8	A	21.2	C
	T	566	33	C			608	36	D			622	31	C			541	33	C			587	27	C		
Cranford St (East)	L	275	45	D	102.8	F	284	13	B	35.7	D	274	12	B	37.5	D	134	12	B	56.6	E	108	48	D	115.3	F
	R	794	123	F			557	48	D			539	50	D			604	67	E			580	128	F		
Main North Rd (South)	T	870	102	F	98.8	F	971	15	B	18.3	B	1038	14	B	15.4	B	911	129	F	125.3	F	1058	67	E	65.7	E
	R	251	88	F			372	28	C			281	21	C			145	104	F			111	53	D		
Intersection		3322			73.9	E	2980			26.3	C	2921			24.4	C	2580			75.1	E	2724			64.1	E

**Table 2.5** Main North Rd / Vagues Rd intersection operation comparison - PM peak hour

Approach	Turn	2018 Base					2021 Base					2021 with development					2031 Base					2031 with development				
		Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS
Main North Rd (North)	L	789	17	C	18.2	C	826	15	B	16.3	C	841	17	C	18.0	C	593	13	B	16.8	C	640	16	C	17.7	C
	R	55	40	E			46	45	E			41	39	E			61	53	F			41	49	E		
Main North Rd (South)	L	5	27	D	55.1	F	5	0	A	9.5	A	4	0	A	9.0	A	4	35	D	56.5	F	2	39	E	26.9	D
	T	1037	55	F			1257	10	A			1221	9	A			962	57	F			1118	27	D		
Vagues Rd (West)	L	88	214	F	210.3	F	107	90	F	86.6	F	112	55	F	56.6	F	109	290	F	282.2	F	93	157	F	147.6	F
	R	13	187	F			15	61	F			11	70	F			16	230	F			13	82	F		
Intersection		1987			210.3	F	2255			86.6	F	2231			56.6	F	1745			282.2	F	1906			147.6	F



**Table 2.6** Main North Rd / Sawyers Arms Rd intersection operation comparison - PM peak hour

Approach	Turn	2018 Base					2021 Base					2021 with development					2031 Base					2031 with development				
		Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS
Main North Rd (North)	L	602	17	B	23.1	C	652	16	B	20.8	C	685	17	B	20.2	C	468	15	B	19.0	B	530	16	B	19.6	B
	R	194	44	D			174	40	D			155	34	C			139	33	C			119	34	C		
Main North Rd (South)	L	105	30	C	54.0	D	113	12	B	22.1	C	111	13	B	20.5	C	121	33	C	60.3	E	127	14	B	24.9	C
	T	727	57	E			815	23	C			804	21	C			650	65	E			712	27	C		
Sawyers Arms Rd (West)	L	336	109	F	101.6	F	463	58	E	56.3	E	440	45	D	44.9	D	354	132	F	124.2	F	441	62	E	60.3	E
	R	103	76	E			62	47	D			56	42	D			64	82	F			64	51	D		
Intersection		2068			52.2	D	2279			29.5	C	2251			26.7	C	1797			61.2	E	1992			32.1	C

**Table 2.7** Northcote Rd / Lydia St intersection operation comparison - PM peak hour

Approach	Turn	2018 Base					2021 Base					2021 with development					2031 Base					2031 with development				
		Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS
Northcote Rd (East)	L	6	8	A	12.0	B	9	0	A	8.8	A	31	9	A	9.3	A	15	7	A	8.1	A	27	7	A	9.8	A
	T	894	12	B		D	1040	9	A		C	923	9	A		C	1320	8	A		C	1192	10	A		
Lydia St (South)	L	120	33	D	33.3	D	21	20	C	20.3	C	79	24	C	23.6	C	70	17	C	17.4	C	106	15	B	14.8	B
	R	0	0	A		D	0	0			C	0	0	A		C	0	0	A		C	0	0	A		
Northcote Rd (West)	T	1139	30	D	30.1	D	1206	12	B	11.9	B	1037	9	A	11.1	B	1465	54	F	53.9	F	1317	12	B	13.1	B
	R	0	0	A		D	9	20	B		C	159	23	C		C	17	18	C		C	165	21	C		
Intersection		2158			33.3	D				20.3	C	2228			23.6	C	2887			53.9	F	2808			14.8	B

**Table 2.8** Northcote Rd / Vagues Rd intersection operation comparison - PM peak hour

Approach	Turn	2018 Base					2021 Base					2021 with development					2031 Base					2031 with development				
		Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS	Flow	Delay	LOS	App. Delay	App LOS
Northcote Rd (East)	L	78	26	C	24.1	C	20	26	C	25.4	C	39	23	C	24.1	C	35	16	B	18.5	B	34	15	B	13.1	B
	T	947	24	C			1051	25	C			973	24	C			1356	19	B			1274	13	B		
Vagues Rd (South)	L	167	164	F	163	F	121	53	D	53.	D	124	43	D	43.	D	157	93	F	92.	F	153	147	F	146	F
Northcote Rd (West)	T	1157	13	B	13.2	B	1301	14	B	14.3	B	1289	14	B	14.3	B	1592	11	B	11.0	B	1579	11	B	11.0	B
Intersection		2349			28.7	C	2494			21.0	C	2425			19.9	B	3141			18.4	B	3041			18.7	B

**Table 2.9** Key network travel times comparison - PM peak hour

Route	Movement	2018 Base			2021 Base		2021 with development		2031 Base		2031 with development	
		Ave. Travel Time (s)	Min. Travel Time (s)	Total delay (s)	Ave. Travel Time (s)	Change from 2018 Base	Ave. Travel Time (s)	Change from 2021 Base	Ave. Travel Time (s)	Change from 2021Base	Ave. Travel Time (s)	Change from 2031 Base
Main North Road to the north	Northbound	245	79	166	134	-112	130	-3	308	174	196	-111
	Southbound	165	72	93	144	-20	170	26	150	6	170	20
Cranford Street to the North	Northbound	352	92	260	184	-168	206	22	285	101	288	3
	Southbound	112	50	62	106	-5	118	12	110	4	122	12
QEII Drive – Northcote Road	Eastbound	136	76	60	129	-79	132	2	196	67	163	-33
	Westbound	246	109	137	147	11	141	-6	129	-18	120	-9



Figure 2.9 Overall Intersection Level of Service Summary PM Peak Hour



Key points from the intersection LOS comparisons in **Table 2.3** to **Error! Reference source not found.** include:

- The Main North Rd / QEII Dr / Northcote Rd and Main North Rd/Cranford St intersections operate better with a lower overall intersection flow in all 2021 scenarios when compared to the 2018 Base scenario. This is a result of the CNC reducing the traffic demands on the Main North Road and Cranford Street corridors.
- All key intersections, in the 2021 scenarios with the proposed development, show a change in intersection delay within a few seconds when compared to the 2021 Base scenario. This shows that the proposed development does not result in deteriorating network performance with the introduction of the signals in Main North Road and change in traffic patterns of the development.
- The 2031 with development scenario shows an improvement to the overall performance of all key intersections when compared to the 2031 Base scenario. Traffic signal phasing and offsets have been carefully managed in 2021 and 2031 to coordinate flows through the Main North Rd / QEII Dr / Northcote Rd and Main North Rd / Cranford St intersections and preserve the functions of both the Main North Road and Northcote/QEII corridors.
- The 2031 scenarios show lower overall intersection flow at some of the intersections along Main North Road (Vagues Road and Sawyers Arms Road) when compared to the 2021 scenarios. The reduction in demands through these intersections could be attributed to the Cranford Basin development being included in the 2031 scenarios. As part of the Cranford Basin development, a link will be provided to Cranford Street and will be used by through traffic to avoid Main North Road.
- The congestion in the 2031 Base on Northcote Road creates queues back past Lydia St for short periods of time which affects the reported delays on the upstream intersections such as at Lydia Street on Northcote Road.
- The performance of the Northcote Road corridor has been managed so delays are largely balanced across the approaches at the Main North Rd / QEII Dr / Northcote Rd intersection.

Overall, the adjacent road network operates better with the CNC and the supermarket traffic with provision of the new signalised access on Main North Road does not adversely affect intersection performance. This is supported by the overall LOS figures where the LOS with the development is the same or better than in the base scenario.

Key points from the travel time comparisons in **Table 2.9** include

- The 2018 Base scenario shows that the northbound movements experience over three minutes of delay along the Main North Road route and six minutes of delay along the Cranford Street route. The eastbound movement experiences over three minutes delay due to congestion.
- The improvement in network performance is apparent in the 2021 Base evening peak hour key route travel times when compared to the 2018 Base scenario. Travel times have (reduced) improved by 2 to 3 minutes on northbound and eastbound routes.
- The critical northbound journeys decrease by 3 seconds from Main North Road and increase by 22 seconds from Cranford Street in the 2021 with development scenario. Southbound journeys increased slightly by 12 to 26 seconds. Minor changes in the east-west journey times.
- The 2031 Base scenario travel time on the network generally increases when compared to the 2021 base scenario particularly for the northbound and eastbound movements. The northbound movements are at a similar level to the existing travel times.
- The 2031 with development scenario shows that the southbound journeys pick up between 12 and 20 seconds additional travel time with some of this from the proposed new signalised access on Main North Road. The northbound journeys from Main North Road shows a large improvement from the 2031 base but still about one minute longer than the 2021 scenarios. There is a 30 second improvement in the eastbound journey time which is again about 30 seconds greater than in 2021.

## 2.7 New signalised Main North Road access

The Foodstuffs Head Office is incorporated in the model as a separate zone. The existing Main North Road access points are left in / left out only requiring any trips from the office to the south to perform a U-turn at the Main North Rd / QEII Dr / Northcote Rd intersection or out of Lydia Street onto Northcote Road and Vagues Road to get back to Main North Road. In the 2018 base scenario there are 60 vehicles performing the U-turn movement (approximately 30 per hour) across the two-hour period while 85 vehicles exit the Head Office via Lydia Street during the 2018 evening peak hour (4:00pm to 5:00pm).

A feature of the new signals proposed for the supermarket is that it can be connected to the Head Office car park at the southern internal network roundabout. This provides the staff of the Head Office the option of turning right onto Main North Road. The number of U-turning vehicles drops significantly with the development to less than 10 per hour and there is also a reduction in traffic from Head Office exiting via Lydia Street.

Rat-running has not been permitted through the site on the right-of-way in the modelling assessment as the likelihood of rat-running is considered low due to the speed environment. The left turn from Main North Road into Northcote Road is controlled by a free left turn and the modelling indicates that this is relatively free flowing. Conversely the right turn from Northcote Road into Main North Road does incur some delay during peak hours but the alternative of rat-running through the site involves a circuitous route via Lydia Street, the right-of-way and the supermarket carpark which is considered to be unattractive to road users and can be discouraged through the introduction of traffic calming measures throughout the carpark.

The PM peak hour operation of the proposed access signals are shown in **Table 2.10** and **Table 2.11** for 2021 and 2031 respectively with the proposed development.

**Table 2.10** 2021 with Development Intersection Operation – Proposed Signal Access on Main North Rd – PM peak hour

Approach	Movement	Flow	Average Delay	LOS	Approach Delay	Approach LOS
Main North Road (North)	Through	615	13.2	B	19.4	B
	Right	113	53.3	D		
Main North Road (South)	Left	234	12.2	B	22.3	C
	Through	1273	24.2	C		
Site access (West)	Left	217	19.3	B	31.2	C
	Right	210	43.4	D		
Intersection		2663			22.9	C

**Table 2.11** 2031 with Development Intersection Operation – Proposed Signal Access on Main North Rd – PM peak hour

Approach	Movement	Flow	Average Delay	LOS	Approach Delay	Approach LOS
Main North Road (North)	Through	682	12.0	B	16.8	B
	Right	101	49.6	D		
Main North Road (South)	Left	234	27.7	C	55.3	E
	Through	1330	60.2	E		
Site access (West)	Left	218	27.3	C	35.1	D
	Right	213	43.2	D		
Intersection		2779			41.3	D

**Table 2.10** to **Table 2.11** show that the worst movement at the intersection is expected to operate at LOS E for the northbound through movement which is influenced by delays propagating back from the downstream Main North Road // Northcote Road / QEII Drive intersection. Overall the intersection operates well at LOS C in 2021 and LOS D in 2031 during the evening peak hour. Overall, the intersection is expected to operate at an acceptable LOS C/D for a peak demand period for all 2021 and 2031 scenarios.

## 2.8 Bus travel times on Main North Road

In January 2019, the Orbiter bus route changed from travelling along Main North Road and QEII Drive to travelling along Main North Road and Cranford Street. The Orbiter buses no longer travel along the frontage of the site on Main North Road. The only high frequency bus service on Main North Road within the site frontage is the Blue Line. Bus travel times for the Blue Line on Main North Road, between the south of the Main North Road / Sawyers Arms Road intersection to the north of Main North Road / QEII Drive / Northcote Road intersection, for the future model scenarios are shown in **Table 2.12** for the evening peak hour.

**Table 2.12** Bus (Blue Line) travel times on Main North Road – PM peak hour

Scenario	Northbound (s)	Southbound (s)
2021 Base	192	260
2021 with development	167	293
2031 Base	230	277
2031 with development	172	278

**Table 2.12** shows that the northbound bus travel times decreases between 25 to 60 seconds with the development for 2021 and 2031 respectively. This is due to the improved progression through the signals with the proposed phasing and coordination in the northbound direction and the bus priority at the access signals. The southbound travel times are consistent in 2031 but with a 33 second increase in 2021. Further investigation could be done to check if offsets or phasing could be changed to help improve southbound coordination for the buses although recognising that there is a bus stop between the site access and Cranford Street. The southbound bus and cycle lane could also be managed to operate as a continuous through lane when in operation in the morning peak period which would improve travel times for southbound buses. If the hours of operation of the bus lane were to be expanded in the future this continuous movement could also be maintained and the development would not preclude this.

Overall, the proposed development will not adversely affect bus travel times on Main North Road when compared to the base scenario in both 2021 and 2031 with improvements in the peak direction where travel times are prone to congestion and unreliability.

## 2.9 Vehicle travel totals

A useful comparison between different model scenarios is the average trip lengths and trip travel times. The evening peak period statistics for three consecutive model runs for the 2021 and 2031 model scenarios are included in **The key** observations are as follows:

- The reduction in congestion is evident with a significant reduction in travel times at 2021 and 2031 across the network despite the increase in the overall number of trips being accommodated within the two-hour window.
- The number of non-development trips drops by around 6-7% in 2021 and 2031 but total travel time drops by significantly more, around 10% in 2021 and around 32% in 2031.
- This is consistent with the results in **Table 2.9** which demonstrate a significant decrease in travel times for some of the key north-south and east-west movements in the vicinity especially at 2031.



**Table 2.13.** This analysis has excluded traffic accessing and exiting the development in order to maintain a comparative data set to compare average trip times and distances on public roads.

The total non-development vehicle trips decreases with the addition of development traffic, due to pass-by and diverted trips travelling to the development and then to the original destination. By excluding these trips from the analysis, the effect of the development on vehicles not utilising the development can be analysed.

The key observations are as follows:

- The reduction in congestion is evident with a significant reduction in travel times at 2021 and 2031 across the network despite the increase in the overall number of trips being accommodated within the two-hour window.
- The number of non-development trips drops by around 6-7% in 2021 and 2031 but total travel time drops by significantly more, around 10% in 2021 and around 32% in 2031.
- This is consistent with the results in **Table 2.9** which demonstrate a significant decrease in travel times for some of the key north-south and east-west movements in the vicinity especially at 2031.

**Table 2.13** Non-Development Vehicle travel totals – PM peak period 4-6pm

Scenario	Total Travel Time (s)	Total Distance (km)	Total Non-Development Peak Trips	Average per vehicle Trip Time (s)	Average per vehicle Trip Distance (km)
2021 Base	2,181,078	20,150	12,216	179	1.65
2021 with proposed development	1,956,456	18,064	11,435	171	1.58
<b>Change in 2021</b>	<b>-224,622</b>	<b>-2,086</b>	<b>-781</b>	<b>-7</b>	<b>-0.07</b>
2031 Base	3,433,574	20,834	12,904	266	1.61
2031 with proposed development	2,346,028	18,778	12,010	195	1.56
<b>Change in 2031</b>	<b>-1,087,545</b>	<b>-2,055</b>	<b>-894</b>	<b>-71</b>	<b>-0.05</b>

In summary the local network is performing better in all scenarios as a result of the improved connectivity across the network, especially in the evening peak where traffic exiting the Foodstuff head office and adjacent activities have limited connectivity to travel south. Without the addition of signals these vehicles are U-turning on Main North Road or using Northcote Road and Vagues or Sawyers Arms Road to travel back to Main North Road southbound.

### 3. Summary of Modelled Effects of Proposal

The supermarket has a large traffic generating footprint, however the total addition of new trips onto the road network is expected to be around 20% of total trips visiting the supermarket and is an addition of approximately 100 trips in and 100 trips out of the site in peak hour. When these new trips are dispersed around the local area their effects are minimised as they largely serve the nearby residential and employment catchment.

The remaining 80% of trips are expected to be trips already on the network as they pass-by the site or are local trips which are diverted from other roads which are not directly adjacent to the site. These trips visit the proposed site as an intermediate trip destination in a series of linked trips in the model and in the case of pass-by trips do not add demands to the transport system.

The key outcomes from the modelling assessment of traffic effects are as follows:

- Evening peak period traffic volumes along Main North Road adjacent to the site drop by 17.5% when the CNC becomes operational with total trips through the local area largely unchanged in 2021.
- Split phasing at the Main North Road / Northcote Road / QEII Drive intersection is considered beneficial in terms of efficiency and safety with or without the development and so is included in both base model scenarios.
- The introduction of the development including the signalised site access on Main North Road at 2021 results in slightly higher northbound traffic volumes adjacent to the site on Main North Road.
- In 2031 the Northcote Road corridor is expected to have an increase in capacity, possible including four-laning. Four-laning results in increased east-west traffic volumes connecting to QEII Drive and the CNC. The Cranford Basin link also provides an alternative corridor for traffic accessing Papanui resulting in lower traffic volumes at the northern end of Cranford Street and along Main North Road to the south of Cranford Street. Net traffic volumes adjacent to the site on Main North Road are slightly lower between the 2021 and 2031 base models.
- Northbound evening peak travel times along Main North Road and Northcote / QEII corridors reduce by up 2-3 minutes per journey following the opening of the CNC with travel times effectively unchanged in northbound direction and increasing slightly in southbound direction with development traffic and introduction of signals in 2021.
- Travel times along the Main North Road and Northcote / QEII corridors deteriorate between 2021 and 2031 and generally reduce in northbound direction and increase slightly in southbound direction with development traffic and introduction of signals in 2031.
- Overall network performance in the evening peak hour with and without the development traffic demonstrates adequate level of service with:

- Main North Road / QEII Drive operating at LOS E in 2021 and improving to LOS D with the development
- Main North Road / QEII Drive operating at LOS F in 2021 and improving to LOS E with the development
- Main North Road / Cranford St operating at LOS C in 2021 and LOS E in 2031 with and without development
- Northcote Road / Vagues Road operating at LOS B and Northcote Road / Lydia Street operating at LOS C in 2031 with development
- Main North Road / Vagues Road operating at LOS F in all scenarios with and without development
- The new signals on Main North Road operating at LOS C in 2021 and LOS D in 2031
- Some congestion related effects on Main North Road cause LOS E at Sawyers Arms Rd in 2031 irrespective of the development.
- The new signalised access will enable right turns to be executed on and off Main North Road which will reduce the amount of traffic from the FSIL Head Office U-turning at the Main North Rd / QEII Dr / Northcote Rd intersection and travelling longer distances through the residential areas in the vicinity of Vagues Road. The reduction in U-turns will be particularly helpful as these movements normally are undertaken at significantly reduced speed impacting the efficiency of the right turn movement and potentially leading to poor safety outcomes when coming into conflict with left turners from QEII Drive.

It is concluded that the surrounding traffic network can accommodate the traffic associated with the proposed development without a deterioration in network performance. Elements of the proposal, specifically the introduction of the site access signals on Main North Road which work well in combination with the proposed changes in layout and operation of QEII / Main North Road signals results in an improvement in the performance of the road network in the vicinity of the site.

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Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Joseph Paul Durdin**

19 November 2019

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## Introduction

- 1 My name is Joseph Paul Durdin.
- 2 I am a Chartered Professional Engineer (CPEng) and registered under the Chartered Professional Engineers New Zealand Act 2002. This qualification means I have been reviewed by the registration authority and deemed to be competent to practice in my area of expertise. I am a Chartered Member of Engineering New Zealand (CMEngNZ), a Practice Area Assessor and co-chair of the NZ Chapter of the Australasian College of Road Safety.
- 3 I hold the technical qualification of Bachelor of Engineering with Honours in Civil Engineering from the University of Canterbury. Since graduating in 1999, I have worked exclusively in the traffic and transportation field as a consulting engineer. I have practiced in both New Zealand and Australia and become a nationally recognised expert with specialist skills in the areas of road safety, strategic and integrated transport planning, and the development of best-practice guidance.
- 4 I am currently employed as the Transportation Group Manager at Abley Limited and have held that position since 2013. I am also a Director of Abley Limited and have held that position since 2011.
- 5 My previous work experience that is most applicable to this application includes:
  - i. the provision of technical transportation planning leadership for numerous land development proposals progressed by Foodstuffs South Island Limited (Foodstuffs) since 2012;
  - ii. appointment as an expert independent transportation advisor to the Board of Inquiry hearing the Basin Bridge proposal; and
  - iii. as the co-author of New Zealand Transport Agency's Research Report 422 'Integrated Transport Assessments'.
- 6 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 7 My role in relation to the Application has been to provide advice in relation to the suitability of the site from a transportation planning perspective for the Proposal. In 2015, I presented evidence in relation to the Proposed Christchurch Replacement District Plan Commercial and Industrial Chapters on behalf of Foodstuffs where that sought Commercial Core rezoning of the Application Site.

- 8 More recently, I have been involved in an oversight capacity of the Abley team that has prepared the integrated transportation assessment (ITA) report for this Application. In my opinion, the amount of energy expended in evaluating the transport effects associated with this Application is unprecedented for a standalone activity. The team has worked very closely and collaboratively with Council to ensure the effects of the Application on the transport environment have been looked at from every possible angle. The high level of agreement between the experts that participated in the transport conferencing sessions is evidence of a good outcome.
- 9 In preparing this statement of evidence I have considered the following documents:
- i. the AEE accompanying the Application;
  - ii. submissions relevant to my area of expertise;
  - iii. planning provisions relevant to my area of expertise;
  - iv. section 42A report;
  - v. the multiple joint witness statements prepared by transport experts;
  - vi. the evidence of Mr Dave Smith, to whom I defer on matters of transport effects associated with the Application; and
  - vii. the Peer Review of Traffic Modelling prepared by Mr John Falconer of QTP.
- 10 I have visited the Application Site and have a thorough understanding of how it integrates with the receiving transport environment.

**Code of Conduct for Expert Witnesses**

- 11 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

## Scope of Evidence

- 12 I have prepared evidence in relation to the extent to which the Application aligns with the transportation objectives and policies of local and regional planning instruments. The key matters discussed in my evidence are:
- i. relevant history of the site – where I present the key transport planning reason why the request to rezone the site to Commercial Core was rejected;
  - ii. transport expert conferencing – where I highlight some of the key conclusions coming out of conferencing;
  - iii. integration with local and regional transport policy framework – where I present an assessment of the Application against the transport objectives and policies of the Christchurch District Plan (CDP), Christchurch Transport Strategic Plan (CTSP) and the Regional Policy Statement (RPS);
  - iv. matters raised by submitters to the Application – specifically in response to the Environment Canterbury and NZ Transport Agency submissions on transport policy matters; and
  - v. matters raised in the Christchurch City Council's (**CCC**) staff report issued under s42A of the RMA.

## Relevant History of the Site

- 13 In 2014/15, Foodstuffs made a submission on the Proposed Christchurch Replacement District Plan (CRDP) requesting the rezoning of a 1.56ha site at 171 Main North Road. The site was proposed to be Industrial General zoning in the CRDP. Foodstuffs sought Commercial Core zoning. The Hearings Panel ultimately rejected the rezoning request.
- 14 Two key paragraphs from the Hearings Panel decision are reproduced for added context around the transportation reasons why Foodstuffs' submission was rejected.
- i. *[411] There are a range of factors that combine to inform our view that Commercial Core rezoning of the site is inappropriate at this time.*
  - ii. *[412] One set of factors concerns the uncertainty of timing of construction of the Northern Arterial, and the difficulty of trying to account for this by way of a suitable rule. Foodstuffs confirmed that its only intention for this site was for a supermarket and that it would be supportive of a rule that limited activity on this site to only a supermarket. On the other hand, the traffic experts were in essential agreement that a supermarket usage would be*

*inappropriate prior to construction of the Northern Arterial. This was anticipated to be completed prior to 2016, but this has now slipped to around 2020, with further uncertainty around that date. The logical consequence would be that any supermarket anchor on the site to a Neighbourhood Centre would be held in indefinite suspension. We do not consider that allowing for Commercial Core rezoning subject to a rule constraining supermarket development pending the Northern Arterial's construction would be a sound planning approach, given the uncertainty it would foster for the community as to redevelopment of what would be the essential anchor for the site.*

- 15 In essence, the primary transportation reason for the decision to reject the proposal revolved around the timing of the rezoning request in relation to the progress made (or lack thereof) on the Northern Arterial (now referred to as the Christchurch Northern Corridor). Given that construction of the Christchurch Northern Corridor is now well advanced, with a projected opening in mid-late 2020, I consider there is sufficient certainty about the future transport environment to enable the effects of the Proposal to be assessed.

#### **Transport Expert Conferencing**

- 16 I participated in the transport conferencing that took place on 16 October 2019. The key matters coming out of the conferencing that are relevant to my evidence are:
- i. From Section 5: All experts agreed that the content of the ITA is accurate; however, wished to note that there are a larger range of planning matters that will need to be considered as part of the Application, particularly as they relate to the land-use/transport relationship and key activity centres.
  - ii. From Section 5: All experts agreed that other than as noted above, the ITA is an appropriate evaluation of the development in respect of the Strategic Planning Framework.
  - iii. From Section 10: All experts agreed that other than as noted above, the ITA is an appropriate evaluation of the non-compliances identified in Section 9 of the ITA.
- 17 To summarise, all experts agreed that the assessment of the proposed activity (as presented in the ITA report) against the strategic transportation planning framework, including the High-Trip Generator rule assessment, was both accurate and acceptable. This is important, because it means all matters specifically addressed in the ITA report that have been agreed and accepted by the experts are not subject to dispute. Accordingly, I generally do not address



these matters specifically in my evidence, except where they have been raised by submitters not party to the conferencing or in the CCC staff report.

- 18 For the avoidance of any doubt, I attended the first of the transport modelling conferencing sessions in a facilitation capacity. I then had no further involvement in the transport modelling conferencing. My colleague, Mr Smith, presents expert evidence in relation to the transport modelling conferencing.

### **Integration with local and regional transport policy framework**

- 19 This section of my evidence presents an assessment of the Application with the local and regional transport policy framework.

- 20 The NZ Transport Agency's Research Report 422: Integrated Transport Assessment Guidelines (November 2010) suggests use of the following terminology when assessing the extent to which an application against objectives and policies:

- **Supportive** means the proposed change complies with or will achieve the relevant policy of the strategy and or plans.
- **Partially supportive** means the proposed change does not necessarily comply with but is supportive of the relevant policy of the strategy and/or plans in one respect and not supportive in another respect.
- **Not supportive** (or non-complying) means the proposed change does not comply with and will not achieve the relevant policy of the strategy and/or plans.
- **Contrary** means the proposed change is opposite to the relevant policy of the strategy and/or plans to the extent of being repugnant and unacceptable.

- 21 Chapter 7 Transport of the CDP specifies two objectives, each of which are supported by several policies. My assessment is generally limited to an assessment of the Application against the objectives. I respond to specific policy matters in my review of the CCC staff report.

- 22 Objective 7.2.1 is an *integrated transport system for Christchurch District*:

- i. *that is safe and efficient for all transport modes;*
- ii. *that is responsive to the current recovery needs, future needs, and enables economic development, in particular an accessible Central City able to accommodate projected population growth;*
- iii. *that supports safe, healthy and liveable communities by maximising integration with land use;*

- iv. *that reduces dependency on private motor vehicles and promotes the use of public and active transport;*
  - v. *that is managed using the one network approach.*
- 23 I consider the Application is supportive, or at least partially supportive of this objective, in that:
- a) it provides enhanced safety outcomes and maintains transport efficiency. This is achieved through proposed improvements to existing transport infrastructure being designed to enhance the safety and efficiency of the environment.
  - b) it is highly accessible and integrated with the surrounding community, as demonstrated by the accessibility assessment of the location (refer to Assessment Matter 4 of the High Trip Generators rule and the assessment provided in Section 10 of the ITA report). The assessment was agreed to be accurate and accepted by experts that participated in the transport conferencing.
  - c) despite being a primarily car-based activity, is designed in a manner that promotes travel to the site by modes other than private motor vehicle, including active modes and public transport. This is demonstrated through the provision of safe, secure and convenient cycle parking, as well as a commitment to implement a Travel Plan that will help encourage the use of public transport and active modes. Furthermore, modifications have been made to the internal layout of the site to improve the directness of the walking connections between Main North Road and the supermarket thus providing excellent walking integration with the surrounding environment.
- 24 Objective 7.2.1 is supported by eight policies. The policies that are most relevant to this Application are:
- a) 7.2.1.2 High trip generating activities
  - b) 7.2.1.3 Vehicle access and manoeuvring
  - c) 7.2.1.4 Requirements for car parking and loading
  - d) 7.2.1.5 Design of car parking areas and loading areas
  - e) 7.2.1.6 Promote public transport and active transport
  - f) 7.2.1.8 Effects from transport infrastructure

- 25 Policies 7.2.1.2, 7.2.1.3, 7.2.1.4 and 7.2.1.5 are directly covered by the transport rules in the CDP. These are been assessed in exhaustive detail in Section 9 and 10 of the ITA report and agreed by the experts that participated in transport conferencing to be accurate. That said, I appreciate that Policy 7.2.1.2 High-trip generating activities is very important in the context of this application and warrants specific attention.
- 26 Policy 7.2.1.2. is to “...manage the adverse effects of high trip generating activities ... on the transport system.” As the policy is associated with the management of adverse effects, I defer to the evidence of Mr Smith for matters of technical detail. I highlight that Mr Smith concludes the “... effects of the development traffic are considered to be positive, due to the extent of mitigation along Main North Road.” The QTP Peer Review of Traffic Modelling report takes a more conservative view, concluding “the anticipated traffic effects are likely to be less than minor, but (allowing for uncertainty and model limitations) not necessarily an improvement as currently reported.”
- 27 Collectively, Mr Smith and the QTP report conclude that the effects of the Application on the transport system will fall in the spectrum of mildly positive to less than minor adverse effects. I rely on these assessments to conclude that any adverse effects arising from the Application are adequately managed and therefore that the Application is largely supportive of this policy.
- 28 Policy 7.2.1.6 seeks to promote public transport and active transport. The Application supports this policy by providing safe, secure and convenient cycle parking, excellent walking integration with the surrounding community and a commitment to implement a Travel Plan that will help encourage the use of public transport and active modes.
- 29 Policy 7.2.1.8 seeks to avoid or mitigate adverse effects and promote positive effects from new and changed transport infrastructure. As noted above, Mr Smith concludes that not only will adverse effects be avoided or mitigated, but positive effects will be delivered by the new and changed transport infrastructure. The QTP report concludes the traffic effects are likely to be less than minor. Based on these assessments, I am comfortable in concluding that the Application will avoid adverse effects. I also conclude that positive effects will be created by the new and changed transport infrastructure, through enhanced safety outcomes and better pedestrian connectivity. Accordingly, I conclude that the Application is supportive of this policy from a transport perspective.
- 30 Objective 7.2.2 is to *enable Christchurch District's transport system to provide for the transportation needs of people and freight whilst managing adverse effects from the transport system.*

- 31 In my opinion, the Application is not directly applicable to this objective, as it relates to activities in the transport zone. Whilst the proposed activity is not within the transport zone, I accept that some mitigations associated with the proposed activity are in the transport zone, such as the establishment of a new signalised access to the activity, modifications to the adjacent intersection layout and repositioning of the northbound bus stops on Main North Road. Each of these mitigation measures have been agreed through the conferencing process and have been subject to a Road Safety Audit (RSA).
- 32 My colleague, Mr Smith, presents evidence that demonstrates the effects of additional and redistributed traffic created by the Proposal can be absorbed into the receiving transport environment with the proposed mitigations in place. Therefore, I conclude that the transportation needs of people and freight will not be compromised by the Application.
- 33 On this basis, I conclude that the proposed activity is generally supportive or partially supportive of the transport objectives of the CDP.
- 34 The Integrated Transport Assessment Guidelines September 2015 prepared by CCC states that consistency with the following actions of the Christchurch Transport Strategic Plan (2012-2042) (CTSP) is desired:
- g) 1.3.1 – Integration of land use;
  - h) 1.3.3 – Influencing travel choice;
  - i) 2.1.2 – Rebuilding suburban centres
  - j) 2.2.1 – Right location, right design, right function, right time
  - k) 2.2.2 – Transit orientated development;
  - l) 2.3.1 – Safer system;
  - m) 4.1.1 – Reshape travel demand to reduce emissions and oil dependence.
- 35 The assessment of these matters is provided in Section 5 of the ITA report. As noted earlier in my evidence, the experts that participated in conferencing agreed that the ITA was an appropriate evaluation of the proposed development in respect of the Strategic Planning Framework; however, it was noted that a larger range of planning matters will need to be considered as part of the Application, particularly as they relate to the land-use/transport relationship and key activity centres. I respond to this matter in the following two sections of my evidence.
- 36 Overall, I conclude that the proposed activity is generally consistent with the relevant actions set out in the CTSP.

- 37 The primary regional policy document is Environment Canterbury's Regional Policy Statement. Chapter 5 – Land Use and Infrastructure and Chapter 6 – Recovery and Rebuilding of Greater Christchurch are the most applicable chapters from a transport perspective.
- 38 I have not provided an assessment of the Proposal against of each of the objectives and policies in these chapters. However, I have considered the objectives and policies and am satisfied that the Proposal is broadly supportive of the transport objectives and policies of the Regional Policy Statement in that:
- a) The Application is for an activity within an existing urban area;
  - b) The activity is highly accessible by all forms of transport, including active modes and public transport;
  - c) The activity can be integrated into the receiving strategic transport environment and, with agreed mitigations, enhance the safety and maintain the efficiency of the transport system;
  - d) The activity will operate with a Travel Plan in place to encourage staff travel by active modes and public transport to minimise reliance on private motor vehicle travel and thereby reduce energy consumption.
- 39 In summary, I conclude that the Application is supportive or partially supportive of both the intent and specifics of the transport objectives and policies in the CDP, CTSP and RPS.

#### **Matters raised by submitters**

- 40 Environment Canterbury's submission includes matters related to transport objectives and policies.
- 41 One point that runs through the submission is the Application involves moving a supermarket from a Key Activity Centre (KAC) to a site that is not a KAC. To the best of my knowledge, the Application is for the establishment of a supermarket on the proposed site and not for the removal of a supermarket from Northlands Shopping Centre. The assessment should therefore relate to provision of an additional supermarket on the Application Site only.
- 42 Even if the PAK'nSAVE supermarket at Northlands Shopping Centre were to close and another supermarket was not to reopen in that space, there is another major supermarket at Northlands, which will enable existing multi-purpose journeys at the KAC to be maintained.
- 43 Whilst the Application is for a supermarket outside of a KAC, it is important to appreciate that there are established supermarkets in each of the KAC's

throughout the city. This means the provision of an additional supermarket will only enhance rather than detract from travel choice for potential customers, including travel by active modes and public transport given the route is on a major bus corridor.

- 44 The submission also contends that the Application compromises integration of transport infrastructure as the Proposal is located away from the Northlands Shopping Centre KAC. Through the conferencing process and as highlighted in the evidence of Mr Smith, it has been established that the Application has the flexibility to be well integrated with planned and future transport infrastructure both in terms of general traffic and public transport.
- 45 The submission also expresses concern that the additional set of traffic signals could disrupt the existing bus infrastructure and add to travel time on the core Blue Line services. I understand these concerns. In response, the Applicant has demonstrated through modelling that a bus priority head-start at the new traffic signals could be introduced to maintain bus priority along the Main North Road corridor. The scale of benefit derived from this detailed design measure depends on the choice of bus stop location. Accordingly, I am satisfied that this concern has been addressed. The matter can be fully resolved at the detailed design stage of the new traffic signals.
- 46 The NZ Transport Agency's submission is of a similar nature to that of Environment Canterbury. It expresses uncertainty about how the activity will integrate with the transport network, particularly public transport. As noted above, the Application has the flexibility to be well integrated with planned and future transport infrastructure both in terms of general traffic and public transport.
- 47 The NZ Transport Agency's submission also states that consideration will need to be given to the impact of establishing this commercial activity outside of the main activity centres in the context of the Regional Policy Statement. As noted earlier, I believe the Application is broadly supportive of the transport objectives and policies of the Regional Policy Statement given it is for an additional supermarket and does not involve removing a supermarket activity from the Northlands Shopping Centre KAC.
- 48 Overall, I am satisfied that the concerns expressed by Environment Canterbury in their submission are largely unfounded on the basis of the Application being for the provision of an additional supermarket and not the transfer of the service from the Northlands KAC to the Application Site. I am also satisfied that a mitigation measure has been identified and can be introduced to minimise public transport journey times along the Main North Road corridor with the proposed activity in place. The Application has the flexibility to be well integrated with planned and future transport infrastructure both in terms of general traffic and public transport.

## Matters Raised in Section 42A Report

- 49 The CCC staff report raises several concerns regarding the suitability of the Application on transport grounds. My evidence responds to Mr Mark Gregory's assessment of the Application against the transportation objectives and policies of local and regional planning instruments. My colleague, Mr Smith, responds to the assessment of transport effects arising from the Proposal.
- 50 Mr Gregory's policy assessment is incomplete in that it only highlights those policies where he deems the Application to not be supportive. Whilst it would be ideal for any activity to be fully supportive of every policy matter, in my experience this is often not the situation for discretionary activities, such as the Application.
- 51 I am aware that extensive effort has been made by the Applicant to maximise the extent to which the Application is supportive of transport policy matters and where it cannot be fully supportive, has taken measures (including design modifications and through proposed conditions) to ensure the Application is partially supportive and avoided being not supportive or contrary to policy matters.
- 52 In Paragraph 85 of Mr Gregory's evidence, he concludes that the effects arising from "... *changes to the network will outweigh the benefits of reducing the u-turn manoeuvres.*" This is a highly simplistic and incomplete view of the safety and efficiency benefits the proposed activity will deliver. Other safety and efficiency benefits of the Application that Mr Gregory does not appear to have considered include:
- a) Provision of enhanced pedestrian crossing facilities on the road network;
  - b) Increased capacity of the Main North / Northcote / QE II intersection to improve efficiency outcomes and enhanced safety outcomes through the provision of fully controlled right turn movements;
  - c) Modifications made to the proposal to address all issues raised in the RSA.
- 53 In Paragraph's 87 to 98 of Mr Gregory's evidence, a number of policy matters are listed. Whilst it is not stated explicitly, I presume that Mr Gregory does not believe the Application supports the policy matters he has listed.
- 54 I agree that the Application cannot be considered fully supportive of all policy matters he has listed. However, I am satisfied that the Application is at least partially supportive of all policy matters listed. I would also like to point out that many of the policy matters are covered directly by the transport rules in the CDP, and these are been assessed in exhaustive detail in Sections 9 and 10 of the ITA report and agreed by the experts that participated in transport conferencing to be accurate.

- 55 I am happy to answer any specific questions the commissioner may have about the extent to which the Application aligns any transportation policy matter.
- 56 Paragraph's 99 to 105 of Mr Gregory's evidence address the Greater Christchurch Urban Development Strategy (GCUDS) / Greater Christchurch Settlement Pattern Update (2018 – 48). Aside from listing a range of facts about what the GCUDS is and seeks to achieve, Mr Gregory comments incorrectly in Paragraph 102 that Application involves the movement of a supermarket away from the Northlands Shopping Centre. As I have noted several times, the Application is for the establishment of a supermarket on the Application Site and not for the removal of a supermarket from Northlands Shopping Centre.
- 57 In Paragraph 105 of Mr Gregory's evidence he states that Figure 6 from 'Our Space' *"explicitly shows Main North Road as a core PT route, identified as a rapid transit corridor"*. This is another factual inaccuracy of Mr Gregory's evidence. The 'Our Space' document explicitly notes that the rapid transit corridors are indicative only and there is no direct reference to these being on Main North Road. That document notes the *"Routes for proposed rapid transit, other public transport services and cycling are all indicative unless already adopted in relevant Council plans."*
- 58 In my view, whilst Main North Road could be an option for a northern rapid transit corridor, it is disingenuous of Mr Gregory to present this as fact.
- 59 Paragraph's 106 to 114 of Mr Gregory's evidence discuss aspects of the Canterbury Regional Policy Statement (CRPS) and Regional Public Transport Plan (RPTP). Mr Gregory highlights that the proposed activity is located on a public transport priority corridor that in the short to medium term is proposed to be enhanced with better service frequencies as part of a strategy to improve accessibility to public transport and increase patronage. In my view, locating a high trip generating activity on this corridor is a highly positive and supporting measure of this initiative.
- 60 Furthermore, the Applicant has responded to the Mr Gregory's concerns regarding the need for improved connectivity between the bus stops on Main North Road and the supermarket and agreed that the signalised access could be designed with a priority bus signal to minimise delays for buses. With these changes in place, I believe the concerns of Mr Gregory are fully addressed.
- 61 For the aforementioned reasons, I am of the opinion that the Application is supportive of transport policy matters and where it cannot be fully supportive, incorporates measures (including design modifications and through proposed conditions) to ensure the Application is partially supportive and avoids being not supportive or contrary to policy matters.



## **Conclusion**

- 62 It is my opinion that the Application is supportive or partially supportive of both the intent and specifics of the transport objectives and policies of key strategic planning instruments.
- 63 I consider all transport planning matters raised by submitters and in the CCC staff report have now either been addressed through design modifications and proposed conditions or are unfounded.

A handwritten signature in blue ink, appearing to read 'J. P. Durdin'.

**Joseph Paul Durdin**

**19 November 2019**

Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of David John Robert Smith**

19 November 2019

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**Applicant's solicitors:**

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**anderson  
lloyd.**

## Introduction

- 1 My name is David John Robert Smith.
- 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.
- 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 seven years. I lead a range of development planning and transportation planning projects for both public and private sector clients.
- 4 My previous work experience includes 20 years of transportation planning and modelling experience. I have developed, maintained and applied transportation models throughout New Zealand, Australia and Malaysia since 2000 and have managed and led numerous projects related to transportation business cases, transportation research and Resource Management Act (**RMA**) related matters for both 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 represented Auckland Council in their submission on the East-West Link and represented Selwyn District Council and Queenstown-Lakes District Council in Plan Change hearings.
- 5 My role in relation to Foodstuffs (South Island) Properties Limited's (**Foodstuffs**) application has been to provide advice in relation to traffic and transportation matters.
- 6 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application** and **Application Site**).
- 7 Under the District Plan, the proposal triggers the high trip generator rule as it is larger than 500 sqm Gross Floor Area (**GFA**) of retail activity, requiring a full Integrated Transportation Assessment (**ITA**) report to be prepared and lodged with the application. I prepared the ITA report to the Assessment of

Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix F of the AEE.

- 8 In preparing this statement of evidence I have considered the following documents:
- (a) the AEE accompanying the Application;
  - (b) submissions relevant to my area of expertise;
  - (c) the statement of evidence on transport policy matters prepared by Mr Paul Durdin;
  - (d) the transportation effects section of the Section 42A report including the evidence prepared by Mr Gregory included as Appendix B to the section 42A report;
  - (e) peer review of transportation modelling by Mr Falconer from QTP.
- 9 I have undertaken several site visits in relation to this application and observed the local traffic environment.

#### **Code of Conduct for Expert Witnesses**

- 10 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

#### **Scope of Evidence**

- 11 I have prepared evidence in relation to traffic and transportation matters. This includes:
- (a) the existing environment of the Application Site;
  - (b) transport elements of the Application;
  - (c) the key findings of my assessment of effects;
  - (d) expert conferencing - transport modelling and general transportation;
  - (e) matters raised by submitters to the Application;

- (f) matters raised in the Christchurch City Council's (**Council**) staff report issued under s42A of the RMA; and
- (g) conditions of consent.

### **Executive Summary**

- 12 The Application Site is located on Main North Road, a four-lane Minor Arterial with peak period bus lanes in operation, and has access via a Right-Of-Way to Northcote Road, a two lane Major Arterial and is currently a busy traffic environment. The future receiving environment will be quite different to the current environment due to the impact of the Christchurch Northern Corridor (**CNC**), which results in a reduction in traffic volumes on Main North Road adjacent to the site of around 17% from 2900 vehicles per hour to 2400 vehicles per hour. This reduction results in an improved performance on the Main North Road corridor with reduced congestion and improved travel times along the corridor.
- 13 A key feature of the Proposal is a new signalised intersection on Main North Road providing safer and more efficient access for vehicles to and from the Application Site and improved pedestrian access across Main North Road. This when combined with the optimised operation of the Main North Road corridor results in a significant reduction in dangerous U-turn manoeuvres, and in local traffic circulating through residential streets to connect to the wider network.
- 14 A full Integrated Transport Assessment was prepared to support the proposal as the size of the supermarket triggers the High Trip Generator rule. To assess the effects of the Proposal on the surrounding transport network a microsimulation model was set up in s-Paramics (**Paramics**). The model was developed in a collaborative manner through ongoing engagement with Council staff since November 2018 and is informed by Council's CAST model.
- 15 The modelling results indicate that the development traffic can be accommodated by the surrounding road network when the CNC is operational. Some elements of the network experience improved performance due to the introduction of the Application Site access signals on Main North Road. The lane configuration and phasing changes proposed at the QEII / Main North Road signals will result in operational and safety benefits, and was agreed through expert conferencing to be beneficial irrespective of the development.
- 16 I have assessed the actual or potential adverse effects of the Proposal, and considered the transport related rules of the Christchurch District Plan, with particular consideration given to non-compliance with rules regarding access design, and number of vehicle crossings. Due to mitigating design elements of

the Proposal, I conclude that no adverse effects are expected as a result of non-compliances.

- 17 Integration with public transportation services is proposed to be achieved through a design offering flexibility to connect to bus stops through strong pedestrian connections from the supermarket front door and Main North Road. Other key features to support integration include the installation of wayfinding and an electronic messaging board in the supermarket foyer to advise customers of bus services and arrival times.
- 18 Consistent with local and regional transport policy, the development will promote active transport modes by providing excellent pedestrian and cyclist infrastructure such as signalised pedestrian crossings, pedestrian linkages within the car park, and visitor and staff cycle parking. The development is well positioned to benefit from public transport services along Main North Road. Alternative travel modes to private car will be promoted by creating personalised Travel Plans for both supermarket and Foodstuffs Head Office staff.
- 19 The Application Site has direct access to the Christchurch Arterial Road Network via multiple vehicle crossings located on Main North Road and Northcote Road and is well positioned from a transport perspective to be an Emergency Coordination Facility. These roads would receive immediate attention from Council following a disaster event due to their important function in the road network hierarchy. Therefore, this site, at the intersection of two arterial roads, is well located in terms of access to the strategic road network to support Christchurch City following a disaster event.
- 20 I consider that with the improvements proposed as part of the Application, the surrounding traffic network can accommodate the additional demands and traffic redistribution of the Proposal without deterioration in network performance. Some elements of the network experience improved performance due to the introduction the Application Site access signals on Main North Road and safer and more efficient lane configuration and phasing proposed at the QEII / Main North Road signals. Overall the effects of the development traffic are considered to be positive.
- 21 I have reviewed the issues raised through submissions and the six concerns put forward in the Section 42A report that are addressed in order for the Proposal to be supported. I have given due regard to all of these matters and consider that any outstanding matters can be satisfactorily resolved through conditions of consent or aspects of the design.
- 22 I consider the proposed development can be supported from a traffic and transportation perspective and am of the view that there are no traffic related reasons why consent should not be granted.

## The existing environment

- 23 The existing site information is reported in section 2 of the ITA. This describes the location, current industrial zoning and existing land use activities on the site as shown in Figure 1 along with the current access arrangements.



Figure 1 Existing Application Site Layout and Access Locations

- 24 Section 3 of the ITA describes the existing roading environment with some of the key features as follows:
- (a) Main North Road provides primary access to the site, is classified as a Minor Arterial in the Christchurch District Plan (**CDP**) and has two lanes of traffic and a bus lane/parking lane in each direction separated by a 4m wide raised median.
  - (b) Northcote Road provides direct access to the existing retail Commercial Local Zone, is a two lane undivided carriageway and is classified as a Major Arterial in the CDP.
  - (c) Lydia Street is a two-way two-lane road connecting the Application Site to Northcote Road via a Right of Way (**ROW**).

- (d) A ROW dissects the Foodstuffs Site and connects Main North Road to Lydia Street.
  - (e) The signalised four leg intersection of Main North Road, QEII Drive and Northcote Road permits all vehicle turning movements with right turn bays and left slip lanes provided on all approaches.
  - (f) The signalised three leg intersection of Main North Road and Cranford Street permits all vehicle turning movements with right turn bays and left slip lanes provided on applicable approaches.
- 25 The Application Site has excellent connectivity to the Arterial road network of Christchurch and is well connected by public transport. The bus stop for all northbound services is located outside the site. The bus stop for southbound services is located in line with the site across Main North Road. Bus shelters are provided at the two bus stops on Main North Road with the high frequency Blue Line and three other regular services passing the Application Site.
- 26 Pedestrian footpaths exist on both Main North Road and Northcote Road corridors and formal crossing facilities across Main North Road are currently only provided at the Cranford Street and Northcote Road signalised intersections as shown in Figure 2.
- 27 Cycle routes in the vicinity of the Application Site (shown in Figure 2) include the Northern Line Cycleway which connects Belfast and the Central City and can be accessed at the Northcote Road/ Vagues Road intersection located less than 1km west of the site. Cyclists are also permitted to use the bus lanes on Main North Road and the Papanui Parallel cycleway is located within 700m of the Application Site.



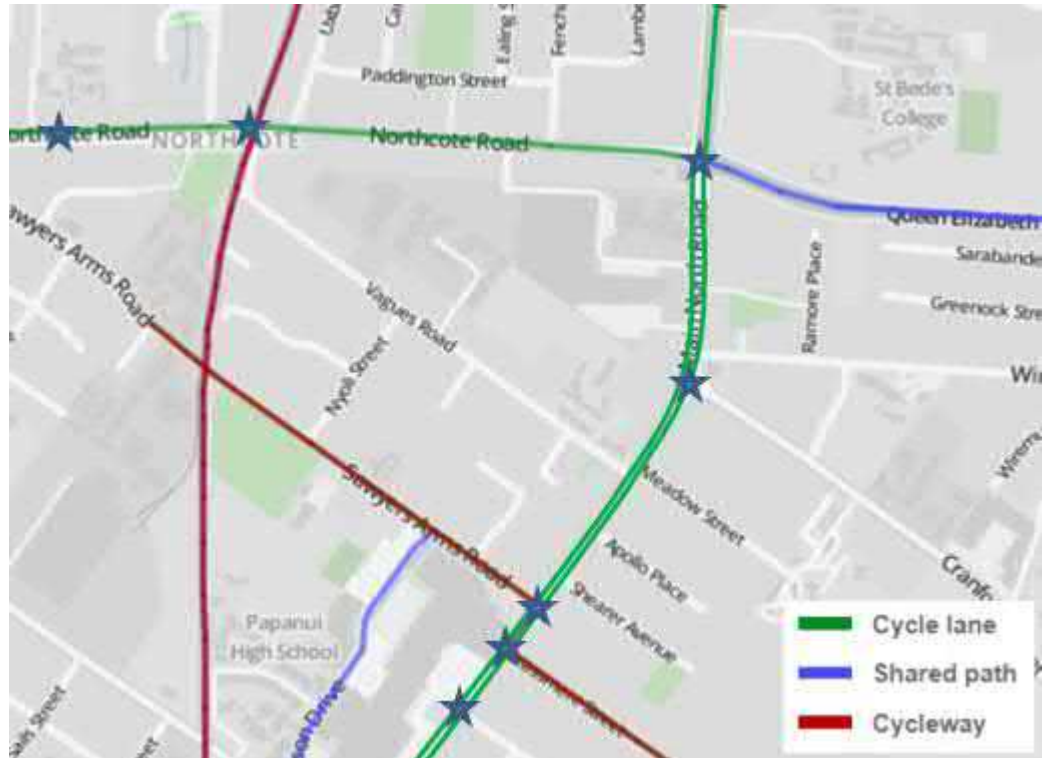


Figure 2 Location of cycle ways and pedestrian crossings (noted by stars)

- 28 I have analysed the safety performance of the local network adjacent to the site using the NZ Transport Agency Crash Analysis System (**CAS**) and this is presented in section 3.5 of the ITA. I concluded that there are currently a relatively large number of reported crashes on the local road environment in the last five years which is a reflection of the high vehicle volumes on both the Main North Road and Northcote Road corridors and the level of conflict at the two signalised intersections especially for right turning vehicles.

### Transportation elements of the Proposal

- 29 A description of the Proposal is set out in section 4 of the ITA, and some of the key transportation elements of the Proposal are as follows:
- a) New 6890m<sup>2</sup> PAK'nSAVE supermarket, with a PAK'nSAVE fuel facility;
  - b) Primary access is a new signalised intersection on Main North Road providing all movement access to / from the proposed supermarket, existing retail buildings and Foodstuffs Head Office;
  - c) Provision of car parking, cycle parking, site access, vehicle delivery, servicing and on-site manoeuvring arrangements in accordance with CDP requirements;
  - d) Proposed changes to the operation and layout of the Main North Road / QEII Drive / Northcote Road intersection to accommodate likely future

changes in travel demand along the corridor including the proposed supermarket traffic;

- e) Relocation of primary car park access point to Foodstuffs Head Office further South on Main North Road as a result of the above proposed supermarket establishment, including new vehicle access arrangements and relocation of six car parks;
  - f) Improved vehicle integration between existing Foodstuffs Head Office and proposed supermarket activities;
  - g) Retention of the existing retail building and automotive servicing facility located at 3-7 Northcote Road (the corner of Main North Road and Northcote Road);
  - h) Associated car park and access redesign to integrate the 3-7 Northcote Road site with the proposed supermarket site.
- 30 The layout of the proposal is available in the Architectural Plans which are Appendix B in the AEE.
- 31 The proposed access arrangements for the site are shown in Figure 3 and will restrict access to the site as follows:
- a) Access 1 - Left in only (existing)
  - b) Access 2 - Left-in/ left out access (existing)
  - c) Access 3 - New signalised access intersection - All turning movements
  - d) Access 4 - Left-in/ left-out access (relocated)
  - e) Access 5 - Left in/ left out access (existing) - after hours only
  - f) Access 6 - All turning movements (existing)
  - g) Access 7 - Left-in/ left out access (existing)

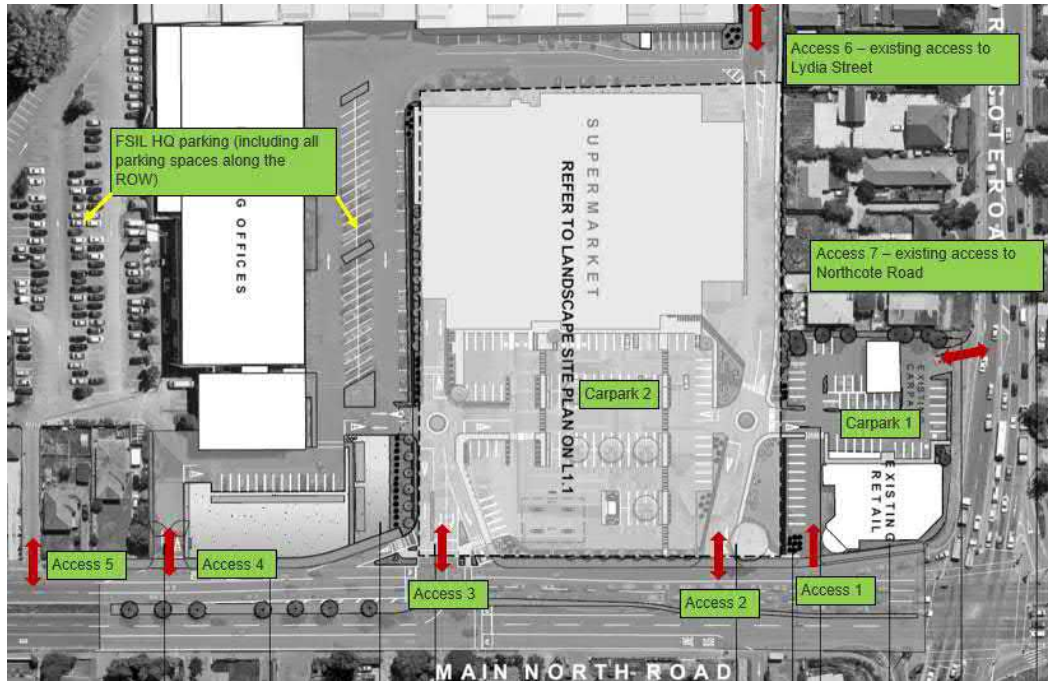


Figure 3 Application Site access locations

32 The proposed car parking changes are summarised in Table 1 with more detail provided in section 7.3 of the ITA.

Car park	Existing	Proposed	Net Change
General Retail (Car park 1)	49	49	No change
PAK'nSAVE incl basement (Car park 2)	78	278	+200
Foodstuffs Head Office (Car park 3)	320	320	No change

Table 1 Summary of parking changes

### Assessment of effects

33 The AEE includes consideration of the integration of the Proposal within the strategic planning framework. This is presented in section 5 of the ITA and I defer to the evidence of Mr Durdin in addressing this matter.

34 Assessment matters that I address in subsequent sections of my evidence include:

- a) Accessibility of the proposal including as an Emergency Coordination Facility
- b) Travel characteristics and trip generation
- c) Transport modelling assessment

## Accessibility of the Proposal

- 35 The accessibility of the development for all users and the suitability of all modes serving the development has been assessed for all modes of transport including consideration of emergency vehicles.
- 36 The Application Site is located on a key bus corridor with high frequency services. The new signalised intersection will include a pedestrian crossing which will give customers a safe passage to the bus stop located in the southbound direction. The internal pedestrian connections provide direct and protected (signalised or raised crossings) pedestrian access to the bus stops on both sides of Main North Road.
- 37 The site has been designed to ensure that pedestrians can conveniently walk between the developments within the Application Site and the adjacent road network. The following pedestrian connections are included within the application:
- a) A two staged signalised pedestrian crossing across Main North Road;
  - b) A signalised pedestrian crossing across the supermarket access on Main North Road;
  - c) A pedestrian path along the ROW connecting the Lydia Street footpath to the supermarket front entrance;
  - d) A pedestrian path connecting Northcote Road to the supermarket through the general retail/ oil changes site;
  - e) Two pedestrian paths connecting the supermarket to the footpath on Main North Road as discussed in the ITA;
  - f) Subsequent to the ITA, the addition of a third southern pedestrian connection directly from the signalised intersection and the main entrance with a bridge across the basement car park ramp<sup>1</sup>;
  - g) A pedestrian connection between Foodstuffs Head Office and the supermarket; and
  - h) Wayfinding signage to encourage walking.
- 38 Pedestrian accessibility and safety will be significantly improved by the two-staged pedestrian crossing with a protected pedestrian refuge on the north

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<sup>1</sup> The ramp has been designed to accommodate this with a maximum grade of 1:5 for 13.7m with 1:10 transitions at the top and bottom of the ramp and is fully compliant with NZ standard

approach of the new signalised intersection on Main North Road. Proposed pedestrian connections are shown in Figure 4



Figure 4 Pedestrian connectivity and crossing locations

39 The provision of cycle parking and end of trip facilities will encourage customers and employees to cycle. There is direct connectivity to the Main North Road bus lanes (which are available for cyclists to share) via the signalised access, which in turn link to the QEII Drive shared path and Northcote Road cycle lane. A more direct connection to Northcote Road and the Northern Line Cycleway is available via the ROW to the north of the supermarket as shown in Figure 5.



Figure 5 Connectivity to cycle network



- 40 The car park has been designed in line with Crime Prevention Through Environmental Design (**CPTED**) principles. All PAK'nSAVE customer cycle parking spaces will be provided along the main façade of the supermarket to provide passive surveillance of bicycles. The car park and areas with pedestrian movement will be lit to an appropriate level to maximise safety.
- 41 Integration between the Application Site and existing (and future) public transportation services is proposed to be achieved through:
- a) A site design offering flexibility as to the preferred location of bus stop, through multiple strong pedestrian connections to Main North Road;
  - b) Wayfinding to direct customers to the location of the bus stop which can be further enhanced through paving on walkways and the installation of a covered bus stop with a strong 'sense-of place';
  - c) Addition of a two-stage pedestrian crossing at the new signals to enable public transport users to safely connect to southbound services;
  - d) Engagement with Council, Christchurch Transport Operations Centre (**CTOC**) and Environment Canterbury in the detailed design of the new signalised access to integrate design elements to maintain or enhance public transport priority on the Main North Road corridor; and
  - e) Installation of an electronic messaging board in the supermarket foyer to advise customers of bus services and arrival times, which is included as a condition of consent.

### **Emergency Coordination Facility**

- 42 The proposal includes an Emergency Coordination Facility (**ECF**) which will operate temporarily during a Civil Defence emergency. During an emergency, road network operations are likely to experience significant disruptions which will vary greatly depending on the nature, location and extent of the emergency.
- 43 I consider from a transportation perspective that the site is well located as an ECF. In an emergency, vehicle access is critical to the operations of the ECF. The site has direct access to the Christchurch Arterial Road Network via multiple vehicle crossings located on Main North Road and Northcote Road. This site, at the intersection of two arterial roads, is well located in terms of access to the strategic road network post event. Three vehicle accesses (two on Main North Road and the Lydia Street ROW) can be used by a 19m semi-trailer to access the loading area and car park during these times.
- 44 Helicopter access to the ECF may also be necessary. Subject to landscaping requirements (I defer to Mr Milne in that regard), the centre of the PAK'nSAVE car

park is large enough (a diameter of 35m is required) that if it were clear of any obstructions a helicopter could land if or when necessary. There are also appropriate places for landings on Foodstuffs Head Office site, retail site adjacent to Oil Changers, and on other nearby properties such as St Bede's College playing fields, or St Joseph's School.

### Travel characteristics and trip generation

- 45 The vehicle trip generation presented in the ITA associated with the proposal provides the foundation for the traffic modelling assessment and has been based on industry best practice sources including the Trips Database Bureau, NZ Transport Agency Research Report 453 and Christchurch City Council Development Contributions Policy (DCP) 2009.
- 46 The trip generation assumptions are included in Table 2 and demonstrate that the site is likely to produce 1013<sup>2</sup> two-way trips in evening peak hour.

Land Use	GFA/ Units	Trip Rate	Future Trips per hour
General Retail	774m <sup>2</sup>	18.9 per 100m <sup>2</sup>	146
PAK'nSAVE	6890m <sup>2</sup>	12.5 per 100m <sup>2</sup>	861
Fuel Court	8 fuel pumps	15 per pump	6 (95% are internal)
Total new trips	-	-	1013

Table 2 Trip generation assumptions

- 47 The supermarket trip generation includes 20% of vehicles as new trips on the road network (primary), 50% of trips are currently on the network but will divert from their current route to visit the supermarket (diverted), and the remaining 30% of trips are passing on Main North Road and will drop into the supermarket (pass by trips)<sup>3</sup>. I consider that these figures are appropriate given the location and scale of the supermarket.
- 48 The Trips Database Bureau (**TDB**) online trip and parking database provides guidance to the likely pedestrian, cyclist and bus passenger trip generation of the development. Three supermarket sites in Christchurch are included on the TDB database which have an average of 74% car driver, 2.5% car passenger, 19.5% pedestrian, 2.5% cyclist and a 1.5% bus passenger mode share.

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<sup>2</sup> These figures differ slightly from those in Table 7.1 of the ITA which were derived from CAST model two hour demand matrices

- 49 The supermarket is anticipated to generate approximately 861 vehicle movements (from Table 2), 233 pedestrian movements, 31 cycle movements and 18 bus passenger movements in the evening peak hour. The Application Site is located with excellent integration with these transport modes as described in paragraphs 35-39 of my evidence.
- 50 The supermarket will be serviced by approximately 25-30 deliveries<sup>4</sup> a day (50-60 vehicle movements a day) shared across two service/delivery yards and accessible via Lydia Street. In order to minimise the conflict between delivery vehicles and customer vehicles and ensure safe and efficient servicing of the site the following conditions are recommended:
- a) Restrict service and delivery vehicles to visiting the supermarket outside of the evening peak hours of 3pm through 6pm on weekdays.
  - b) All delivery and servicing vehicles shall access the site via Lydia Street during supermarket operating hours.
  - c) Semi-trailer and fuel tanker deliveries shall only turn right from Northcote Road into Lydia Street to service the site.
  - d) Restrict fuel tanker movements to only occur outside of supermarket operating hours.
- 51 Fuel tankers will service the fuel pump facility by entering the site via the Lydia Street ROW and exit via the signalised intersection using the fuel tanker only exit. The fuel tanker will access the site outside of the supermarket operating hours to eliminate any conflict with customers.

### **Transport modelling assessment - background**

- 52 A microsimulation transportation model (the Paramics model) has been developed with s-Paramics software to support the assessment of effects.
- 53 I have worked collaboratively with Council modelling staff from November 2018 to ensure that the model has been developed in accordance with best practice and integrates with Council's other transportation modelling tools, namely the Christchurch Transport Model (**CTM**) and Christchurch Assignment and Simulation Transport (**CAST**) Model. The model takes travel demands extracted from CAST supplied by Council's staff. This choice of models (CAST and Paramics) used to support this assessment was agreed with Council following receipt of the first Section 92 request in late 2018.

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<sup>4</sup> Including an estimated two heavy truck and trailer, four semi-trailer, 11 medium truck, four light truck and seven delivery vans based on estimates received from Foodstuffs



- 54 The Paramics model has been calibrated and validated using a base year of 2018 with future assessment years for 2021 and 2031 developed. The modelled periods include typical weekday morning peak period (7am to 9am), evening warm-up period (3pm to 4pm) and evening peak period (4pm to 6pm). For more details about the model calibration and validation, this is documented in Appendix A of the ITA.
- 55 In Section 8 of the ITA I have detailed the assumptions and outcomes of several modelling scenarios that were undertaken based on the best available information at the time that the resource consent application was lodged and subsequently publicly notified.
- 56 Subsequent to notification, I have worked closely with Mr Gregory and the wider team from Council to further understand and agree on a number of assumptions relating to the future receiving environment. There were several additional iterations of transport modelling that were completed to capture the outcomes of these discussions.
- 57 This collaborative approach to revisiting the modelling has led to four transport modelling conferencing sessions which have included representatives from Council, NZ Transport Agency and CTOC. I address conferencing in more details in paragraphs 87-103 of my evidence.
- 58 The modelling assumptions scoped and agreed through conferencing, differ from those recorded in the ITA as follows:
- a) The 2021 and 2031 permitted baseline includes traffic volumes from the existing Toll operations on the 2 Lydia Street site which is consistent with the current industrial zoning. This differs from the 2031 ITA modelling which assumed the existing consent for a Sports Facility on 2 Lydia Street was implemented which would generate higher traffic demands in the evening peak period. The 2021 modelling assumed the consent was not implemented and the site was vacant<sup>5</sup>.
  - b) The phasing and cycle times for the operation of the Main North Road / Northcote Road / QEII Drive intersection and other signals are all fixed at 85 seconds which is consistent with current network operation. The signal phase times at the intersection have been modified to accommodate pedestrian crosswalk movements with full pedestrian protection ensuring the phase time meets the minimum pedestrian movement crossing time

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<sup>5</sup> It has subsequently been observed through an independent modelling peer review undertaken by Mr Falconer of QTP that at 2021 the 2 Lydia Street should have included the assumed Toll operations. Mr Falconer concludes this will have no material effect on the assessment.

when the usual traffic demands of the phase would not require this amount of time.

- c) The layout and phasing of the Main North Road / Northcote Road / QEII Drive intersection without the development has been modified to be consistent with that which was proposed in the ITA as mitigation. This includes the reallocation of lanes on the Main North Road southern approach to enable a dual right turn and the introduction of split phasing from the two Main North Road approaches and removal of filter right turns. This treatment is now considered by experts to be beneficial irrespective of the development and is included in the base (without development) models.

59 The assessment has focused on the evening peak period that was agreed between conferencing experts as the critical period of operation. Additional transport modelling has been undertaken for the morning peak and interpeak (middle of the day) periods and is recorded in the Transportation Modelling Joint Witness Statements, including the acknowledgement that the evening peak period remains the most relevant focus of the assessment of effects.

#### **Re-routing and re-distribution of traffic in modelling**

60 During the transportation modelling concerns were raised by Mr Clark and Mr Sissons regarding the reduction in flows on Main North Road directly adjacent to the supermarket when the development traffic has been added. I am of the view that there are two contributing factors as recorded in section 2 of the Transportation Modelling Joint Witness Statement (**JWS**) 4.

61 *“The experts note that this is likely to be due in part to the traffic re-distribution and re-routing in the models when development traffic is added, however it is also due to the additional flexibility and route choice on the network as a result of the introduction of the additional signalised intersection on Main North Road (between QEII Drive and Cranford Street).”*

62 The additional flexibility and route choice on the network are in my view a positive outcome of the development and are discussed in detail in the ITA and paragraph 83 of my evidence.

63 The following addresses the re-routing and re-distribution of traffic within the transportation modelling outputs presented in the ITA and Appendix A.

64 There are two distinct elements which I consider are relevant to this matter:

- a) Re-distribution and re-routing of trips within Council's CAST model which provides the input demand matrices to the Paramics model; and

b) Re-routing of trips within the Paramics model.

65 Mr Gregory provided the CAST demands for the Paramics modelling which my team under my direction have imported into Paramics. This methodology was agreed with Mr Gregory as an appropriate methodology for undertaking the modelling during our engagement with Council in late 2018 and subsequently re-confirmed prior to caucusing. I have reviewed the CAST demands provided by Mr Gregory prior to accepting them as suitable inputs to the Paramics, notwithstanding the limitations of CAST.

66 Mr Gregory has provided an explanation for the re-distribution and re-routing of traffic within CAST in paragraphs 228-229 of his evidence as follows:

*“This is because the CAST model uses a method known as ‘equilibrium assignment’, which is the cornerstone of all big transport models. Equilibrium assignment is a process where software iteratively ‘spreads’ traffic across the network, until the distribution of trips reaches a state by which no single user can improve their trip cost. This is a method used by all larger ‘static’ models, (although CAST does it particularly well), which is best described as a generalisation of what would be in reality a series of complex route choice decisions made by users, often in reaction to changes in traffic conditions.*

*The published criticism of equilibrium assignment is that it would consider all users in a network to have omniscient knowledge of conditions, both present and future.”*

67 I agree with Mr Gregory's explanation of the limitations of the equilibrium assignment algorithms for loading traffic demand onto the road network. I note that other assignment methods are extensively used throughout New Zealand including an iterative incremental assignment method which are less sensitive to this phenomenon.

68 I have also extensively checked the conversion of the CAST output demands to the Paramics model and can confirm there is no loss of trips occurring in the conversion process. I have also checked for significant re-routing issues inside Paramics which may be contributing to the concerns raised by Mr Clark and Mr Sissons during conferencing and can confirm that there are no anomalies. As such it is my view that the reduction in some traffic volumes is isolated to the limitations of the equilibrium assignment methodology in CAST.

69 I have discussed this matter with Mr Falconer who has undertaken an independent peer review of the transportation model and this is addressed in the following paragraphs.

## Transport modelling peer review

70 The Paramics model has also been independently peer reviewed by Mr Falconer from Quality Transport Planning Limited (**QTP**). Mr Falconer is a recognised expert in transportation modelling and is familiar with both the CAST model having developed and maintained it for Council, and is an experienced Paramics modeller.

71 Following the receipt of Mr Falconer's peer review my team have responded to the issues raised and provided additional information in that regard. Mr Falconer has completed his peer review and in paragraph 6.2.6 of his technical note concludes:

*"...there is strong evidence that the model is in the right ball-park and adequately reflecting future year operation with development in place. It is reasonably clear that the anticipated traffic effects are likely to be less than minor, but (allowing for uncertainty and model limitations) not necessarily an improvement as currently reported."*

72 I am satisfied with Mr Falconer's findings and remain of the view that the modelling that has been undertaken has been thorough, robust and can be relied upon to inform the AEE. I present the results of the modelling assessment in the following paragraphs.

## Transport modelling assessment - results

73 The following summary of results relates to the outputs presented in Appendix A to my evidence, but I note this is largely consistent with the findings described in the ITA.

74 The future receiving environment will be different to the current environment due to the impact of the CNC, which results in a reduction in traffic volumes on Main North Road adjacent to the site of around 17% from 2900 vehicles per hour to 2400 vehicles per hour. This reduction results in an improved performance on the Main North Road corridor with reduced congestion and improved travel times along the corridor. The modelled performance of each of the key intersections in the vicinity is presented as Level of Service (**LoS**) in Table 3. This compares the intersection LoS in 2018, and in 2021 and 2031 with and without the development traffic.

75 LoS is a qualitative metric used by traffic engineers to describe the performance of an intersection or road corridor. The descriptions of each LoS category from A through to F are included in Table 1.1 of Appendix A and are synonymous with the quantum of delay faced by general traffic. Most importantly I note that LoS F (where average delay across the hour exceed 80 seconds at signals/roundabouts

and 50 seconds on minor leg of give way/stop controlled intersections) is generally considered to describe an environment which is at or over capacity. I consider that LoS E or better would generally be acceptable in urban areas during peak periods.

Intersection	2018	2021 no Dev	2021 with Dev	2031 no dev	2031 with dev
Northcote/Vagues	C	C	<b>B</b>	B	B
Northcote/Lydia	D	D	<b>C</b>	E	<b>C</b>
Main Nth/QEII/Northcote	F	E	<b>D</b>	F	<b>E</b>
Main Nth/access signals	n/a	n/a	C	n/a	D
Main Nth/Cranford	E	C	C	E	E
Main Nth/Vagues	F	F	F	F	F
Main Nth/Sawyers Arms	D	C	C	E	<b>C</b>

Table 3 Intersection Level of Service summary

- 76 The results demonstrate that between 2018 and 2021 when the CNC is scheduled to be operational, LoS is expected to improve from LoS F to E at the Main North Road / QEII Drive / Northcote Road signals and from LoS E to C at Main North Road / Cranford Street.
- 77 The only intersection operating at poor LoS is Main North Road / Vagues Road due to delays for right turners turning on to Main North Road. I have observed most vehicles currently avoid this difficult right turn and use the Main North Road / Sawyers Arms Road intersection (which is signalised) and operates well.
- 78 The addition of development traffic in 2021 leads to improved LoS at the three key intersections along Northcote Road as the addition of the new site access signals removes the need for vehicles wishing to travel south from undertaking U-turn manoeuvres at the QEII Drive signals or travelling south via Northcote Road. I also note that the right turn out of Lydia Street is banned which results in an improvement in the efficiency and safety performance of this intersection.
- 79 Between 2021 and 2031 the Cranford Basin link is introduced in the transportation model which provides a local link between Cranford Street and the Papanui commercial area. This direct connection results in a further reduction in traffic flow through the Main North Road / Cranford Street intersection. There is also increased growth on the Main North Road corridor to the north of QEII Drive and along both Northcote Road and QE II Drive.
- 80 The addition of development traffic in 2031 results in improved LoS at Northcote Road / Lydia Street, Main North Road / QEII Drive / Northcote Road and Main North Road / Sawyers Arms Road for the same reasons as highlighted in the 2021 modelling. All intersections in 2021 and 2031 operate at LoS E or better

with the exception on Main North Road / Vagues Road which is an existing issue during peak times and is not worsened by the development.

81 I have also extracted travel times for general traffic and buses (the Blue Line) to demonstrate the generally improved performance across the local network. These changes in travel time are summarised in Table 4.

Route	2021 general traffic	2031 general traffic	2021 buses (Blue Line)	2031 buses (Blue Line)
Main North Road northbound	-3	-111	-25	-58
Main North Road southbound	26	20	33	1
Cranford St to Main North Road northbound	22	3	n/a	n/a
Cranford St to Main North Road southbound	12	12	n/a	n/a
Northcote Rd to QEII Drive eastbound	2	-33	n/a	n/a
QEII Drive to Northcote Rd westbound	-6	-9	n/a	n/a

Table 4 Travel time changes (in seconds) with development (negative is improvement)

82 The travel time results show some improvements in travel times especially the critical Main North Road corridor in the northbound direction which is the commuter tidal flow direction in the evening peak period. The improved operation due to the coordination of the Main North Road traffic signals and providing more flexibility for Foodstuffs head office vehicles to access the wider network results in overall improvements in travel times. This is offset by modest increases in travel times for the southbound direction due to the introduction of the new set of signals, acknowledging that the signal coordination that has been introduced supports northbound movement. I am of the view that the increases in travel time are modest and are appropriately offset by improvements in the northbound direction.

### Summary of Assessment of Effects

83 I conclude that the modelling results demonstrate a positive effect on the performance of the transport network due to the extent of infrastructure improvements provided as part of the Application. These benefits are delivered as follows:

- a) the improved layout and phasing of the Main North Road signals enables more flexibility in allocated green time to the Main North Road northern and southern approaches;
- b) the new midblock signals on Main North Road provide a safe facility for Foodstuffs head office traffic to turn right in and right out of the site

reducing U-turns at Main North Road, and removing circuitous travel via Northcote, Sawyers Arms and/or Vagues Roads;

- c) connectivity through the site has been improved such that divert and pass-by vehicles can visit the site without passing through the Main North Rd/QEII/Northcote signals; and
- d) the inclusion of midblock signals on Main North Road allows for more controlled progression of traffic along the corridor so the impact of coordination has been improved.

84 I consider that there are several safety benefits arising as a result of the changes proposed as part of the development application. These are as follows:

- a) Improved pedestrian safety with a fully protected two stage crossing at the new access signals proposed on Main North Road;
- b) Addition of safe pedestrian facility along the existing ROW to connect to Lydia Street;
- c) Removal of the right turn out of Lydia Street;
- d) Extension of the raised median to restrict right turn movements in and out of Oil Changers;
- e) Addition of new signals on Main North Road to remove the need for vehicles to U-turn at the Main North Road / QEII Drive / Northcote Road signals;
- f) Removal of filtered right turns on Main North Road at Main North Road / QEII Drive / Northcote Road signals; and
- g) Potential to relocate a bus stop closer to Main North Road / QEII Drive / Northcote Road signals which has fully protected pedestrian crosswalks.

85 Overall, I consider that with the improvements proposed as part of the application, the surrounding traffic network can accommodate the additional demands and traffic redistribution of the proposed development without deterioration in network performance. Some elements of the network experience improved performance due to the introduction the site access signals on Main North Road and safer and more efficient lane configuration and phasing proposed at the QEII / Main North Road signals. Overall the effects of the development traffic are considered to be positive, due to the extent of mitigation along Main North Road.

## District Plan Assessment

86 The proposed development triggers the high traffic generator rule due to the size of the development (having greater than 500 sqm of retail GFA). I have addressed the relevant assessment matters including an assessment of three non-compliances against the CDP, which in my view are negligible as described in Section 10 of the ITA.

## Transportation modelling expert conferencing

87 I have attended four sessions of informal expert conferencing relating to transportation modelling held on the 10<sup>th</sup> September 2019, 20<sup>th</sup> September 2019, 2<sup>nd</sup> October 2019 and 15<sup>th</sup> October 2019. The outcomes of the transportation modelling expert conferencing are recorded in three Joint Witness Statements (**JWS**).

88 The four transportation modelling conferencing sessions were undertaken including experts from Christchurch City Council, NZ Transport Agency and CTOC. The four sessions were structured as follows:

- (a) Session 1 (10th September 2019) - agree on scope of additional modelling to address experts concerns regarding the operation of the Main North Road / QEII Drive / Northcote Road intersection and discuss concerns regarding routing of traffic in the ITA modelling.
- (b) Session 2 (20th September 2019) - review results of additional modelling delivered based on agreed Session 1 scope and identify areas of additional refinement in the modelling assumptions leading to an updated scope of modelling.
- (c) Session 3 (2nd October 2019) - review results of additional modelling delivered based on agreed Session 2 scope, agree on further refinements in modelling assumptions and revisit discussion on re-routing of traffic in modelling.
- (d) Session 4 (15th October 2019) - review results of additional modelling delivered based on agreed Session 3 scope and agree on final positions.

89 Collectively, the conferencing involved scoping an agreed set of modelling scenarios and underlying assumptions, iteratively undertaking additional modelling work and reviewing the subsequent modelling outputs as agreed.

90 The outcome is the updated AEE presented in this evidence as Appendix A. It is my intention that this supersedes the contents included in section 8 of the ITA. I have extracted the key assumptions and the key outcomes across the four



sessions to provide clarity regarding my understanding of the final position of all experts.

- 91 The agreed assumptions with respect to the 2021 and 2031 transportation modelling within the application are as follows:
- (a) The traffic generation for the 2 Lydia Street site in future years should be calibrated to align with the current Toll Holdings level of activity (refer Section 1 of JWS 1);
  - (b) The current and proposed traffic signals along the Main North Road corridor must operate at an 85 second cycle time (refer section 2 of JWS 1);
  - (c) The phasing of each set of traffic signals must provide sufficient clearance time for fully protected pedestrian movements as specified by CTOC (refer section 1 of JWS 2);
  - (d) In 2021 and 2031 the Main North Road / QEII Drive / Northcote Road intersection should be reconfigured to a split phasing approach with reconfigured lane allocation on the Main North Road south approach which is consistent with that proposed in the ITA (refer section 8 of JWS 3), and
  - (e) In 2031 the modelling should assume that the Northcote Road corridor will be four-laned with no additional improvements to the Main North Road / QEII Drive / Northcote Road intersection (refer section 3 of JWS 1) (although I note that it was later recorded by Council that an upgrade to this corridor is planned but will not necessarily include four-laning).
- 92 The future operation of the network should give effect to the Christchurch City Council Network Management Plan objectives of (refer Section 10 of JWS 3):
- (a) Protecting the east-west corridor as a major arterial acknowledging its function (although note explicitly stated I interpret this to be predominantly a movement function); and
  - (b) Safeguarding public transport on the Main North Road corridor.
- 93 The key points of agreement that are the outcome of the four sessions that I consider to be most relevant to the assessment of traffic effects are as follows:
- (a) All parties agreed that the changes proposed in the ITA as mitigation at the Main North Road / QEII Drive / Northcote Road intersection would appear to have merit irrespective of the development, and should be considered for implementation around the same time that the CNC opens (refer section 8 of JWS 3).

- (b) The upgrade project of Northcote Road does not have a specific design, and may require additional upgrades to the Main North Road / QEII Drive / Northcote Road intersection (refer section 10 of JWS 3).
- (c) The Main North Road / QEII Drive / Northcote Road intersection operates satisfactorily in the morning peak with and without the development (refer section 11 of JWS 3).
- (d) The proposed changes to the Main North Road / QEII Drive / Northcote Road intersection are acceptable in the interpeak period and there is no need to consider effects of the development further in the interpeak period (refer section 12 of JWS 3).
- (e) There are safety benefits in reconfiguring the Main North Road access signals to signalise the left turn movements in and out of the supermarket and there is no deterioration in the efficiency of the intersection as a result of this change (refer section 13 of JWS 3).
- (f) The addition of the development is predicted to lead to an improvement in the performance of the Main North Road / QEII Drive / Northcote Road intersection due in part to traffic redistribution and re-routing in the models, and due to the additional flexibility and route choice on the network as a result of the additional signalised intersection on Main North Road (refer section 2 of JWS 4).

94 I am of the view that there is only one matter that was outstanding following the conclusion of transportation modelling conferencing. This concern relates to the nature and extent of re-routing of traffic within the CAST model operated by Council and any re-routing within the Paramics model (refer section 2 of JWS 4). I have addressed this in paragraphs 66-67 of my evidence.

95 I consider that the most significant point of agreement in relation to the modelling conferencing is recorded in 5 of JWS 4, refers to the Main North Road/QEII Drive/Northcote Road intersection and reads as follows:

96 *“All experts agree that it would seem logical that as part of the Christchurch Northern Corridor opening works, the lane allocation at the intersection and phasing should be changed as per the proposed mitigation (unless there are non-traffic reasons that the experts are not aware of) irrespective of the development, as this will deliver safety and efficient improvements at the intersection. This is a matter which should be advanced by NZ Transport Agency and Christchurch City Council.”*

97 I believe that the most contentious issue prior to conferencing related to the mitigation proposed at this intersection which had not previously been discussed

with NZ Transport Agency or CTOC and had been the subject of disagreement with Council. The agreement between all parties that the intersection should be upgraded in the manner proposed as mitigation irrespective of the development is a fundamental change acknowledging the considerable safety and efficiency benefits of the proposed changes. In my view these changes are not required as mitigation but are required to adapt to the future changes in the receiving environment. However, the reallocation of the median to lengthen the southbound right turn bay as part of the design of the access signals on Main North remains an important mitigation measure.

### **General Transportation Expert Conferencing**

- 98 I have attended one session of formal expert conferencing relating to broader traffic and transportation matters held on the 16<sup>th</sup> October 2019. The outcomes of the transportation expert conferencing are recorded in a JWS dated 21<sup>st</sup> October 2019.
- 99 The general transportation conferencing focused on presenting and discussing the contents of the ITA other than section 8 which was agreed to have been superseded by the outcomes of the modelling undertaken and discussed through the modelling conferencing sessions. There were several requests from experts for additional information to the ITA and I have addressed these in turn as follows:
- (a) Risk rating of the Main North Road / QEII Drive / Northcote Road intersection – A request was made to confirm the level of crash risk associated with the intersection. I understand that Council identified the highest risk intersections in the city based on 2014-18 crash data and Main North Road / QEII Drive / Northcote Road was the 8<sup>th</sup> worst intersection in the City. I believe that the changes in layout and phasing discussed in modeling conferencing will significantly reduce the safety risk due to the removal of right turn filtering from the Main North Road approaches.
  - (b) Location of pedestrian crossings – Clarity was sought regarding the current locations of pedestrian crossings in the vicinity of the site and these are denoted by stars in Figure 2 of my evidence.
  - (c) U turn crashes at Main North Road / QEII Drive / Northcote Road intersection – Experts acknowledged that there are currently a significant number of U-turning vehicles on Main North Road from Foodstuffs Head Office travelling southbound, as there are no breaks in the current raised median to enable vehicles to directly turn south. I have checked the NZ Transport Agency Crash Analysis System (CAS) data base and observe that only one U-turning vehicle in the last five years has resulted in a

reported crash. I note that the new signalised access proposed will significantly reduce the number of U-turning vehicles.

- (d) Crashes at Northcote Road / Lydia Street intersection - There have only been two reported crashes in the last five years at this intersection, both of which are rear end crashes. One crash involved three vehicles travelling east on Northcote Road, the crash was caused by a vehicle rear ending the car in front of it pushing that vehicle into a third car. The other crash involved two vehicles travelling west on Northcote Road with one vehicle rear ending the other vehicle. These accidents are typical of an environment where there is regular and sometimes unexpected queueing of vehicles. No crashes were recorded relating to vehicles turning into or out of Lydia Street.
- (e) Tracked path for Lydia Street left turn by semi-trailers - Concerns were raised regarding whether westbound semi-trailers on Northcote Road could safely turn into Lydia Street. I have undertaken vehicle tracking as shown in Figure 6 which shows that semi-trailers need to cross the centreline of Lydia Street to enter from Northcote Road east. Although this is an existing issue with the receiving environment I believe this raises a safety concern which would be exacerbated by the development. I recommend the inclusion of a condition of consent to ensure that semi-trailers servicing the supermarket access Lydia Street by only turning right in from Northcote Road west.



Figure 6 Tracked path of semi-trailer accessing Lydia Street

- 100 Experts discussed the benefits of the Proposal maintaining a direct pedestrian link between the supermarket and public transport services along Main North Road. I believe that pedestrian connectivity is an essential component to encourage the use of public transport but must also ensure that pedestrian safety is not compromised as pedestrians negotiate the car park. I understand that this matter has also been raised in the urban design and landscaping conferencing.
- 101 I consider that there is flexibility within the design of the site to enable a northbound bus stop to be located to the north or to the south of the proposed signalised access on Main North Road and strong pedestrian connections are included in the design to integrate with either option as shown in Figure 4. I acknowledge that Environment Canterbury and Council both have an interest in the operation of the bus services and integration of public transport with the site. I strongly support the re-location of the existing bus stop to the north of the signals such that the northern pedestrian facility across the site connects the bus stop directly to the front door of the supermarket. I believe this is the most desirable location to support public transport usage and is shown in Figure 7.

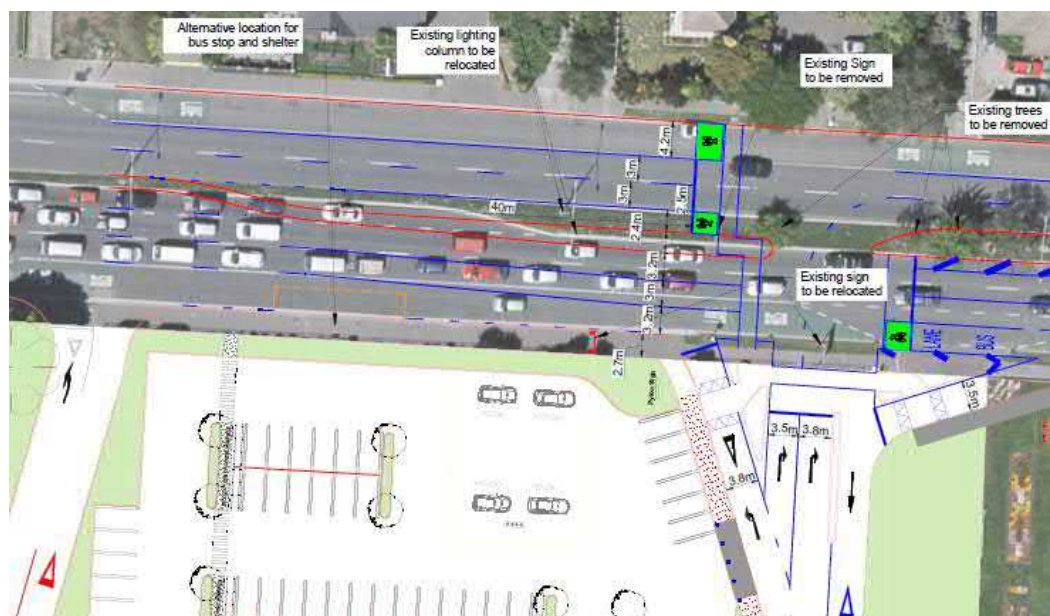


Figure 7 Potential relocation for northbound bus stop

- 102 Several points of concerns raised by experts are proposed to be addressed through conditions of consent. I support these recommendations and have summarised these as follows:
- (a) The Applicant is to engage with Christchurch City Council, Environment Canterbury and CTOC during the detailed design stage of the signalised access on Main North Road (refer section 4 of General Conferencing JWS).

- (b) The left turn from Northcote Road into the Oil Changers carpark is to be monitored to ensure that the number of left-turners using this existing access does not increase as a result of rat-running through to the supermarket, to an extent that westbound through traffic is adversely affected. (refer section 4 of General Conferencing JWS).
- (c) A Travel Plan should be developed for supermarket employees to encourage uptake of sustainable transport modes and to reinforce that car parking by employees must occur on-site and not extend to on-street parking on adjacent streets (refer section 4 of General Conferencing JWS).

103 I consider that there are no significant points of disagreement arising from general transportation conferencing.

**Matters raised by submitters**

104 I have read the following submissions that have been received which address transportation matters. I address these submissions in turn in the following paragraphs:

- a) Mark Knox Homan
- b) Gary Watts, Canterbury Neighbourhood Support
- c) Ann Taylor
- d) David Wagstaff
- e) Christchurch Citizens Collective
- f) Susan Joan Steel
- g) The Roman Catholic Bishop
- h) Natasha Spink
- i) NZ Transport Agency
- j) Jennifer Jones
- k) Canterbury Regional Council

*Mark Knox Homan*

105 Mr Homan supports the application highlighting the supermarket will benefit the local area with improved access to the supermarket relative the current restricted parking at the existing PAK'nSAVE Supermarket in Northlands Mall. I agree that

the proposed supermarket location and corresponding parking provision is a significant improvement over the current supermarket with a high level of accessibility for all modes of transport.

*Gary Watts, Canterbury Neighbourhood Support*

- 106 Mr Watts raised two matters relating to access to the supermarket.
- 107 Firstly, that entry and exit point must be safely and clearly marked. I can confirm that all road marking and signage will be in accordance with the following standard/ specifications and will be shown at detailed design stage:
- a) NZ Transport Agency Traffic Control Devices (TCD) Manual
  - b) Manual of traffic signs and markings (MOTSAM)
  - c) Christchurch Construction Standards (CSS)
- 108 Secondly, Mr Watts states that vast improvements must be made for any exit or entry to Northcote Road. There are two accesses onto Northcote Road. The access via Lydia Street will be much improved in terms of road safety as it is proposed that the right turn out of Lydia Street is to be banned as part of the proposal. The second access adjacent to Oil Changes will also be much improved in terms of road safety as the existing raised median island will be extended further to the west of the access to eliminate right turns in and out of the site.
- 109 It is my view that the above improvements satisfactorily address Mr Watts concerns.

*Ann Taylor*

- 110 Ms Taylor supports the application highlighting the improved access to the supermarket relative to the existing PAK'nSAVE Supermarket in Northlands Mall which has limited parking. I agree that the proposed supermarket location and corresponding parking provision is a significant improvement over the current supermarket in these regards, and also provides a high level of accessibility for all modes of transport.

*David Wagstaff*

- 111 Mr Wagstaff highlights concerns with traffic congestion on Main North Road adjacent to the site and concerns about the frequency of accidents at the Main North Road / QEII / Northcote Road intersection. I agree that the current environment is congested and note that following the opening of the CNC, traffic volumes adjacent to the site are forecast to drop by 17% and traffic volumes to

the north of the QEII intersection are forecasts to drop by more than 50%. The phasing and layout of the Main North Road / QEII / Northcote Road is proposed to change as part of the application to remove the currently dangerous filter right turns on the Main North Road approaches which in my view will significantly reduce the risk of crashes occurring at the intersection and will result in a safer environment for all road users.

- 112 Mr Wagstaff also shares concerns about the introduction of an additional set of traffic signals suggesting this will create more of a bottleneck effect. Traffic signals are controlled by a system called SCATS within the Christchurch Traffic Operations Centre. One of the benefits of SCATS is it actively monitors and manages the operation of traffic signals and allows the signal timings to be coordinated to minimise or eliminate delays to through traffic. The Paramics transportation modelling presented in Appendix A to assess the effects of the development demonstrates the benefit of the coordination of signals and additional flexibility in travel choice as a result of the new signals.
- 113 Table 2.9 in Appendix A demonstrates that travel times in the vicinity will improve significantly when the CNC is operational, and the introduction of the supermarket traffic results in only small changes in evening peak travel times by 2021. In 2031 there are some significant improvements in travel times for Main North Road northbound trips and east-west travel along QEII Drive and Northcote Road.
- 114 The final point relating to transportation matters in Mr Wagstaff's submission signals that there are likely to be more school children passing through the area if another school were to be built on Vagues Road. The application includes a safe two-stage cross walk facility across Main North Road at the site access signals which will significantly improve safety for all pedestrians crossing Main North Road and a 1.2m wide new facility along the ROW connecting Lydia Street to Main North Road.
- 115 It is my view that the future receiving environment including the mitigation proposed in the application satisfactorily addresses Mr Wagstaff's concerns.

*Christchurch Citizens Collective*

- 116 The Christchurch Citizens Collective (the **Collective**) are concerned about adding more lights to the Main North Road corridor and are of the view that this will cause further congestion and gridlock, and *"are concerned about congestion and further disruption of traffic flows"*. As noted in my response to Mr Wagstaff's submission:
- a) Traffic volumes will decrease in the future;



- b) The new signals will be coordinated with existing signals to minimise optimise the flow of traffic along the corridor; and
- c) The traffic modelling demonstrates significant improvements in travel times when the CNC opens and minor changes when the supermarket traffic is added to the network at 2021 with some large improvements out to 2031.

117 The Collective also suggest that *“our members will flout these lights if installed”*. I would like to point out that there are a large number of examples of traffic signals in Christchurch that are located in relatively close proximity and are coordinated to provide largely unimpeded through movement for traffic but also provide safe access and movement for traffic and pedestrians crossing busy corridors. Local examples include Main North Road between Langdons Road and Sawyers Arms Road, Marshlands Road between Briggs Road and QEII Drive, and Marshlands Road adjacent to the Palms mall. Accordingly, I am of the view that members of the Collective are already driving on corridors with closely spaced and coordinated signals providing for through traffic as well as access for all modes in a safe and efficient manner. I am hopeful that the members are not flouting their legal responsibility as they use these corridors in their everyday travels.

118 The Collective acknowledge that there is currently a PAK'nSAVE supermarket at Northlands Mall. I understand that Foodstuffs intend to relocate their PAK'nSAVE branded supermarket rather than operate two PAK'nSAVE supermarkets in close proximity.

119 It is my view that the concerns raised by the Collective are satisfactorily addressed in the information available as part of the application.

*Susan Joan Steel*

120 Ms Steel raises concerns regarding traffic noise, which I will defer to Mr Hay.

121 Ms Steel directly refers to the busy-ness of Northcote Road and is concerned that further traffic congestion will be obvious. I agree that when traffic is added to a congested corridor the performance of that corridor will deteriorate quickly. The addition of the signalised access on Main North Road provides an alternative for southbound traffic on Main North Road to avoid a circuitous trip via Northcote Road and Vagues Road to travel south. The total traffic volumes on the Northcote Road corridor without and with the development are shown in Figure 2.4 and Figure 2.8 of Appendix A and demonstrate that the additional flexibility provided by the new set of signals results in a small reduction in traffic volumes on the Northcote Road corridor to the west of Lydia Street.

122 On this basis I am of the view that the development has a positive effect on traffic volumes and congestion on this corridor, however I expect that there will continue to be congestion experienced during peak times on this corridor irrespective of the supermarket. It is my view that the Ms Steel's concern relating to congestion on Northcote Road will be addressed by Council's intent to add capacity to the corridor as signalled by Mr Gregory and noted in the transportation conferencing Joint Witness Statement.

*The Roman Catholic Bishop of Canterbury*

123 The submission lodged by the Catholic Diocese of Canterbury signals the intent to develop a secondary school adjacent to the site. The submission is in support of the application and addresses traffic generation, pedestrian linkages and public transport as three key aspects of the application that are supported, specifically:

- a) The consolidation of heavy vehicle usage and restriction of servicing during peak times. I agree that when the proposed school is operational this should be extended to include school peak times to minimise the potential for conflict with students;
- b) The provision of safe, separated and high amenity pedestrian linkages through the site;
- c) The provision of the new signalised access on Main North Road enabling fully protected pedestrian crossing movements to access bus stops; and
- d) The provision of a northbound bus advance phase to enhance bus priority along the corridor.

124 I agree that the transport elements highlighted in the submission are key benefits of the application which improve the local transport environment.

*Natasha Spink*

125 Ms Spink supports the application and requests that there is access provided in both directions on Main North Road. The application includes the provision of a signalised access allowing full movements both northbound and southbound on and off Main North Road. The benefits of providing this access are highlighted in the ITA and summary of the AEE in my evidence.

*NZ Transport Agency*

126 The submission from the NZ Transport Agency raises three general areas of concern with respect to traffic matters. The NZ Transport Agency:

- a) considers that the ITA and modelling included within the notified application is not adequate;
- b) are concerned that the changes to the layout and operation of the Main North Road/Northcote Road/QEII Drive intersection proposed in the application have not been discussed or agreed with NZ Transport Agency, and seek that the Applicant consults with them in this matter; and
- c) would like to ensure that the site is suitably accessible through vital public transport links, pedestrian access and cycling, highlighting the importance of effects of the proposal on the adjacent bus lane network.

127 I have engaged with Mr Ian Clark in his role as an expert representing NZ Transport Agency in transportation matters, in the four transport modelling conferencing sessions and one general transportation conferencing session.

128 The JWS dated 18<sup>th</sup> October reflects the outcome of the four modelling sessions. The transportation modelling has been completely revisited as an outcome of the modelling conferencing and the JWS demonstrates that all parties including Mr Clark agree on the appropriateness of the models used, scope of modelling undertaken, and underlying modelling and network operation assumptions, with specific focus on the proposed changes in layout and operation of the Main North Road/Northcote Road/QEII Drive intersection. The key statement from section 5 or the 18<sup>th</sup> October JWS is:

*“All experts agree that it would seem logical that as part of the Christchurch Northern Corridor opening works, the lane allocation at the intersection and phasing should be changed as per the proposed mitigation (unless there are non-traffic reasons that the experts are not aware of) irrespective of the development, as this will deliver safety and efficient improvements at the intersection. This is a matter which should be advanced by NZ Transport Agency and Christchurch City Council.”*

129 I agree with the NZ Transport Agency that it is important that the proposal integrates well with public transport, walking and cycling modes and I am of the view that there is excellent accessibility to and integration between modes as addressed in section 6 of the ITA. The general transportation conferencing and corresponding signed JWS dated 21<sup>st</sup> October recognises the importance of integration between public transport and pedestrian movement.

130 I consider that the integration of modes can be addressed in the detailed design of the signalised access taking into consideration the optimum location of the bus stop with respect to the operation of the bus lane, opportunities for a bus advance phase at the signals and considering pedestrian desire lines and connectivity. A

condition of consent is proposed to ensure that the Applicant engages with relevant parties in the detailed design process.

*Jennifer Jones*

- 131 Ms Jones raises concerns with respect to adding traffic to already busy intersections being Main North Road / QEII Drive / Northcote Road and Main North Road / Cranford Street.
- 132 I have addressed the traffic effects on these two intersections in my evidence and these are included in more detail in the modelling assessment in Appendix A. I also reiterate that the future receiving environment will be quite different to the current traffic situation with the introduction of the Christchurch Northern Corridor in 2020/21 and Cranford Basin development and link prior to 2031 which provide traffic relief to the key Main North Road intersections.
- 133 I am of the view that the congestion currently experienced at these intersections will be significantly reduced in the future and the introduction of the new signalised access provides more flexibility and route choice for motorists, resulting in further efficiency improvements on the Main North Road corridor.

*Canterbury Regional Council*

- 134 The submission from Environment Canterbury as the Canterbury Regional Council (**CRC**) raises several matters relating to transportation policy. I will defer to Mr Durdin in these matters.
- 135 The submission raises concerns regarding the addition of the signalised access on Main North Road due to the potential for the signals to disrupt the existing bus infrastructure and add travel times to core services.
- 136 I have analysed the travel times for northbound and southbound services from the Paramics modelling which is reported in section 2.8 of Appendix A to my evidence. The modelling estimates the Blue Line travel times in the evening peak hour and concludes that:
- a) Travel times for northbound services decrease by 25 and 60 seconds in 2021 and 2031 respectively due to the addition of the development and installation of signals; and
  - b) Travel times for southbound services increase by 30 seconds in 2021 and are largely unchanged in 2031 due to the addition of the development and installation of signals, and there may be the opportunity through detailed design to operate this section as a continuous through lane in the morning peak period when the southbound bus lane is in operation.

- 137 Based on this modelling assessment I conclude that travel times are likely to improve in the peak tidal flow direction and the introduction of signals would only introduce a small delay in the non-tidal flow direction. Further optimisation of the operation of the corridor including signal timings has the potential to further improve the outcomes for public transport users.
- 138 The CRC submission also dismisses the merits of potentially moving the northbound bus stop on Main North Road on the basis that *“comparatively few bus passengers on the Blue Line will be wanting to access the proposed site.”*
- 139 I have met with Mr Fleete, Mr Wright and Ms Stapleton on two occasions and was accompanied by Ms Rebecca Parish to discuss the concerns raised in the CRC submission. These informal meetings allowed us to discuss options relating to integrating the application with the important public transport function of Main North Road.
- 140 The meeting also provided me with an opportunity to share video animations from the Paramics model of the operation of the Main North Road corridor with bus priority enabled at the Main North Road signals and with the northbound bus stop located to the north and to the south of the signals.
- 141 It is my view that both locations work well with respect to providing high quality bus priority for northbound services on this corridor and the transport modelling I have undertaken demonstrates this.
- 142 From a pedestrian connectivity perspective, I consider that the northern location in Figure 7 produces better outcomes due to the direct connection across the supermarket carpark to the front door of the supermarket. I also note that this location is more convenient for St Bedes College students using the northbound bus services as well as visitors to the existing commercial centre to the north of the supermarket. I consider that there is flexibility within the design of the application to accommodate either bus stop location option with strong pedestrian linkages to both through the Application Site.
- 143 I have also been involved in transportation conferencing with Mr Fleete and Mr Wright on the 16th October 2019 at which the concerns were discussed with other experts representing Christchurch City Council, NZ Transport Agency and CTOC. The outcome of this conferencing is recorded in the signed JWS dated 21st October 2019. The concerns raised in the CRC submission were discussed during conferencing and the key statement from section 4 of the JWS is the following:
- 144 *“All parties recommend a condition of consent such that the applicant will engage with CCC, Environment Canterbury and CTOC at detailed design stage of the new signalised access. This will ensure that public transport priority is maintained*

*or enhanced within the design, including consideration of a northbound bus jump at the signalised access and the optimal location of bus stop(s) along the corridor to service the supermarket and other adjacent activities.”*

145 I am satisfied the inclusion of this condition of consent and the outcomes of the updated transportation modelling included as Appendix A addresses the matters relating to transportation effects on public transport services raised in the CRC submission.

#### **Matters raised by Council staff report**

146 I have structured my response to the transportation matters raised in Mr Harris' Section 42A report and evidence of Mr Gregory included as Appendix B as follows:

- a) six key concerns to be addressed in paragraph 66 of Mr Harris report to support the proposal;
- b) five road safety audit matters considered to be unresolved by Mr Gregory;
- c) four matters considered by Mr Gregory to be points of disagreement following transportation expert conferencing; and
- d) transportation modelling assessment undertaken by Mr Gregory.

147 I disagree with many other minor issues raised in Mr Gregory's evidence but consider that the above four matters are the most relevant to the application.

#### **Six key concerns**

148 In paragraph 66 of Mr Harris' Section 42A report, the transport aspects of the applications are summarised by stating *“Mr Gregory considers that the proposal could be supported from a transport perspective if six key concerns can be addressed:”* I have addressed each of these six matters in turn below:

- a) *“Safeguarding of the public transport route, including space to develop the corridor, and measures to mitigate delays (e.g. priority lighting at the proposed intersection)”*

I acknowledge that the Main North Road corridor is an important public transport priority route and in principle support the inclusion of a bus advance phase at the new site access signals on Main North Road to enable buses an approximate two second green time in advance of other road users. I have undertaken transportation modelling and shared the results with Environment Canterbury to demonstrate the feasibility and effectiveness of this.

The decision to include this form of bus priority is not one for the applicant to make in isolation from Council (as the asset owner), CTOC (who operate the network) and Environment Canterbury (who operate the bus services). The practicality of a bus advance phase is also dependent on the final location of bus stops which is a decision to be made by these three parties and not the applicant.

I am confident that the site design includes sufficient flexibility to support several bus stops locations and to enable bus priority to be included in the signal design if preferred. Subsequently I have recommended engagement with Council, CTOC and Environment Canterbury in the detailed design of the new signalised access to integrate design elements to maintain or enhance public transport priority on the Main North Road corridor.

Mr Gregory raises concerns about the design 'squeezing' the bus lane. I note that the safety audit did not raise any concerns with the narrowing of the bus lane, however, since the RSA was conducted the intersection has been modified to reduce the northbound bus lane to a width of 3.2m.

According to NZTA guidance<sup>6</sup>, best practice in New Zealand is that bus lanes should be either wide enough for cyclists to ride adjacent to buses (4.2 m or wider) or narrow enough that cyclists and buses must travel in single file, (3.2 m or narrower).

The proposed bus lane width is within the acceptable bus lane design guidance. I agree that ideally, a 4.2m bus lane should be provided to ensure buses are not held up behind cyclists. Council cycle count data shows in 2016 only 10 northbound cyclists were counted on Main North Road in evening peak hour with an approximate 50-60 cyclists per day. The chances of a bus being held back by a cyclist is considered to currently be very low.

However, the proposal to narrow the bus lane to 3.2m was to enable the provision of a high quality 2.4m wide pedestrian refuge within the median, which I consider delivers a significant road safety benefit, supporting the safe access of pedestrians and cyclists, to connect to the southbound bus services.

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<sup>6</sup><https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-standards-and-guidance/cycling-network-guidance/designing-a-cycle-facility/between-intersections/bus-lanes/>

- b) *“Integration with the public transport corridor through design (e.g. through location of covered bus stops, integration with pedestrian connections into the site)”*

I have detailed the design elements which demonstrate the Applicant’s proposed integration with public transport in the Application Site in paragraph 41 of my evidence. The Proposal includes a condition of consent to provide an electronic messaging board for public transport users in the supermarket foyer. I have discussed these elements with Mr Fleete.

- c) *“Demonstration that the site can function with the Lydia Street entrance / exit as left in and left out exclusively (including for delivery vehicles)”*

Mr Gregory refers to Northcote Road Route Improvements (**NRRI**) which is a project under the current LTP in paragraphs 47-49 of his evidence. He suggests *“Should the proposal be approved, the consented plans should include contingency in its design in the event that an option for Northcote Road is preferred, which requires Lydia Street to be changed to a ‘left in-left out’ intersection”*. It is recorded in section 10 of JWS 3 that the upgrade project of Northcote Road does not have a specific design, therefore I consider that there is no plan to either restrict traffic movements at the intersection, or to use as a basis for demonstrating how a left in and left out arrangement would function.

I am of the view that this is an unreasonable request on the Applicant, is hypothetical, and only one of many eventualities that may emerge from the NRRI project. There will be other affected parties that currently rely on the right turn into Lydia Street, specifically the current tenants and future owners of the 2 Lydia Street site. I also note that the NRRI will need to go through a process whereby affected parties are consulted.

This notwithstanding, if the Lydia Street intersection was hypothetically restricted to left in left out movements, there are options to service the site via the Main North Road ROW access, and via the Lydia Street left in and left out which would in my view would need to suitably designed as part of the NRRI project to ensure safe manoeuvring was achievable to access Lydia Street.

- d) *“Confirmation regarding network effects, with all access movements operating safely and modelling risks suitably managed”*

I consider the assessment of effects to be robust and to have demonstrated positive safety benefits as listed in paragraph 84 of my evidence and confirmed through the Road Safety Audit process is included



as Appendix D of the ITA and has been signed off by Council's Safety Engineer.

There have been several concerns relating to modelling raised by Mr Gregory. In my view most modelling issues were resolved in the four expert conferencing and note that Mr Gregory is a signatory to the three JWSs prepared. An independent peer review has been completed by Mr Falconer and has found that *"the model is in the right ball-park and adequately reflecting future year operation with development in place"*<sup>7</sup>. I consider that the independent peer review finding supports my view that the modelling undertaken can be relied upon to inform the Assessment of Effects.

- e) *"Demonstration that the access to the Redwood Family Dentists at 186 Main North Road can operate safely with the proposed signalised intersection"*

I consider that access to the Dentists can operate safely within what is proposed by the Applicant. As mentioned in the RSA response (refer page 19 of Appendix D of ITA), surveys were undertaken on the morning of 16 July 2019 and recorded 11 vehicle movements in and eight movements out of the dental practice in a two-hour period (10am – 12 noon) using this vehicle crossing. We have assessed that it is impractical to signalise the access for this low level of demand and noting that it is a two-way one lane vehicle crossing.

Considering that a wide bus lane (4.2m) exists and that no parking will be allowed within the intersection any vehicle that reverses out would be able to do so without encroaching the through traffic lanes. During the design stage of the intersection Abley suggested the use of flexi-bollards or a narrow kerb across approximately 20m in the vicinity of the Dentist access to prevent right turn movements in and out of the Dentist site as well as prevent vehicles reversing on to the traffic lanes. However, this idea was not supported by Council suggesting that flexi-bollards are not a desired outcome.

I have met with Redwood Family Dentists and discussed their traffic concerns in their submission. I understand that they are comfortable with the proposal, are no longer concerned and have subsequently withdrawn their submission.

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<sup>7</sup> paragraph 6.2.6 of QTP peer review technical note

Signage will be provided at the applicant's expense at the dentist entrance to alert customers that the access is left out only (as existing). Right turns and U-turns from Main North Road southern approach will be banned, and this will be clear to northbound motorists through the installation of signage.

I consider that these measures mitigate Mr Gregory's concerns and further design treatments including flexi-bollards or another form of delineation to prevent vehicles using the access from encroaching on the intersection can be considered further as matters of detailed design.

- f) *"Confirmation that matters related to safe cycle and pedestrian access to the site have been achieved"*

Paragraphs 26-28 of my evidence present the pedestrian and cycle facilities and the extent of connectivity to the wider network. I believe this demonstrates a much more walkable environment and shows opportunities for enhanced walking and cycling within the vicinity of the site. I consider the current environment provides a safe and appropriate level of access. I also acknowledge that there is scope for further improvements to be made.

I understand Mr Gregory's concerns primarily relate to improving walking and cycling between the Northern Line cycleway and the Proposal

I consider that there is sufficient room to provide a pedestrian/ cyclist refuge island approximately 15-20m east of Lydia Street. The refuge island can be of sufficient width to accommodate a cyclist (1.8m) and would enable less experienced cyclists to cross Northcote Road in two stages whilst more experienced cyclists may choose to use the existing flush median.

I note that the installation of a refuge island is outside of the Applicant's control as works within the road reserve would be required. It is fully acknowledged that such changes would be at Council's discretion and that Council's due process needs to be followed. This includes presenting any changes to the area traffic engineer and passing resolution from the Delegated Authorities, which are the local Community Board and Council.

- 149 I am of the view that all six of these matters are satisfactorily addressed through conditions of consent or through aspects of the design. I consider that the assessment of the transportation effects of the development demonstrates that the applicant has given regard to all of these matters and on that basis the Proposal can be supported.

## Road safety audit (RSA) outstanding matters

150 In paragraph 260 of Mr Gregory's evidence, it is asserted that *"there are five outcomes at this stage which appear to be unresolved"*. I have addressed each of these in turn below:

- a) *"Lydia Street roundabout – the mix of customer traffic and delivery vehicles appears unresolved"*

As stated in the RSA designer's response<sup>8</sup>, I consider that this matter is outside of the Applicant's control as it relates to the 2 Lydia Street site. The gate providing access to the Toll site should ideally be set back sufficiently from the property boundary to ensure trucks do not block the intersection. Given Lydia Street is a public road and is connected to a ROW, unimpeded vehicle access should be available at all times and if this is not the situation then it the responsibility of the road controlling authority to ensure such access is available.

This notwithstanding the number of vehicles turning into and out of the gated entrance is low. Abley undertook a survey of the Toll access and observed only six heavy vehicle movements into the gate in a two-hour period. I also understand Toll will cease operating out of this site in 2020 which is prior to the construction of the proposal. I consider that any concerns would need to be discussed with the operator of the 2 Lydia Street site prior to the supermarket opening but could be mitigated through:

- Installation of signage to alert motorists of incoming trucks
- Instructing truck drivers to allow any vehicles waiting at the roundabout to pass prior to turning into the ROW from Lydia Street.

- b) *"Internal roundabout – the proposed monitoring / review condition managing vehicle movements between FSIL office and the proposed supermarket is not supported at this stage"*

The proposed monitoring condition was endorsed by Council's Safety Engineer. This is stated in section 2.5 of the Road Safety Audit under the Safety Engineer's response dated 17/07/19.

- c) *"Private access to the traffic signals – although agreed that signalising is needed but not possible"*

This is addressed in paragraph 148(e) of my evidence.

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<sup>8</sup> Section 2.2 of Appendix D of ITA

- d) *“Signals design to accommodate pedestrians and a bus jump. Although resolved in isolation, no plan has yet been seen which shows how these additional requirements can be safely and appropriately included”*

The site access has been designed and tested through modelling to demonstrate that a two-stage fully protected pedestrian crossing can be achieved across Main North Road using Sidra Intersection software. The results of this have been shared with Mr Gregory prior to caucusing. Subsequent Paramics modelling presented and discussed in caucusing (including the modelling included in Appendix A) has ensured that the minimum phase times are set to enable sufficient clearance times for pedestrians.

The Paramics model has also been used to test the feasibility and effectiveness of a ‘bus jump’ (or bus advance phase). I have shared Paramics video animations with Mr Fleete and Mr Wright of Environment Canterbury to demonstrate how this will operate in practice. The benefits of including a ‘bus jump’ are contingent on the final agreed location of the northbound bus stop. This is one of the reasons for offering a condition of consent to engage with Council, CTOC and Environment Canterbury during the detailed design of the signals. I am confident a ‘bus jump’ will work efficiently and safely if agreed by these parties that it should be included within the final design.

- e) *“Right of way access for pedestrians – proposal yet to be seen”*

For clarity, Mr Gregory’s concern relates to the ROW to access the Foodstuffs Head Office carpark and not the ROW connecting to Lydia Street. The access will be used as a gated afterhours only vehicle access to Foodstuffs Head Office. Pedestrians will be directed to pedestrian connections that will be provided for Foodstuffs Head Office and supermarket customers shown in Figure 4. The volume of traffic anticipated to use the after-hours access is very low and with the pedestrian desire line removed, I consider Mr Gregory’s concern is resolved. I note these changes were signed off by the Council Safety Engineer in their response dated 17 July 2019.

### **Expert conferencing ‘areas of disagreement’**

- 151 In paragraphs 296-299 of Mr Gregory's evidence, four matters are raised that Mr Gregory considered to be areas of disagreement and/or require clarification. I have addressed each of these in turn below:

- a) *“The use of Travel Demand Management (TDM) was tabled to mitigate the effects of not providing designated on-site parking, but not agreed as final, having not yet been seen and considered.”*

As recorded in the JWS dated 21 October 2019, *“all experts agreed that TDM would be beneficial in spreading trip generation during the evening peak period and ensuring staff parking occurred on-site in preference to on-street”*. This is proposed to be delivered through two consent conditions as follows:

- Implementation of management controls to restrict movement from the Foodstuffs Head Office carpark into the supermarket carpark via the internal roundabout for any time of day if there is evidence of a safety risk associated with queuing at the roundabout impeding access from Main North Road.
- The development of a travel plan for Supermarket staff is proposed. This would include providing staff with information about their travel choices including public transport, walking and cycling; and parking management including containing staff vehicle parking within the site. The travel plan would be supplied to Council for comment.

- b) *“Details regarding proposed cycle parking numbers were not available”*

I was not party to discussing this matter at conferencing and note this is not an outstanding action recorded in the JWS. This notwithstanding, 25 visitor cycle parks will be provided on the northwest and southwest corners of the supermarket, and nine staff cycle parks will be provided in the basement. This exceeds the requirements under the relevant CDP rules.

- c) *“The statement that ‘public transport priority is maintained or enhanced...’ There is a difference between maintaining and enhancing. Both terms were included simply because there was no agreement on this point. My expressed opinion has been that all policy is aligned with a view that the PT corridor is going to be enhanced, and that integration from development is part of the delivery mechanisms of the desired PT future identified in the RPTP.”*

I defer to my colleague Mr Durdin in this matter.

- d) *“A swept path of a semi-trailer vehicle turning left into Lydia Street was requested to demonstrate the availability of delivery access to the site by such vehicles, in the event that the right turn movement from Northcote is restricted.”*

I have included the requested vehicle tracking in paragraph 99(e) of my evidence. Concerns regarding restricting the right turn into the site are discussed in paragraph 148(c) of my evidence.

### **Transport modelling assessment undertaken by Mr Gregory**

- 152 Mr Gregory provided CAST model inputs, with the most recent set being received during the transport modelling conferencing on the 9th and 13th of September 2019. The specification of these models was agreed between experts during conferencing and is recorded in the three modelling JWS. This modelling has also been independently peer reviewed and approved by Mr Falconer.
- 153 Mr Gregory states in paragraph 143 *“Since caucusing, I have re-run the CAST demand models to reflect the future environments, including technical operating parameters that would be acceptable to the road controlling authority delegates.”* I was unaware that Mr Gregory was intending to re-run the models following the agreement between all experts in four sessions of expert caucusing at which the technical operating parameters were agreed between Council, CTOC and NZTA. However, I note that his CAST model outputs show very different results to those received from Mr Gregory by Abley on the 9<sup>th</sup> and 13<sup>th</sup> of September which were agreed between all experts.
- 154 One of the benefits of expert caucusing is to enable an agreed position to be formed among experts which narrows the range of issues where there are differences of opinion. Most importantly for transport modelling this is intended to avoid there being ‘two versions of the truth’. Mr Gregory has agreed with the scoping and modelling undertaken during caucusing and has signed three JWSs. I am perplexed as to why Mr Gregory has undertaken additional modelling and I note that he has not informed me or my colleague Mr White (who also attended modelling caucusing as a technical modelling expert) of his intention to do so.
- 155 The statement in paragraph 143 concerns me as Mr Gregory does not disclose what technical operating parameters have been changed, why they have been changed, and who the road controlling authority delegates are who would consider this acceptable. Mr Gregory provides no evidence why the decision to deviate from the parameters agreed between Council, CTOC, NZTA and myself during four sessions of caucusing has been made, what process has been followed in making that decision post-caucusing and whether any other parties have been involved.
- 156 This notwithstanding, I have briefly reviewed the modelling which Mr Gregory has presented in evidence and am of the view that the modelling which is presented in Mr Gregory’s evidence should not be considered on the basis of process as stated above. I also question the technical merits of the modelling presented and I consider the most pertinent matters are:

- a) There is no evidence that the model which Mr Gregory has chosen to use has been calibrated or validated for this purpose (which is the case with Paramics);
  - b) The method by which the 'degree-of-saturation' is calculated has not been disclosed. Although it is not explicitly stated I expect that these have come directly from CAST which is contrary to the previous agreement among experts regarding the use of models. Mr Gregory states in paragraph 119 that "the CAST model is a powerful but reasonably coarse tool used to measure wider network changes. Paramics is a more precise and dynamic tool...". I agree with this statement and am of the view that the Paramics model is a much superior tool for predicting intersection performance and it is not appropriate to present this analysis directly from CAST.
  - c) I note that all movements at the intersections presented by Mr Gregory in his Appendix A have a degree of saturation of below 100% with or without the development and therefore operate below capacity for all movements and all scenarios. There is also no clear trend of significantly deteriorating Level of Service with some movements improving and the worst degree of saturation only changing marginally. As such, in my view the conclusions Mr Gregory extracts from his modelling are incorrect.
  - d) Whilst Mr Gregory has not documented his modelling assumptions or commented on why it is different to that which has been derived from previous CAST outputs that were agreed between experts and received in September, one assumption he does note in paragraph 181 is that he has assumed 30% of trips to the site are new or 'primary' which is a significant departure from the 20% I have assumed based on Council's Development Contributions Policy 2009-19 guideline and corresponds to an increase of  $(30-20)/20 = 50\%$  of new trips to the local network which in my view are very unlikely to occur.
- 157 I also note from in paragraphs 199 through 205 of Mr Gregory's evidence, that he has run the 2021 Paramics model for sensitivity testing. I have not been informed by Mr Gregory that he intended to run the model and have as such have not sought the permission for the model (which is owned by Foodstuffs South Island Limited) to be run by Council. I provided a copy of the models to Mr Gregory to enable him to review the contents. I am unsure of the assumptions or conditions under which Mr Gregory has undertaken the modelling or how the synthetic adjustments noted in paragraph 201 have been implemented by Mr Gregory.

#### **Proposed consent conditions**

- 158 I recommend a number of consent conditions to ensure transport effects of the Proposal are satisfactorily managed and any adverse effects avoided, remedied

or mitigated. The conditions of consent I propose are recorded in the Section 42A Report (Appendix P- Applicant's Proposed Transport Conditions) and include conditions of consent that were agreed during the expert conferencing.

### **Conclusion**

- 159 I have undertaken an Assessment of Effects including the preparation of a full Integrated Transport Assessment support the proposal. To assess the effects of the Proposal on the surrounding transport network a microsimulation model was set up, developed in a thorough and collaborative manner through ongoing engagement with Council staff and informed by Council's CAST model.
- 160 The modelling results indicate that the development traffic can be accommodated by the surrounding road network when the CNC is operational. Some elements of the network experience improved performance due to the introduction of the Application Site access signals on Main North Road. The lane configuration and phasing changes proposed at the QEII / Main North Road signals will result in operational and safety benefits.
- 161 I consider that with the improvements proposed as part of the Application, the surrounding traffic network can accommodate the additional demands and traffic redistribution of the Proposal without deterioration in network performance. Some elements of the network experience improved performance due to the introduction of the Application Site access signals on Main North Road and safer and more efficient lane configuration and phasing proposed at the QEII / Main North Road signals. Overall the effects of the development traffic are considered to be positive.
- 162 I have reviewed the issues raised through submissions and the six concerns put forward in the Section 42A report that are required to be addressed in order for the proposal to be supported. I consider that these matters are all resolved satisfactorily through conditions of consent or aspects of the design. I consider that the assessment of the transportation effects of the development demonstrates that the applicant has given regard to all of these matters and on that basis the proposal can be supported.
- 163 I consider the proposed development can be supported from a traffic and transportation perspective and am of the view that there are no traffic related reasons why consent should not be granted.

**David John Robert Smith**

**19 November 2019**



Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Evidence of Andrew Davies Burns**

19 November 2019

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**anderson  
lloyd.**

## Introduction

- 1 My name is Andrew Davies Burns. I am a qualified urban designer with a Diploma and Master of Arts in Urban Design (with Distinction) from the Joint Centre for Urban Design (1997, Oxford Brookes University, Oxford). I hold a Bachelor of Architecture degree (1992, Victoria University of Wellington), am a full member of the Royal Town Planning Institute (MRTPI) and Fellow of the Royal Society of Arts.
- 2 I am a director at McIndoe Urban Ltd, a specialist urban design practice based in Wellington and have held that post since 2013. I am a member of the Auckland Urban Design Panel, a Built Environment Expert for Design Council CABE (UK) and an External Examiner and guest lecturer for the School of Architecture, Victoria University of Wellington. I was a director of Matrix Partnership Ltd, a multi-disciplinary practice in London (2003-13) and seconded urban design director to Arup (South Africa, 2012). Prior to these roles I worked as an urban designer for Urban Initiatives Ltd (London) and DEGW plc (London) from 1997 to 2003. In total I have 27 years professional experience (23 years since gaining my post graduate urban design qualifications, and a further 4 years of experience in architecture).
- 3 I held part-time lectureships at Masters level in urban design at Oxford University; Department for Continuing Education, Kellogg College (August 2010 – March 2013, MSc course in Sustainable Urban Development); and Oxford Brookes University, Joint Centre for Urban Design (August 2006 – March 2013, MA course in Urban Design); and, the Bartlett School of Planning, University College London (2004-06).
- 4 My experience relevant to this project includes extensive professional design review and advice for multiple Local Authorities (NZ & UK), design guideline formulation and large scale masterplanning of complex city-scale projects. This is detailed in **Appendix A** and key aspects are listed below:
  - (a) Providing urban design advice and reporting on a wide range of developments to Porirua, Wellington, Palmerston North, Lower Hutt, Nelson and Auckland Councils and the private sector;
  - (b) Masterplanning lead for: Christchurch Retail Precinct Plan; Petone and Hutt Central Spatial Plans; Shelly Bay Masterplan; Aokautere urban expansion, Palmerston North; Onehunga Wharf Masterplan. In South Africa I led the masterplan for the Capital City of Tshwane (Pretoria) and numerous town and neighbourhood centre studies in the UK; and,
  - (c) Preparing initial housing quality assessment criteria for Ministry of Housing and Urban Development (MHUD, Sept/Oct 2018) and lead author of various sections of the Auckland Design Manual.

## Relationship to the Project

- 5 My role has been to provide independent Urban Design advice in relation to Foodstuffs South Island Properties Limited's (**Foodstuffs**) application. For clarity, I was not involved in the design development of the Proposal or AEE assessment. The application is to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 6 In preparing this statement of evidence I have considered the following documents:
- (a) the AEE accompanying the Application;
  - (b) the statements of evidence of Mr Milne (landscape), Mr Allan (RMA / planning), Mr Colegrave (economics) and Mr Young (architecture);
  - (c) Christchurch District Plan provisions relevant to my area of expertise within Chapters 3, 15 and 16.
  - (d) The Council's section 42A report; and,
  - (e) The Council's urban design advice (RFI dated 10.09.2019, 3.09.2018 and, Urban Design Panel dated 14.08.2019).
- 7 I was engaged by the Applicant in 2015 to provide it with urban design expertise informing its submissions on the Christchurch Replacement District Plan (CRDP) Chapters 15 and 16, and in particular the request to rezone the Application Site from Industrial General to Commercial. My work included preparing urban design evidence and appearing before the Independent Hearings Panel on the Applicant's submissions.
- 8 Subsequent to the Panel's decision on the CRDP, the Applicant engaged McCoy Wixon architects, Aurecon (RMA planning) and rough&milne landscape architects along with other technical expertise to prepare the Proposal that is now before the Commissioner. Of relevance to my own analyses is the *Landscape and Urban Design Assessment*<sup>1</sup> of the application prepared by rough&milne (June 2019). I have not repeated the detail of that report in my evidence but have taken it into account in my own analyses.

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<sup>1</sup> 171 Main North Road Resource Consent Application, Appendix E: Landscape and Urban Design Assessment.

9 I first visited the Application Site in 2015 as part of the CRDP process. I subsequently visited the Site in November 2019 as preparation for this evidence.

### **Code of Conduct for Expert Witnesses**

10 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

### **Scope of Evidence**

11 I have prepared evidence in relation to the urban design issues and effects of the application for a PAK'nSAVE supermarket, fuel facility, emergency coordination facility and associated access, parking and landscape works on the Site. My evidence is structured as follows:

- (a) an Executive Summary of my urban design evidence;
- (b) identification of an assessment framework for the Proposal;
- (c) overview of the proposal;
- (d) amendments to the application following expert conferencing;
- (e) general urban design matters addressing the existing environment and related effects of the Proposal on the environment;
- (f) matters raised in the Christchurch City Council's (CCC) staff report issued under s42A of the RMA; and,
- (g) concluding comments.

### **Executive Summary**

12 This evidence provides an independent assessment of the Proposal in relation to Urban Design. I took part in Expert Conferencing (urban design) on the 25<sup>th</sup> October 2019 and am a signatory to the subsequent Joint Witness Statement dated 1 November 2019. I have reviewed the 21 submissions and no urban design matters were raised requiring a response in this evidence.

13 Five key urban design topics have been identified as the basis of my assessment. These topics have been informed by the relevant objectives, policies and matters of discretion in Chapters 3, 15 and 16 of the Christchurch District Plan and by best

practice matters relevant to the Site. Two of these topics naturally overlap with the landscape and architecture evidence of Mr Milne and Mr Young, as would be expected for a development of this size.

- 14 The key findings from my analyses and assessments in this evidence include:
- (a) The use of the subject land for a supermarket will generate superior urban design outcomes for the wider Site and its immediate context than would existing or permitted industrial functions.
  - (b) A clearer identity for the local area will emerge, establishing synergies with adjoining local retail, office accommodation and a possible future school, and opening up new through-Site connections that did not previously exist.
  - (c) The scale, form and layout of the Proposal is appropriate for its arterial road context and underlying zoning but with higher levels of design and amenity than the status quo demonstrates.
  - (d) The design of the building is good for this genre, deploying multiple design scales with positive frontage and entry articulation. Service and delivery areas are appropriately contained away from the public front.
  - (e) In conjunction with reviewing the Council s42 assessment, the main urban design issues appear to be the quality of two of the pedestrian connections, the degree of street activation and engagement and, the effects of the fuel facility on visual amenity and physical links. I address these matters at paras 83-88 of this evidence and in summary under the 5 topics below.
  - (f) **Topic 1: Urban form and character** – the Proposal will enable the wider Site to read ‘on the ground’ as a place with centre-like qualities. Better land use compatibility will strengthen the existing Local Centre in line with District Plan provisions (e.g. 15.2.2.1 a). Good relational scale with residential neighbours is achieved through the 7.8m supermarket height at the interface, and equally with the Head Office through height and façade length.
  - (g) **Topic 2: Urban structure** – the Site acts as a linchpin with the Proposal offering improved Site-to-context integration and a new sense of centrality. The coarse grain of the wider block structure supports the large-scale supermarket while new finer grain pedestrian connections are provided. In relation to supermarket position, moving the building forward on the Site creates adverse outcomes regarding legibility and functionality. These matters are explained at para 48.
  - (h) **Topic 3: Relationship to street** – Views from the street into the Site will be attractive, principally framed by a legible and active supermarket frontage,

complemented by three layers of street-scaled trees. East-west Site entrances work well to the north but are more circuitous to the south and the fuel facility (while a compliant activity and form) does not best support pedestrian amenity at the street edge and interrupts links. The supermarket position is appropriate in relation to Main North Road character and the Site's zoning, providing an attractive street outcome (see paras 83-86).

- (i) **Topic 4: Public realm** - Public invitation into the Site as privately-owned space is principally established by a range clear visual cues - obvious retail destinations, consistent landscape and footpath treatments, seamless connections with public streets, and unambiguous service area boundaries. New cross-site links provide attractive and convenient routes with good visibility. Improved outdoor occupation of space would help along with the possible addition of a quality pedestrian plaza. The Proposal performs well in relation to CPTED (though I identify some specific issues that would benefit from further consideration if appropriate). Overall landscape mitigation of car parking is addressed in the evidence of Mr Milne.
- (j) **Topic 5: Architectural concept and design** – for this genre of building, a good level of visual interest and quality is achieved through design at multiple design scales (macro, intermediary and fine). The intermediary scale could be further enhanced to offer stronger modulation and relational qualities. I have noted that yellow signage to the main façade is over-scaled and dominates the parent building. Building entrances are legible though the southern entry exists in a dichotomy with the fuel facility. Planning is successful with concentrated 'front of house' public activities and contained service areas.
- (k) For the reasons set out in this evidence, **I consider that the application can be supported from an urban design perspective** with the changes that have been made following expert conferencing and including the provision of a quality pedestrian plaza at Main North Road. I have considered other adjustments that would improve the Proposal further, including enhanced design of the fuel facility structure, scale reduction of the main building yellow signage, stronger modulation of the supermarket's east elevation and, augmented surface differentiation of the central north-south car parking aisle.

## Assessment Framework



*District Plan Zoning for the Application Site (Source: Aurecon)*

- 15 This assessment focuses on the PAK'nSAVE supermarket Proposal within its (wider) Application Site. This wider Site includes existing adjoining Commercial Local Zone retail to the north and Foodstuffs (SI) Head Office to the south enabling changes to access and carparking on these sites.

### ***Relevance of District Plan provisions to the Proposal***

- 16 The Application Site is zoned primarily Industrial General (IG) with 3-7 Northcote Road zoned Commercial Local (CL), and a small access portion zoned Residential Suburban. The Proposal's Activity Status is Discretionary (Unrestricted). This indicates a broad scope of assessment and can include consideration of the matters of discretion at section 16.7 of the District Plan, however these do not adequately address urban design considerations.
- 17 The Proposal is for a land use not anticipated in the IG Zone and is likely to generate large numbers of visitors to the Site. Given the proposed retail activities, these will read as synergistic with the Commercial Local Zone that sits adjacent to the proposed supermarket to the north. I consider that the assessment criteria contained within the Commercial Chapter are relevant to my assessment due to this adjacency and the primarily retail functions anticipated by the Proposal. This position was agreed with the Council's urban design officer (and reflected in the advice within the Council's RFI), in particular those matters of discretion at section 15.3.1 (Urban Design) and Objectives and Policies at 15.2.4.
- 18 District Plan Chapter 3 Strategic Directions is identified in the Planning Policy Joint Witness Statement as relevant "in the broad context". I have therefore considered these provisions only in so far as they are helpful to informing a general urban design opinion and the following could be considered relevant: 3.3.7 Objective – Urban growth, form and design; 3.3.10 Objective – Commercial and industrial activities; and, 3.3.14 – Incompatible activities. At the conclusion of the General Urban Design Matters assessment I provide some observations in relation to the broad thrust of these provisions.

## **General Urban Design Matters**

- 19 I consider it appropriate that a range of 'general urban design matters' should be identified salient to the Proposal and the specific conditions of the site and context. In formulating this approach, and as a starting point, I was guided by Objectives, Policies and Matters of Discretion under 3.3.7, 15.2.4.2, 5.13.1 and (to a lesser extent) 16.7.1, 16.7.2. In my opinion, the District Plan is directing that we follow best practice urban design analysis guided by that policy framework and the matters of discretion. To that end I have considered a range of best practice matters (aspects of development form<sup>2</sup>) relevant to the site and identified five topics (listed below). A description of the relevant existing context in relation to each topic is first presented, followed by an assessment of the Proposal. Each topic ends with conclusions that are carried forward to the overall Conclusion at paras 89-94.
- 20 *Topic 1: Urban Form and Character:* Addresses the question around the future identity and character of the area. In urban design terms, success of the local area will depend on what type of place is likely to emerge, how it integrates with its context and consistency of overall environmental characteristics. Urban form considers relevant built form patterns including height, bulk, scale and grain.
- 21 *Topic 2: Urban Structure:* Analysis of the wider spatial street and block context. The pattern of alignments, urban edges along streets and spaces is noted along with the distribution of principal activities. The legibility of the context is considered along with ease of movement.
- 22 *Topic 3: Relationship to Street:* The relationship of the proposal to its street setting is assessed. This necessarily includes matters of site-wide legibility, entrance, building location and street quality.
- 23 *Topic 4: Public Realm Design:* The characteristics and quality of the public realm (open spaces, connections). This aspect of assessment is addressed in the evidence of Mr Milne (rough&milne landscape architects), however I provide overall observations where relevant to urban design.
- 24 *Topic 5: Architectural Concept and Design:* The overarching architectural concept is primarily assessed in the evidence of Mr Young (McCoy Wixon), however this is also addressed here in so far as the appropriateness of the proposal relates to urban design. Overall design and appearance of the proposal is reviewed along with high level commentary on internal planning, layout and amenity.

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<sup>2</sup> By Design, DETR/CABE, 2000 (page 16); and, The Councillor's Guide to Urban Design, CABE, 2003 (pages 6, 7).



## Overview of the Proposal

- 25 The proposal for a primarily retail development (PAK'nSAVE supermarket) and emergency coordination facility is fully described in the Application (AEE, Aurecon, section 4) and also in the Architectural Design Statement (McCoy Wixon architects). I do not repeat those descriptions here, but for ease of reference I note the overall composition includes:
- (a) Supermarket: 12,324sq.m total (5,436sq.m basement parking, 802sq.m upper level admin, 6,086 ground floor of which 3,492sq.m is net retail)
  - (b) Supermarket set back 69m from Main North Road, max height 12.6m to east elevation, 7.8m / 7.7m to eaves on north / south elevations
  - (c) Fuel facility setback 4.5m from street edge, max canopy height 5.64m
  - (d) Car parking: 276 spaces total (168 basement + 102 surface)
  - (e) Emergency facility: shares supermarket accommodation / parking
  - (f) Existing Foodstuffs Head Office: 6,435sq.m (no change to building)
  - (g) Northern Local Centre: 940sq.m (no change to buildings)
  - (h) New access arrangements connecting the Site with Main North Road and internal linkages to the north, south, east and west.

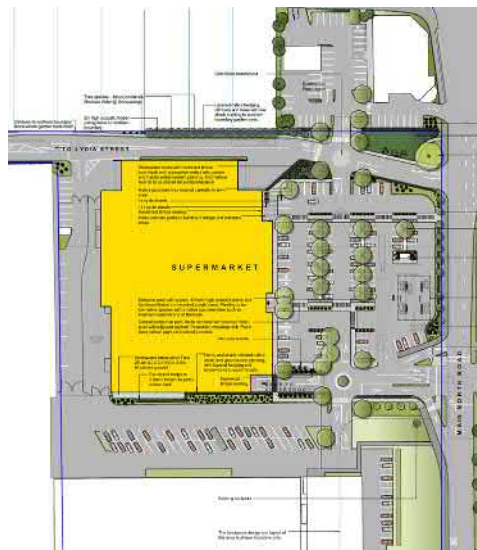


Figure 1: The Proposal (source: rough&milne)

## Amendments to the Application as a result of Urban Design Conferencing

- 26 In summary, the changes to the Proposal that have resulted from consideration of matters discussed at urban design conferencing include:

- (a) A more direct pedestrian linkage to the supermarket has been provided from the south utilising a pedestrian bridge over the basement ramp;
- (b) A revised, widened (3.8m) and enhanced east-west pedestrian connection from the northern supermarket building entrance to Main North Road;
- (c) A more direct, realigned pedestrian linkage north of the supermarket to and within the Commercial Local Zone connecting to Northcote Road;
- (d) Provision of additional landscaping: additional trees located in a north-south alignment through the car park, along with additional trees located at the Main North Road frontage, and change in car park surface treatment;
- (e) Enhanced landscape design at the northern supermarket building entrance to further emphasise this entrance;
- (f) Amendment of the proposed fuel station canopy and shrouded structure. this amends the colour and material to reduce its visual dominance;
- (g) Provision of gates to the rear service area of the supermarket to contain this area to the north and south;
- (h) Removal of the gate previously shown at the western end of the RoW;
- (i) Northern façade articulation to the building (revision of the cladding articulation);
- (j) Additional trees shown within the landscape strip along the ROW (proposed at 3.0m spaces with the proposed tree species (*Alnus joreullensis*) detailed as agreed in the Landscape Joint Witness Statement;
- (k) Additional cycle stands (23 customer cycle parks were proposed in front of the store above ground with 25 now proposed);
- (l) The treatment for the roundabout located on the ROW has been revised to be comprised of Gobi block permeable paving (instead of the proposed stormwater basin with rain garden planting) to accommodate vehicle tracking for the fuel tanker through the site; and,
- (m) Lastly, I recommend the provision of a quality plaza space at the point of connection of the primary east-west footpath with the street and co-located with the proposed bus stop. This would provide a greater level of connectivity, street-edge amenity and public invitation to the site. While this has not yet been updated in the revised plans circulated with this evidence it will be adopted, with plans pre-ciculated.

## Urban Design 'General Matters' Assessment

### Topic 1: Urban Form and Character

#### Existing Context

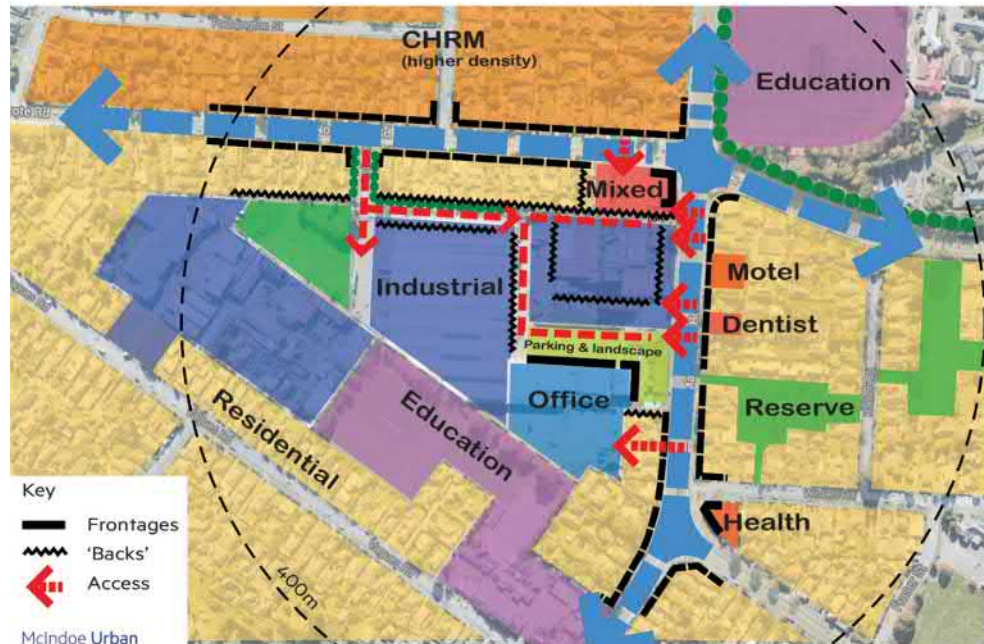


Figure 2: Existing environment analysis

27 The existing environment around the Site is of low-intensity development and dominated by the linearity and arterial scale of Main North Road. The character of this street is influenced by its low level of enclosure (circa 1:5 height-to-width ratio) and the overall impression when moving through the area is of a poor sense of centrality and mixed identity. Despite the general conglomeration of non-residential activities at and around the Site, it is not clear where or when one has 'arrived'. The Main North Road / Northcote Road junction provides something of a legible landmark and wayfinding element but is not best supported by its built form context. The larger scale Murdoch Manufacturing buildings do not signal public invitation and the Foodstuffs office 'front lawn' presents an ambiguous green space with regard to public occupation.

28 In terms of character, the general condition in the vicinity of the Site (image above) is of a mixed environment with a clear split between residential and commercial / industrial activity. The presence of a motel and dentist opposite the Site add to the sense of a mixed / local convenience environment in a minor way. That mix includes finer-grain housing and small-scale retail / commercial alongside coarse-grained industrial – clearly apparent in the aerial image at Appendix B. The presence of Commercial Local retail to the northeast and the Foodstuffs office to the south assists with a transition to residential scales. While the width of Main

North Road offers some mitigation for eastern housing, there exists an uncomfortable juxtaposition along this street. The extensive residential presence across the area suggests (in urban design terms) that a more compatible character outcome for the industrial pocket of land fronting Main North Road could be pursued.

29 A feature of the area is the use of 'back land' for industrial activities, generally screened by residential that fronts the bounding streets, allowing industry to have a relatively benign presence in the area. Two instances occur where industry 'meets' the street – along Vagues Road and at the Murdoch Manufacturing frontage onto Main North Road (Fig. 3). The latter presents part blank walls onto the street while other structures near the frontage offer no meaningful relationship and are effectively 'backs' (Fig. 2). The Proposal to redevelop the Site for a supermarket is an opportunity to resolve the industrial frontage issues above.



Figure 3: Industrial 'backland' and industrial street frontage at '1' and '2'



Industrial Site frontage – poor engagement, blank walls, no invitation

- 30 The state of existing buildings in the Commercial Local Zone and on the Murdoch Manufacturing site indicates that this is an area in transition. I understand the larger industrial shed structure to the west will convert into a school and such a change, along with the Proposal, is indicative of the shift in overall character and purpose of the Site (providing functions that directly support local residential neighbourhoods). The District Plan anticipates industrial development (see District Plan sections 16.4.1.1, 16.4.1.2 and 16.4.2) on the Site up to 15m in height (within 20m of a residential zone) with min 3m setback, and such development might see increased scale and dominance of industrial-type forms with inactive street edges and no public invitation into the Site. Future permitted activities anticipated for the IG Zone might also include yard or trade-based suppliers. Such suppliers locate extensive low-grade outdoor courts to the front of sites (e.g. Hirepool image below located along the Hutt Road in Lower Hutt and zoned General Business). Such an outcome would be far less successful than the Proposal due to: a) lower quality design; b) compatibility conflicts with the adjoining street and residential contexts; c) lower street amenity; and, d) likely disconnection with adjoining sites. I conclude that the Proposal avoids the difficulties that this Policy would introduce for the Site.



*Example of a yard-based supplier – Hirepool, Lower Hutt*

### *The Proposal*

- 31 *Relation to broader neighbourhood context:* In overall terms, the Proposal will change the role of the area towards one of enhanced nodal and centre-like qualities. It will do this by offering the Site as a destination to surrounding residential neighbourhoods and encouraging access to and use of the area for a wider section of the community than at present. In terms of land use, the Proposal presents far greater compatibility with the adjoining context of Commercial Local retail activities and Foodstuffs Head Office than do current (or anticipated) industrial functions. This greater compatibility will result in a more coherent character and identity for the area at the wider scale and in so doing will strengthen the Local Centre as anticipated under policy 15.2.2.1 (a) and its vitality under 15.13.2.4 (a, i).



- 32 *Relation to local context:* The Proposal includes an 96m x 70m supermarket building to a max height (top of east elevation parapet) of 12.6m and from Main North Road will read as part of a general cluster of commercial and industrial buildings with a frontage oriented towards Main North Road. A fuel facility is proposed at the front of the Site. Whilst the fuel facility is consistent with IG Zone provisions, it does not best support the amenity of the street or the quality of visual relationships towards the Site. The fuel structure is utilitarian and I would prefer to see this designed as a more elegant structure. It would also benefit the development to locate the fuel facility either to north or south of its proposed location such that it doesn't form the centre-piece in views towards the supermarket frontage. However, I understand that operational and safety requirements may prevent any such relocation and I am also mindful of the context of the Site's zoning. Therefore, I would be satisfied with an outcome that provides an additional quality plaza space as set at out below para 33c while a more elegant fuel structure design would further improve street edge visual amenity.
- 33 The immediate local context includes the 2 storey Foodstuffs Head Office to the south with a circa 35m street setback, a collection of single storey small footprint retail buildings to the north built to back edge of pavement, coarse grain (180m x 130m) industrial sheds set circa 150m back from the street, and otherwise a 1-2 storey fine grain housing context with 5-10m setbacks. The Proposal relates in three ways to the buildings here:
- (a) With height up to 12.6m the Proposal will relate to the 15m height of the Foodstuffs Head Office building. The supermarket's 96m eastern façade length is generally in scale with the 120m northern façade of Foodstuffs Head Office that will be read together on approach from the north (Figure 4). While in plan the 25m/30m modularity of the Proposal's east façade relates to the 30m street frontage width of the Foodstuffs office, this is not so apparent in the east elevation and I would prefer to see the modularity expressed more clearly (discussed later under Topic 5).



*Figure 4: Scale relationship between the Proposal and Head Office*

- (b) The Main North Road character (west side) of commercial-scale buildings is generally continued but with an improved visual outlook for dwellings opposite through: a) higher quality landscape along street edges; b) higher specification façade design; and c) the proposed 69m setback will reduce the visual dominance of the building. I address the matter of setback later under 'Topic 3: Relationship to Street'. I would prefer to see the design of the yellow signage (38.7m x 7.4m) modified such that the façade of the parent building is not subservient to the sign. The fuel canopy colour is neutral (not yellow) that helps with mitigation as noted earlier.



*Figure 5: Proposal (east) street and building views*

- (c) The proposed landscape to the front of both the Head Office building and the supermarket will read as a more consistent planted outcome than at present and 'tidies-up' the Site's frontage. I would also suggest the creation of a quality pedestrian plaza space at the point of connection of the primary east-west footpath with the street and co-located with the proposed bus stop. Such a space would acknowledge the nearby Commercial Local Zone buildings, create a public focal point, reflect the landscape frontage to Head Office and, align with the opportunities identified in the rough&milne report<sup>3</sup>.

34 The context to the north includes a common boundary with fine grain housing. The Proposal has reduced its height to 7.8m along this edge well within the District Plan 15m limit and is set back some 11.9m. New boundary fencing and tree planting is

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<sup>3</sup> 171 Main North Road Resource Consent Application, Appendix E: Landscape and Urban Design Assessment, page 20.

proposed to help mitigate effects on residential neighbours. Modelled views from the rear of Northcote Road dwellings prepared by McCoy Wixon (images below) indicate that the Proposal presents a simpler backdrop than the existing situation and the density of tree planting appears appropriate to filter views to the south. The PAK'nSAVE sign on the north elevation may have limited adverse visual effects for adjoining dwellings and I would prefer it is removed or re-designed with muted colours.



Figure 6: (above) Rear view from No. 11a looking south onto the Proposal and the existing view (below). Source McCoy Wixon and rough&milne



### Conclusions

35 The following conclusions are drawn in relation to 'Urban Form and Character':

- (a) The Proposal will change the role and character of the area towards one that is more synergistic with its neighbourhood context by offering destination and public invitation with an enhanced centre-like identity.
- (b) Improved site-wide land use compatibility will strengthen the existing Local Centre in line with District Plan provisions.
- (c) Higher quality building specification and landscape design oriented towards Main North Road will provide better outlook and amenity than existing or anticipated industrial outcomes for residents.
- (d) Overall façade length and height will relate to the existing Foodstuffs Head Office building aiding scale relationship.



- (e) Design adjustments to the east elevation, main yellow signage and Fuel Station could be considered to enhance the Proposal further.

## Topic 2: Urban Structure

### Existing Context



Figure 7: Urban structure

- 36 The local context and the block within which the Site is located is shaped by the intersection of two macro city grids, resulting in the triangular shape shown above. Main North Road kinks at Cranford Street to follow these two grids. Because of the Major and Minor Arterial status and scale of roads around the Site, Main North Road discourages pedestrian movement and the Northcote Road / Main North Road intersection (SH74) is not conducive to pedestrian activity. This suggests the area is more attractive to vehicle trips / strategic movement or very local pedestrian movement and pedestrian counts nearby are very low (Appendix C). Main North Road is an important arterial that supports bus movements with stops located near the Site. The evidence of Mr Smith (para 92) notes that the key policy objective from the CCC Network Management Plan for this corridor is 'safeguarding public transport' therefore any improvements to support public transport movement and connectivity to public transport would be supported. The proposed plaza would support this objective by creating a positive and legible place at the bus stop.
- 37 A notable aspect of the context is the coarse grain of the street / block structure, with little evidence of a finer-grained access system emerging. Comprehensive redevelopment of industrial areas within the block (see Fig. 3) may, in the future, result in a more permeable spatial structure however any such change is unknown

and beyond the scope of this evidence. The coarse grain of the street grid further supports the primacy of vehicle-based movement noted above.

- 38 Lydia Street and the ROW provides very local public access into the mid-block and provides service access to the rear of the Site. From an urban design perspective, the unsurveilled 'backs' condition along its edges is not conducive to safe pedestrian movement. Conferencing with Mr Hattam, Ms Dray and Mr Milne indicated that this link was 'just' acceptable in CPTED terms. I support the Proposal's introduction of pavements (currently none exist), improved landscape but I also note that matters of concealment should be addressed and avoided.
- 39 Figure 7 above describes nodes (circled in blue) that occur at the Northcote Road and Cranford Street intersections with Main North Road. Of these, the former reads as a 'higher order' than the latter given: a) the Major Arterial road status; b) the part frontage of Commercial Local retail; and, c) the landmark presence of the St Bede's College open space. The diagram also highlights the clustering of commercial, industrial and retail functions focused towards the northern node that provide a point of distinction for the area. However, while these expand the presence of non-residential activities, they do not best support the Commercial Local retail nor do they contribute much to the Northcote Road / Main North Road node for the reasons explained below.
- 40 The Site itself could be described as poorly integrated in so far as the three main functions (northern Commercial Local Zone; central industrial; and, southern offices), whilst clustered, exist in relative isolation (Fig. 8 below). Each has little or no meaningful interaction with the other and, as is the case to the north, are physically separated. For such a large area (circa 240m street frontage) this is a poor outcome and urban design good practice would seek greater cohesion generally and greater consistency vis-à-vis place identity.



Figure 8: Existing environment – three separate functional types

## The Proposal

- 41 The Proposal removes the existing Murdoch Manufacturing industrial functions on the portion of the Site shown as 'B1' above. B1 could be viewed as a linchpin in terms of site-context integration and offers the opportunity for a clear spatial site-wide organisation and sense of centrality (Fig. 9 below).



Figure 9: The Proposal (high level outcomes)

- 42 The image above indicates (at a high level) the changes brought about by the Proposal on the Site and context, and in urban design terms integrates with the context in the following ways:
- (a) A land use (retail) that supports increased pedestrian movement from the Northcote Rd / Main North Rd junction to the Site, relates to the Head Office activity and futureproofs western links to a possible school.
  - (b) A scale of retail activity (large floor plate, vehicle-based) that is compatible with the coarse-grained wider block structure and underlying industrial zoning. But offers a more appropriate type of environment (than an industrial activity) in an overtly residential setting.
  - (c) An attractive and direct connection for the 400+ employees at Foodstuffs Head Office to the supermarket and north to the Commercial Local Zone.
  - (d) A broader retail offer, complementing the Local Centre (I refer to the evidence of Mr Colegrave paras 78-84) and creating greater cross-shopping opportunities for local residents and workers.
  - (e) A setback that mitigates the dominance of a large-scale supermarket within its fine grain residential context.



43 In relation to my earlier contextual analysis, I observe that a more relevant clustering of commercial and retail functions is achieved (Figure 9) and supports policy 15.2.4.1 (b) (i, iii, v) by reducing conflicts between industrial and ‘cleaner’ office and residential activities – reducing incompatibilities along common boundaries.

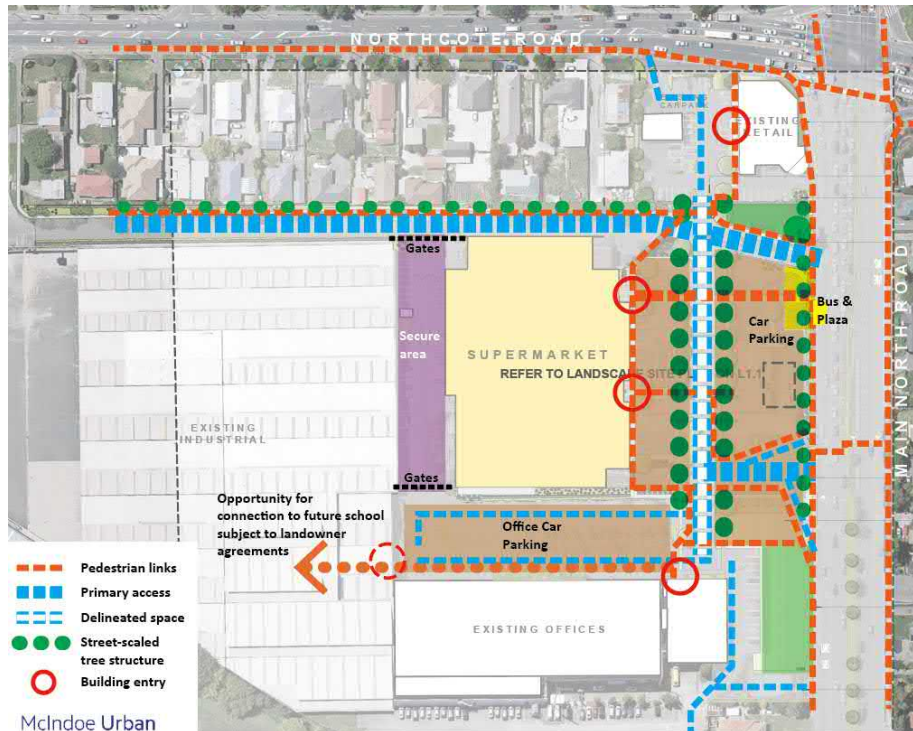


Figure 10: The proposed structure – a finer grain of connections

44 The segregation shown in Fig. 8 is addressed by the Proposal’s finer grain of connectivity (Fig. 10). Links to the south (Head Office) are established, to the north and east wide pedestrian paths are created from the store front to the street and bus stop, and directly into the Commercial Local Zone. The recommended plaza (para 33 c) would create a quality pause space inviting a relationship between the street and Site. Finer grain connectivity supports policy 15.2.4 (a) (ii) that seeks a pattern of development that responds positively to its context and is easy and safe to navigate (wayfinding).

45 The supermarket layout and its configuration in relation to adjoining areas is shown in the McCoy Wixon and rough&milne design drawings<sup>4</sup> and also in subsequent aerial illustrations. I provide an aerial illustrative view below for ease of reference (McCoy Wixon image).

<sup>4</sup> 171 Main North Road Resource Consent Application, Appendix B: Architectural Plans and Appendix E: Landscape and Urban Design Assessment.



*Proposed aerial perspective (source: McCoy Wixon)*

- 46 The proposed supermarket layout screens the industrial structures beyond and provides containment to the backs of Northcote Road housing. The service functions for the supermarket are appropriately contained (visually and physically) away from the public street front, ensuring only the more active retail activities address the car park and street. The northern and southern side elevations will have reduced public visibility and have been designed to provide privacy and security for the Site and neighbours.
- 47 A new (eastern) built frontage is established 69m back from the Main North Road edge, and in so doing creates a forecourt space that: a) allows entry / parking / arrival to work together; b) provides the necessary emergency facility activity space as noted in the evidence of Mr Young; c) allows visibility 'in the round' of the Foodstuffs office and clear access south to the office entrance; and, d) reduces the perceived scale and dominance of the supermarket with respect to residences opposite. Setting the building back and opening up a space at the front of the Site facilitates access routes north and south which is desirable for pedestrians and supports access to and visibility of the existing Local Centre.
- 48 A supermarket frontage aligned more closely with the Head Office frontage (i.e. 35m setback) would offer benefits such as allowing these two forms to read together more strongly, however I am also mindful of the underlying Site zoning, and issues related to operational requirements of both the supermarket and emergency facility. Were the building to sit a further 30m forward on the Site I would be concerned about the much larger rear service 'back land' area created and the likely need to utilise some of this for public parking. It is clear from reviewing the McCoy Wixon floor plans that reduced legibility of entry would then occur along with servicing conflicts (see evidence of Mr Young, para 27). On balance therefore I am comfortable with the proposal vis-à-vis building position. I consider the issue of supermarket building setback further under 'Topic 3: Relationship to Street' and in my s42 response (paras 83-86).

## *Conclusions*

- 49 The following conclusions are drawn in relation to 'Urban Structure':
- (a) The Site can be viewed as a linchpin, with the Proposal offering improved Site-context integration and a clearer sense of centrality relative to the Head Office and Commercial Local Zone.
  - (b) The coarse grain of the street / block context and arterial status of Main North Road supports larger scale vehicle-based retail activities. Providing for local pedestrian trips to the Site is important and cross-site connections integrate to the north, south and east. The opportunity to connect west into the future school exists subject to owner agreements.
  - (c) The Proposal presents a land use that will not detract from, but offer better alignment with, the existing Local Centre, and will support increased pedestrian movement.
  - (d) The proposed Site structure screens existing industrial buildings, contains service functions away from the public front and allows space to the front of the Site that facilitates cross-site movement. Regarding building setback, adverse outcomes are noted regarding supermarket legibility and functionality were the building to move forward on the Site.
  - (e) The functional / operational requirements of the Proposal are set out in the evidence of Mr Young and influence proposed Site structure.

## ***Topic 3: Relationship to Street***

### *Existing Context*

- 50 The relevant street contexts for the Site are Main North Road, the intersection with Northcote Road and (to a lesser extent) Northcote Road itself. It is also noted that a ROW exists off Lydia Street linking to the rear of the Site. The west side of Main North Road (at the Site) is identified within both the IG and Commercial Local Zones of the District Plan. The eastern side opposite the Site is Residential Suburban Zone. A starting point is therefore to recognise the mixed environment outcomes along this part of Main North Road.
- 51 Main North Road near the Site is a 6-lane dual carriageway with planted median. Grass berms separate pavement from carriageway and pedestrian crossings occur only at intersections. Highway-scaled lighting, long straight road alignments and vehicle movements dominate the environment. The close proximity of housing along this street is anomalous with these environmental qualities, while the occurrence of larger scale commercial forms with varying and deeper setbacks is more consistent with this type of street setting.



52 Main North Road has an industrial and office activity-dominated western edge of circa 190m (at the Site) with a small proportion of fine grain retail (30m built frontage length). This provides an estimated 12% of street edge 'frontage' though includes a proportion of blank wall and low activation. As noted earlier in my evidence (para 29), existing industrial activities on the Site do not offer engagement, public access or positive frontages to Main North Road. The western site edge to the street has no street-facing building entrances. Elsewhere residential edges provide varying degrees of setback often screened by fencing and planting and this residential pattern continues north beyond Northcote Road.

53 As a useful local comparator, I have considered Main North Road further to the south at Northlands Key Activity Centre. This centre is characterised by limited activation and street edges are dominated by the blank edges of buildings, vehicle entries and weakly landscaped commercial car parking areas. Poor pedestrian connections exist between Main North Road and the mall. Servicing is visible from Sawyers Arms Road. This area (zoned Commercial Core) includes a small cluster of fine grain retail to the north at the street edge that is disconnected from the larger scale retail mall by the blank walls of the adjoining Countdown supermarket and is isolated in terms of pedestrian linkages. Whilst Northlands was developed prior to the current District Plan zoning and associated expectations for this area, there are useful 'lessons learned' from Northlands relevant to the Proposal. These are:

- Ensure visual and physical integration is achieved between retail and other commercial activities;
- Ensure all buildings orientate attractive frontages and entrances towards the street;
- Provide attractive and direct pedestrian connections from street to building;
- Ensure attractive landscape outcomes including trees of sufficient scale to visually define street edges and reduce surface car parking areas; and,
- Contain service areas from public street views.

- 54 In contrast (and by way of example), the shopping area south of Northlands at the transition between Papanui Road and Main North Road (image below) presents high levels of fine grain active edge built to both street edges. This is complemented by a two-lane street with painted median, some parallel parking and a dedicated cycle lane that all contribute to a more traditional 'high street' and walkable setting.



- 55 Overall, the analysis demonstrates that Main North Road between Northcote Road and Papanui Road is not a fine grain, pedestrian-oriented retail environment but is primarily a vehicle-based (multi-lane), coarse grain mix of commercial, industry and retail mall typology. Further characterised by limited activation and street edges dominated by multiple vehicle entries to commercial car parks. There are no planned upgrades to the pedestrian and urban amenity of Main North Road though a 17% decrease in traffic volume is anticipated through the Christchurch Northern Corridor project (evidence of Mr Smith para 111). Northcote Road running past the north of the site has been earmarked for four-laning for some time. The presence of vacant industrial buildings (Murdoch Manufacturing) on the Site points to likely change in the context, however the substance and configuration of other established commercial and industrial buildings, and a vehicle-dominant character, makes it unlikely that Main North Road will become a conventional retail street and will contrast from the 'high street' type environment described at para 54.

### *The Proposal*

- 56 The proposal offers an opportunity for much-needed enhancement to the Site's street edge offering public accessibility, a strong line of tall street-scaled trees and low native planting, new Site entrances linking to two supermarket building entry points and a highly glazed frontage set back but oriented towards the street (McCoy Wixon image below).





- 57 The IG Zone for the Site specifies a min 3m setback against an arterial road (no maximum setback). The Proposal is therefore not in conflict with the expectations for building position in the IG Zone. As a retail destination that is likely to be read as related to the adjoining Local Centre and Head Office building, the issue of building size, site position and integration with neighbours is important. Contextual factors pointing to an appropriate scale and spatial arrangement have been analysed suggesting large scale / coarse grained forms set back from the street edge are compatible with the type of setting offered by Main North Road.

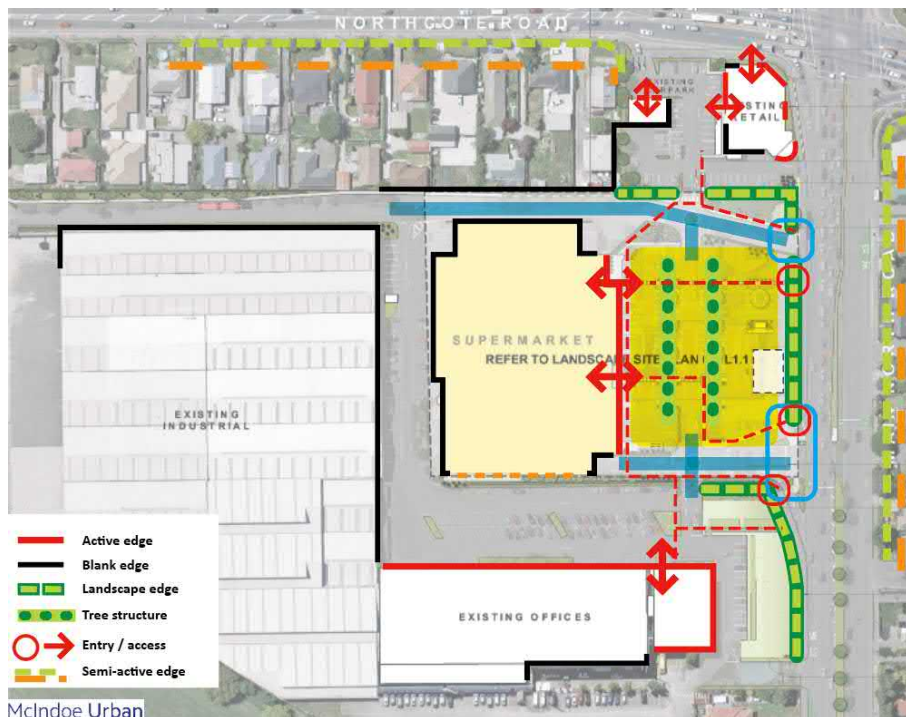


Figure 11: Building edge conditions and activation

- 58 The relevance of the nearby Northlands centre as a comparator was identified and various shortcomings were noted as issues for the Application Site to avoid. With this in mind, the proposal delivers the following outcomes in relation to the street:
- (a) A large-scale supermarket building clearly visible and with a highly legible and attractive frontage (see 'Topic 5') oriented towards the street;

- (b) Two supermarket building entrances facing the street supporting 64m of glazing to the front façade. Entrances are clearly signalled by setbacks and emphasised by footpath and landscape design, though views onto the southern entrance from the street are interrupted by the fuel facility.
- (c) A centrally positioned open space / landscaped car park area that allows the southern office building and northern Commercial Local Zone retail to face towards the supermarket frontage and forecourt (Commercial Local Zone buildings likely to be redeveloped in time);
- (d) A direct, wide (3.8m) pedestrian link connecting the northern supermarket entry to street edge;
- (e) A clearly delineated and attractive landscape street front and a north-south avenue of 10-12m tall trees within the Site that align with the existing Head Office frontage; however,
- (f) The 69m set back reduces the potential for pedestrian engagement at the street edge but is appropriate within the scale and vehicle-dominated character of Main North Road; and,
- (g) The fuel facility is a District Plan compliant form and activity, however in urban design terms is utilitarian and does not best support pedestrian amenity at the street edge or optimise visual connections into the Site. Some mitigation occurs through eliminating the branded yellow fascia colour and its open structure permits views through to the supermarket frontage beyond. An alternate position less 'front and centre' would offer benefits to street edge amenity but I am cogniscent of the evidence of Mr Young and Mr Smith in setting out the operational parameters for this facility and the Site's zoning. My conclusions at para 32 apply.

59 The District Plan does not set specific expectations for through-site links, but given the coarse grain of the wider block within which the Site is located and the shift to a more visitor-driven / destination retail activity, it is reasonable to consider a finer grain of movement and better Site-wide integration generally. Figures 10 and 11 indicate how the Proposal delivers better connectivity and links. The supermarket frontage provides a high level of activation along one side of the N-S link and the Head Office provides activation and overlooking from the south. To the north the existing Commercial Local Zone buildings create a degree of surveilled space (assuming tenancies will be re-let) and it would be desirable for any future changes to this area to consider greater activation of the through-site link.

### *Conclusions*

60 The following conclusions are drawn with regard to 'Relationship to Street':

- (a) A higher quality and higher amenity street edge will emerge than currently exists or that would be likely to occur through industrial uses on the Site.
- (b) A legible and attractive supermarket frontage faces the street and is complemented by a street-scaled tree structure.
- (c) A northern Site street entrance links to building entry along a generous landscaped path. The southern building entry connects less successfully with the street. Activation of paths occurs within the Site though the local retail area is in need of improvement.
- (d) Supermarket form and setback is appropriate in relation to Main North Road character and the Site's zoning, but reduces the potential for activation and pedestrian engagement at the street.
- (e) The fuel facility is a permitted activity and complies with zone standards, but does not support pedestrian amenity at the street edge. Its design could be improved to create a more interesting visual focus for pedestrians.

**Topic 4: Public Realm Design**

61 Main North Road is an arterial and bus route. As one of the major north-south routes in/out of the centre of the city it is highly legible, however the 6-lane structure and extent of traffic on it restricts pedestrian amenity and current pedestrian counts at the Cranford Street intersection are very low (Appendix C). Notwithstanding the 17% traffic reduction anticipated following the opening of the Northern Corridor (para 55), and as befitting its role in the city street network, its long term function is likely to be predominantly 'movement' rather than 'pause' or 'place'.

62 Currently Northcote Road is operating at or near capacity (Mr Smith), may be 4-laned in future and is typical for its classification. However, the Northern Line Cycleway (Mr Smith, para 39) makes it a reasonably attractive access route for cyclists, with that emphasised by the existing cycle lane. Cycling connections into the Site are indicated in yellow below. Cyclists are also likely to exit the site through the Commercial Local Zone turning left onto Northcote Road (see image below. My arrow added in orange).



Figure 12: Cycle connections (source: Dave Smith, Abley)

- 63 Lydia Street links to a right of way servicing the Site through to Main North Road. It is of a utilitarian and service access character accentuated by inactive edge conditions.
- 64 Within the Site, access routes provide vehicle and service movement with minimal pedestrian amenity (there are no dedicated footpaths into the Head Office, Murdoch Manufacturing or Commercial Local Zone sites).

*The Proposal*



Figure 13: Proposed public realm and landscape (source: rough&milne)

- 65 The evidence of Mr Milne provides a detailed description of the landscape concept design, usability and aesthetic approach. CPTED assessment is provided in the application report by rough&milne<sup>5</sup> and I provide additional comments below. The following assessment inevitably includes some overlap with Mr Milne but focuses on urban design implications of the public realm. To avoid overlap with Mr Milne, I have not addressed the general matter of landscape mitigation of the car park area though I would prefer to see a change in surface material for the central north-south vehicle aisle to enhance amenity and visually reduce this space.

<sup>5</sup> 171 Main North Road Resource Consent Application, Appendix E: Landscape and Urban Design Assessment, page 31.

- 66 **Through-Site links north-south:** These show a clearly delineated pedestrian connection (2.6m wide) from the supermarket site north into the Commercial Local Zone, tracking along the western edge of Commercial Local Zone retail and onto Northcote Road. Such a link will benefit the city / local area by providing an attractive and convenient public through route with good, open visibility, avoiding concealment and entrapment. This link will ensure that the future fine grain retail in the Commercial Local Zone is integrated with the proposed supermarket and further south to the existing offices. To the south a pedestrian connection runs along the front façade of the supermarket linking (via a bridge over the basement ramp) either east to Main North Road or south to the existing offices. These southern routes offer connections into and through the Site that would not exist were the Site to remain as an industrial activity and benefit the 400+ office employees as well as general public walking to the Site from the south. The design of the footpaths offer a coordinated treatment north-to-south across the wider site, ensuring legibility and legitimacy of public access is conveyed.
- 67 **Through-Site links east-west:** As with the north-south linkages these footpaths provide a coordinated design language and paths include landscape planting to offer buffering from car parking. Two primary connections are made from the store front to Main North Road. The grander northern east-west route (3.8m wide) is direct and emphasises the hierarchy of access driven by links to the repositioned bus stop, Commercial Local retail, Northcote Road intersection / signalled crossings and St Bede's College. The southern route (2.2m wide) links (via a dog-leg) to the existing offices and south east to Main North Road. The proposed signalled pedestrian crossing will have the least direct route to the supermarket. It is possible that users would not follow the more circuitous footpath and prefer a more (potentially unsafe) direct desire line. A further link occurs to the west along a ROW to Lydia Street. The quality of this ROW is described in the evidence of Mr Milne and has been subject to CPTED assessment in the rough&milne urban design report. Para 38 of my evidence addresses this link and I consider it important to avoid any concealment opportunities. Enclosure of the rear supermarket service area after hours is also important to the safety of this public route and I support the provision of automatic gates.
- 68 **Public invitation:** The clarity of public use of the Site and its wider linkages are critical. Public invitation is established by three attributes:
- (a) Activities which rely on public exposure and access will signal that the public are welcome onto the Site. These activities are the visibility of the supermarket façade, the visibility of the office building, the small shops/tenancies that are located in the Commercial Local Zone and signage.
  - (b) Use of a coordinated and consistent paving and landscape treatment that typologically and visually connects the Site together and links seamlessly

with the footpaths along Main North Road and Northcote Road. These will read as an extension of the public realm and will therefore be clearly identifiable public walkways; and

- (c) The design of new access streets and intersections with traditional footpaths either side tying in with Main North Road.

69 Conversely the development's service areas are located away from the Site's frontage, contained by the proposed building, secured with gates and of a very different level of design quality. This makes it clear where the public can and can't go. Ambiguity may occur along the ROW and into the Commercial Local Zone if the landscape, lighting and footpath design is not of an appropriate quality consistent with the public realm elsewhere across the Site.

70 A further consideration related to public invitation is the potential for a quality public plaza at the eastern end of the northern pedestrian link to Main North Road. Such a space (discussed previously) would considerably strengthen the quality of public invitation into the Site.

71 **Provision for occupation:** It has been established through conferencing that the future Site, once developed out with a supermarket function, is likely to be read as having 'centre-like' qualities. While Chapter 15 does not prescribe what a centre should look like, important aspects of a place like this are public realm (streets / spaces) areas that can be occupied by various activities – sitting / eating / informal play and so on. Whilst the predominant movement environment is one of vehicle trips, catering for walk journeys to and around the wider site (i.e. north to the Commercial Local Zone and south to the offices) is to be anticipated and I understand some 233 pedestrian movements will occur in the evening peak (Mr Smith, para 49). Outdoor occupation is more likely to occur either towards the northern parts of the Site for the public moving between the Commercial Local Zone and the supermarket, or south towards the existing offices. The new lawn area to the south could easily provide for sitting out / eating lunch and would be well positioned in relation to the pedestrian route linking the supermarket to the offices. No such space exists to the north though the suggested plaza would work very well in this regard. I therefore suggest that the Proposal considers opportunities for occupiable outdoor areas with appropriate furniture, sun and shade.

72 **Potential negative effects of privatisation:** The Site is a private space with publicly accessible elements and therefore the risk of engendering public ambiguity on entering may exist. This risk is avoided by:

- (a) Site-wide connections north and south are visually as well as physically open 24/7 so that the public can clearly see and move between Northcote Road, the supermarket and the offices.

- (b) 'Public' retail destinations are accessed off the sides and ends of the north-south routes;
- (c) Extension of continuous surface / footpath treatments and other landscape elements avoids defining private areas that might otherwise tend to discourage casual public use; and,
- (d) The public nature of the proposed Emergency Coordination Centre presents an obvious public role and destination for the Site.

73 **Safety and security:** A CPTED assessment has been prepared as part of the rough&milne urban design and landscape report. I have reviewed that report and agree that the Proposal performs well against CPTED matters though I would identify the following four issues that could be further considered:

- (a) The lack of active edge / surveillance to parts of the northern Commercial Local Zone through-link. Areas for concealment occur. This could be rectified through short-term façade / glazing treatments subject to internal planning, or in the longer term, comprehensive redevelopment of the zone.
- (b) Rear of supermarket concealment and lack of surveillance – resolved through provision of gates after hours but also consider safety during the day if used as a cut-through. Consider either 24/7 gate operation or improved pedestrian amenity / streetscape / landscape.
- (c) Lydia St ROW is largely unsurveilled and rather narrow. Potential entrapment risks exist as this long linear space does not offer choices for escape. Consider ensuring clear lines of sight, avoiding concealment, lighting, CCTV and overt design evidence that the link is cared for.
- (d) Head Office car park and activity after hours. If the office car park is being used as spill-over parking or allows staff and /or public pedestrian movement then poor surveillance will occur after hours, augmented by the blank south wall of supermarket. Further, the potential for entrapment may occur at the western end, though the significant width of this space offers mitigation.

### *Conclusions*

74 The following conclusions are drawn in relation to 'Public Realm':

- (a) Cross-site links north-south and east-west will benefit the local area by providing attractive and convenient public through routes with good visibility, reasonable activation and avoiding concealment and entrapment. The central north-south car parking aisle would benefit from greater differentiation in surface material and/or colour.



- (b) Public invitation and any perceived privatisation is avoided by a range of clear visual cues, consistent landscape and footpath treatments and the presence of an Emergency Coordination Centre.
- (c) Outdoor occupation of spaces is important for a place with centre-like qualities. Further consideration should be given to how areas to the north and south might be used and the inclusion of a public plaza space.
- (d) I consider that the Proposal performs well in relation to CPTED (though I identify some specific issues that would benefit from further consideration if appropriate).

**Topic 5: Architectural Concept and Design**



75 **Overall concept and design:** The challenge for this supermarket building Proposal is to deal with a large-scale retail form in a manner that offers an appropriate level of visual amenity for its context. This requires the building to ‘work’ at a number of scales as follows:

- (a) *At the macro scale* - the building needs to relate to the 6-lane arterial road. It will be viewed at moderate speed from moving vehicles and therefore presenting as a large overall form (96m x 70m) with visible signage is appropriate. The proposed setback offers the ability for this large building as a whole to be perceived and also allows adjoining buildings to be emphasised and read ‘in the round’.
- (b) *At the intermediary scale* - the building offers a façade and form composed of several elements. Firstly, the angled roof creates visual relief through a dynamic and (gently) varying skyline. This is then juxtaposed against a dominant, rectilinear yellow sign. Setbacks in the façade line at the corners are apparent however the general modulation (projection / recession) evident in the plan form does not translate strongly into façade expression and appears to be negated by the large yellow sign and the overhanging roof that doesn’t follow the recession in plan. The outcome being a weakness



in the intermediary scale that links the overall building form (macro) to the more detailed human scale described below. The proposed eastern edge projections (in plan) are circa 25-30m in length and would relate to the 30m Head Office frontage. I suggest these could be conveyed more definitively.

- (c) *At the finer (human) scale* - the building works well and conveys a high degree of visual interest. This is achieved by virtue of the extensive glazing, shop front information, planting, entry structures, canopy and setback and so on. I would observe that to achieve such a high degree of glazed frontage for a supermarket is a highly successful outcome though the trolley bay and (to a lesser degree) internal ramp reduce connections to internal retail activity.



- 76 **Signage design:** Allied to the discussion above is the scale and expression of the large yellow main sign. I have addressed this previously in my evidence and make the general observation that the yellow sign (38.7m x 7.4m) is out of scale with the building's east façade such that the parent building becomes subservient to the sign.
- 77 **Side elevations:** Whilst the north and south elevations are much less visible than the east (front) elevation, these nevertheless perform important functions. The south elevation relates to the Head Office building and car park by providing a 70m length and high proportion of glazing with a tall line of trees. The north elevation is required to relate to the backs of Northcote Road housing. I note the changes to articulation in this side façade help mitigate its scale when viewed from the adjoining dwellings and the dense tree planting along this boundary effectively filters views towards the supermarket.
- 78 **Legibility of entrances:** The two front entrances are clearly signalled by entrance setbacks, landscape treatment, paths and signage, and are in logical locations facing the car park and street. These entries are generously wide and will be clearly visible. The main 'lobby' space along the front (east) of the building is accessed from three directions, being via the two entries and from the basement ramp. They allow movement along the front of the building where activity will benefit activation

generally and wayfinding can be expected to be legible. Views towards the south entry are interrupted by the fuel facility that is less than ideal in urban design terms. This dichotomy (pedestrian vs vehicle) that could be resolved by relocating the fuel facility, however I am satisfied that my suggestions at para 32 would provide an acceptable outcome overall.

- 79 **Internal activity and service areas:** The layout and planning of the Proposal makes two fundamentally important decisions. Firstly, it concentrates the more publicly relevant activities (entry, lobby, checkout, access) to the front of the building facing the car park and street. Secondly, it physically and visually contains the services areas to the back (west) away from the public front. In so doing it organises the building's layout in the best possible way with respect to the Site. In addition, the southern edge provides ample fenestration allowing natural (south) light into the 'produce display' part of the supermarket. The northern edge is designed as bulk store with blank walls to ensure privacy for residential neighbours along Northcote Road. Overall the internal planning is appropriate from an urban design perspective.

### *Conclusions*

- 80 The following conclusions are drawn in relation to 'Architectural Concept & Design':
- (a) The Proposal works well at several design scales (macro, intermediate and fine / human). Of these the intermediate scale could be improved to offer stronger modulation and relational qualities.
  - (b) Signage to the main façade could benefit from better relational scale with the parent building including reduced size of the yellow signage background.
  - (c) Building entrances are legible and signalled by setbacks and other treatments. The southern entry is less successful, setting up a dichotomy with the fuel facility.
  - (d) Internal layout and planning is successful with concentrated 'front of house' activities facing east and contained service areas away from the public.

### **High-level urban design implications of Strategic Directions Chapter 3**

- 81 The Planning Policy conferencing noted the broad relevance of the Chapter 3 provisions. To assist this understanding, I provide the following high-level observations on the performance of the Proposal in relation to Chapter 3:
- (a) An important focus of the chapter is achieving an integrated, quality development. I would note that, fundamentally, the Proposal opens up the Site (including the adjoining Commercial Local Zone and existing offices) to through-site movement, establishing linkages and integration that do not

currently exist. This is important given the new land use compatibility (retail/supermarket/office) that will occur under the Proposal with opportunities for links to a likely new school (subject to owner agreements). Some links are provided along street edges or activated by building frontages within the Site, others occur through car parking areas. For the latter it is important that paths are well-landscaped, lit, safe, direct and inviting. The principal northern most east-west link is a generous, wide route that connects to a bus stop and the store front. Links to the south, while not perfectly direct, are well-aligned, attractive and likely to be used. The Lydia Street ROW is less than ideal for CPTED reasons and I suggest any risks of concealment are avoided.

- (b) In my opinion, a supermarket form is well-suited to (and integrates with) the scale of the 6-lane Main North Road. The proposed building position (setback) is driven by a number of operational and emergency service requirements set out in the evidence of Mr Young, and while the 69m setback reduces street edge engagement, it allows adjoining retail and office to be visually prominent and open towards the supermarket forecourt. I also comment on the issue of supermarket frontage alignment with the Head Office at para 48 of my evidence.
- (c) The quality and attractiveness of the area as an arterial gateway and residential neighbourhood is negatively affected by the presence of existing industry (described earlier at para 29). The proposed supermarket will form a new retail destination with easy, legible access. I note that the 400+ office employees and local residents will be able to walk directly to the supermarket and northern retail and this greater footfall generally will support the vibrancy of the Commercial Local Zone. A more consistent landscape edge is proposed and the line of street-scaled trees at the front boundary will enhance street amenity. The fuel facility does not add to pedestrian amenity at the frontage and a more elegant design could be considered given its prominent location.
- (d) Lastly, the proposition for a supermarket will offer better compatibility than industrial activity with adjoining residential and office functions. Environmental quality, landscape, building design and accessibility are all far superior for a retail environment than industrial and I conclude that the Proposal will offer benefits to the immediate context in this regard. Neighbouring residential to the north will not be overlooked by the Proposal and a neutral backdrop is formed by the northern supermarket edge, screened with planting. The northern PAK'nSAVE sign could be removed or the colour muted to reduce visibility effects for those residents.

### **Matters raised by CCC staff report (s42 report)**

82 I have reviewed the s42 report and in particular those matters raised by CCC's urban design advisor Mr Hattam. I note that Mr Hattam's report was written prior to the changes to the Application as a result of expert conferencing (para 26 of my evidence) and therefore in my opinion several of the issues raised have been resolved. These are at paras 82, 83, 89 and 104 of the s42 report. Informed by Mr Hattam's report, Mr Harris concludes that adverse visual amenity effects will be minor (given the IG Zone and conformity with built for standards), signage effects will be less than minor, but that effects relating to site layout will be more than minor and the southern pedestrian connection from Main North Road has more than minor adverse effects. I therefore comment further on:

- (a) Layout - building setback and street engagement; and,
- (b) Site-wide integration in terms of pedestrian connections.

#### ***Building setback and street engagement***

83 Two types of urban form consistently emerging in commercial business environments today are: a) street based urban environment where buildings (usually smaller convenience goods and services) are generally located close to, and facing the street, forming a good level of interaction with the street and therefore creating a high level of pedestrian amenity; and, b) contrasting this form are larger footprint buildings influenced by their use / operational requirements and where having easy access to the car is critical for the success of the operation. Such environments result in a more car dominated environment less conducive to high levels of pedestrian amenity, and therefore reduced activation and engagement. While both environments have their place, it is important to understand where each one 'works' and is appropriate, and not to expect buildings to behave contrary to their environment. Clearly along Main North Road there are parts intended to operate as more pedestrian friendly built form, and parts intended to operate as a more car based built form. It appears that the Papanui Road / Main North Road intersection is quite clearly the former while the IG Zone is intended to be the latter. The built form standards for the IG Zone that do not define a maximum setback, coupled with permitted outcomes such as yard-based suppliers and not least the 6-lane scale and linearity of Main North Road sends out a clear message that this will be a car-based environment.

84 Notwithstanding the above, buildings in industrial (and commercial) zones should not be completely immune from good urban design principles relative to the zone. The issue here is the discretionary supermarket activity proposed for the location that points to more commercial outcomes, but it is unfair to expect buildings here to behave as if they are in a pedestrian-oriented 'high street' or 'town centre' environment. Commercial Chapter polices refer to (my emphasis): 15.2.4.2 (a) (i)

*encouraging pedestrian activity and amenity along streets and in adjoining public spaces, to a degree that is appropriate to the location and function of the road; 15.2.4.2 (a) (viii) achieving a visually attractive setting when viewed from the street; and 15.13.1 (a) (ii) Promotes active engagement with, and contributes to the vibrancy and attractiveness of, any adjacent streets etc.*

- 85 In my opinion there are two key points to note here. Firstly, that the level of street edge amenity is to be considered relative to its roading environment (refer to my paras 51, 52 above). Secondly, that the policies and matters of discretion distinguish between 'active' and 'attractive' while the latter does not necessitate a built form response with buildings very close to the street. Here the underlying Site's zoning and the vehicular scale and role of Main North Road come into play ("appropriate to location and function of the road") placing more weight on achieving an attractive setting.
- 86 The issue is therefore what constitutes a "visually attractive setting". Were the proposed supermarket to be located close to or even 3m from the Main North Road edge, this would require the (surface) car parking to be located elsewhere on Site, with the alternatives (assuming all other operational matters are workable) being either behind the building to the west or utilising the Head Office parking area. This would then dictate that the primary building entrances and 'front' would face either the rear or side such that the inactive / blank side or rear elevations would be positioned onto Main North Road. This type of outcome can be seen at Northlands Countdown and is, I suggest, particularly unattractive and highly inactive. By comparison, the Proposal provides a more attractive visual setting by providing a pleasant landscape edge, a visible glazed frontage, routes to the front entrances and activity from the general coming and going of people. The suggested plaza would assist this further. I have already commented on (para 48) the issues with bringing the building partly forward on the Site as referred to at para 168 of the s42 report. Therefore, on balance I consider the approach to Site layout and street engagement to achieve a number of the outcomes sought by the Chapter 15 provisions tempered by the underlying industrial zoning.

#### ***Site-wide integration in terms of pedestrian connections***

- 87 The concerns raised in the s42 report with regard to integration focus on the extent and quality of pedestrian connections between the supermarket, the wider Application Site and the adjoining street context. I note the following:
- (a) That links between the northern building entry and the street are positive and changes following expert conferencing have improved these still further. The suggestion I have made for an additional plaza space would add a high level of connectivity, amenity and public invitation to the Proposal.

- (b) Links north from the supermarket to the Commercial Local Zone and Northcote Road have been improved following conferencing. Pathways are more direct (less turns) and the footpath through the local retail has been widened and is more direct.
- (c) Links south to Head Office and southeast to Main North Road have been introduced following conferencing such that much more direct and inviting connections will exist. These utilise a new pedestrian bridge (image below) over the basement ramp and along the glazed face of the supermarket.



- (d) Links directly east from the southern supermarket entry do not easily connect with the street but terminate on the fuel facility, requiring a dog-leg route. As noted at para 67, people using the new signalled pedestrian crossing will have the least direct route to the supermarket but the nearby alternative southern route (para 87c) and the quality direct northern route (para 87a) will provide attractive alternatives for pedestrians. Overall pedestrian access to the supermarket will be successful.
- (e) Links to/from the west via the Lydia Street ROW have been addressed in my evidence (para 38) and I note the importance of avoiding concealment risks.

88 While a number of connections are good and will be inviting and attractive to pedestrians, the link west via the ROW needs to be well-managed to improve CPTED performance. The link between the proposed signalled crossing and the southern supermarket entry is circuitous / less than ideal but other southern connections are positive.

## Conclusions

### 89 ***Overarching Conclusions***

- (a) For the reasons set out in this evidence, **I consider that the application can be supported from an urban design perspective** with the changes that have been made following conferencing and including the provision of a quality pedestrian plaza at Main North Road. I have also considered other design adjustments that could improve the Proposal further, including refined design of the fuel facility, scale reduction of the main yellow signage, stronger modulation of the supermarket's east elevation and, augmented surface differentiation of the central north-south car parking aisle.
- (b) The use of the subject land for a supermarket will generate superior urban design outcomes for the wider Site and its context than would either existing or permitted industrial functions.
- (c) A clearer identity for the local area will emerge, establishing synergies with adjoining development. The scale, form and layout of the Proposal is appropriate for its arterial road context and underlying Site zoning.
- (d) The design of the building is good for this genre, deploying multiple design scales with positive, glazed frontage and entry articulation.
- (e) The main urban design issues appear to be the quality of two of the pedestrian connections, the degree of street activation / engagement and the effects of the fuel facility on visual amenity and physical links. I address these matters at paras 83-88 of this evidence and in summary below.

### 90 ***Urban Form and Character***

- (a) The Proposal will change the role and character of the area towards one that is more synergistic with its neighbourhood context by offering destination and public invitation with an enhanced centre-like identity.
- (b) Improved site-wide land use compatibility will strengthen the existing Local Centre in line with District Plan provisions.
- (c) Higher quality building specification and landscape design oriented towards Main North Road will provide better outlook and amenity than existing or anticipated industrial outcomes for residents.
- (d) Overall façade length and height will relate to the existing Foodstuffs Head Office building aiding scale relationship.

- (e) Design adjustments to the east elevation and yellow signage, and Fuel Station could be considered to enhance the Proposal further.

91 ***Urban Structure***

- (a) The Site can be viewed as a linchpin, with the Proposal offering improved Site-context integration and a clearer sense of centrality relative to the Head Office and Commercial Local Zone.
- (b) The coarse grain of the street / block context and arterial status of Main North Road supports larger scale vehicle-based retail activities. Providing for local pedestrian trips to the Site is important and cross-site connections integrate to the north, south and east. The opportunity to connect west into the future school exists subject to owner agreements.
- (c) The Proposal presents a land use that will not detract from, but offer better alignment with, the existing Local Centre, and will support increased pedestrian movement.
- (d) The proposed Site structure screens existing industrial buildings, contains service functions away from the public front and allows space to the front of the Site that facilitates cross-site movement. Regarding building setback, adverse outcomes are noted regarding supermarket legibility and functionality were the building to move forward on the Site.
- (e) The functional / operational requirements of the Proposal are set out in the evidence of Mr Young and influence proposed Site structure.

92 ***Relationship to Street***

- (a) A higher quality and higher amenity street edge will emerge than currently exists or that would be likely to occur through industrial uses on the Site.
- (b) A legible and attractive supermarket frontage faces the street and is complemented by a street-scaled tree structure.
- (c) A northern Site street entrance links to building entry along a generous landscaped path. The southern building entry connects less successfully with the street. Activation of paths occurs within the Site though the local retail area is in need of improvement in the future.
- (d) Supermarket form and setback is appropriate in relation to Main North Road character and the Site's zoning, but reduces the potential for activation and pedestrian engagement at the street.



- (e) The fuel facility is a permitted activity and complies with zone standards, but does not support pedestrian amenity at the street edge. Its design could be improved to create a more interesting visual focus for pedestrians.

93 **Public Realm Design**

- (a) Cross-site links north-south and east-west will benefit the local area by providing attractive and convenient public through routes with good visibility, reasonable activation and avoiding concealment and entrapment. The central north-south car parking aisle would benefit from greater differentiation in surface material and/or colour.
- (b) Public invitation and any perceived privatisation is avoided by a range clear visual cues, consistent landscape and footpath treatments and the presence of an Emergency Coordination Centre.
- (c) Outdoor occupation of spaces is important for a place with centre-like qualities. Further consideration should be given to how areas to the north and south might be used and the inclusion of a public plaza space.
- (d) I consider that the Proposal performs well in relation to CPTED (though I identify some specific issues that would benefit from further consideration if appropriate).

94 **Architectural Concept and Design**

- (a) The Proposal works well at several design scales (macro, intermediate and fine). Of these, the intermediate scale could be improved to offer stronger modulation and relational qualities.
- (b) Signage to the main façade could benefit from better relational scale with the parent building including reduced size of the yellow signage background.
- (c) Building entrances are legible and signalled by setbacks and other treatments. The southern entry is less successful, setting up a dichotomy with the fuel facility.
- (d) Internal layout and planning is successful with concentrated 'front of house' activities facing east and contained service areas away from the public.

**Andrew Davies Burns**  
**19 November 2019**

## Appendix A: Andrew Burns Relevant Experience



### curriculum vitae

**ANDREW BURNS** MRTPI, FRSA, MAUD (Dist), BArch, BBSc

#### Contact

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#### Skills & Experience

Andrew is a highly experienced director-level urban design and development specialist who has delivered projects across Europe, Africa, Middle East, Asia and New Zealand. He is currently working in New Zealand as a director at Wellington-based McIndoe Urban Ltd, and a 'Built Environment Expert to Design Council' (CABE (London)).

Andrew is a former urban development director at Arup (London) appointed to run the Pretoria Capital City Masterplan, and a former urban design and architecture director at Matrix Partnership Ltd (London). Andrew was a part-time lecturer at Oxford University (Keble College), at the Joint Centre for Urban Design, Oxford Brookes University; a studio tutor at The Bartlett, UCL; and, currently an external examiner and guest lecturer in urban design at the School of Architecture and Design, Victoria University of Wellington.

He is an architecturally trained, qualified Town Planner and urban designer and a Fellow of the Royal Society of Arts. Andrew has particular experience in leading large scale, integrated urban development projects for both public and private sectors.

#### Qualifications

Member of the Royal Town Planning Institute (MRTPI)

Fellow of the Royal Society of Arts

MA Urban Design (Dist.)  
Oxford Brookes University, UK

BArch (Hons), BBSc  
Victoria University of Wellington, NZ

#### Key Appointments

2013 (ongoing) Director - McIndoe Urban

2014 (ongoing) Auckland Urban Design Panel member

2013 (ongoing) External Examiner, Victoria University of Wellington, NZ

2012-13 Urban Design Director, Arup (South Africa)

2006 (ongoing) CABE Built Environment Expert (UK Govt agency), LB Newham Design Review Panel, Berkshire Regional Panel

2003-12 Director, Urban Design and arch. Matrix Partnership Ltd, London, UK

2010-12 Lecturer, Continuing Ed. Dept. Oxford University (MSc), UK

2006-13 Lecturer, JCLUD, Oxford Brookes University (MA), UK

2004-06 Studio Tutor, The Bartlett, UCL, London, UK

2000-03 Associate, architecture and urban design, DEGW plc, London, UK

1997-2000 Urban Designer, Urban Initiatives, London, UK

1993-96 Architect (grad), Bell Wright Architects & Alastair McDougall Architects.

#### Select Experience

##### City & Regional Development Strategies

Hutt City Spatial Plan for the CBD, NZ (2017-19)  
Petone Spatial Plan, NZ (Jan 2016-17)  
Pretoria Capital City Masterplan, SA (2012-13, project director)  
Waterfront regeneration Dublin Docklands (2003-4, Project Manager)  
Dublin-wide Station Environs study, Dublin Transport Office (2003-4)  
Dublin City Strategy 'Managing Intensification and Change' (2001-2)  
Harlow & Stevenage New Towns Renewal, UK (2007-2010)

##### Design Review, Policy, Guidance

Christchurch District Plan Sectional Review  
Wellington, Auckland, Palmerston North, Whanganui design review  
Auckland Design Manual residential chapters (2013) lead co-author  
CABE publication 'Creating Successful Masterplans' (2009-10, co-author)  
Auckland Urban Design Panel member  
Design review (Wellington City Council, Palmerston North City Council)  
Design Excellence Policy drafting (WCC, 2016)  
CABE Design Review Panel (UK)  
Berkshire Regional Design Review Panel (UK)  
Good Practice Guide on Design in the Planning System (1998)

##### Large Scale Integrated Urban Development

Aokautere Area Structure Plan, Palmerston North (2018-ongoing)  
Christchurch City Centre Retail Plan, NZ (Nov 2013-May 2014)  
Onehunga Wharf Development, Auckland NZ (June 2016-17)  
Shenzhen: Masterplan for a new mixed use retail quarter, China (2010-11, project manager and urban design lead)  
Mombasa, Masterplan for a new waterfront city quarter, Kenya (2011)  
Venlo 240Ha Trade Port Noord, The Netherlands (2000-2001)  
Woodberry Down Estate 2,000 Unit Development, London, (2004-10)  
IT Business Park, Potsdam, Germany (2001)  
Mape New Town & Hilton Hotel, Sierra Leone (2010-2012)  
Dublin Docklands redevelopment, ROI (2003-4)

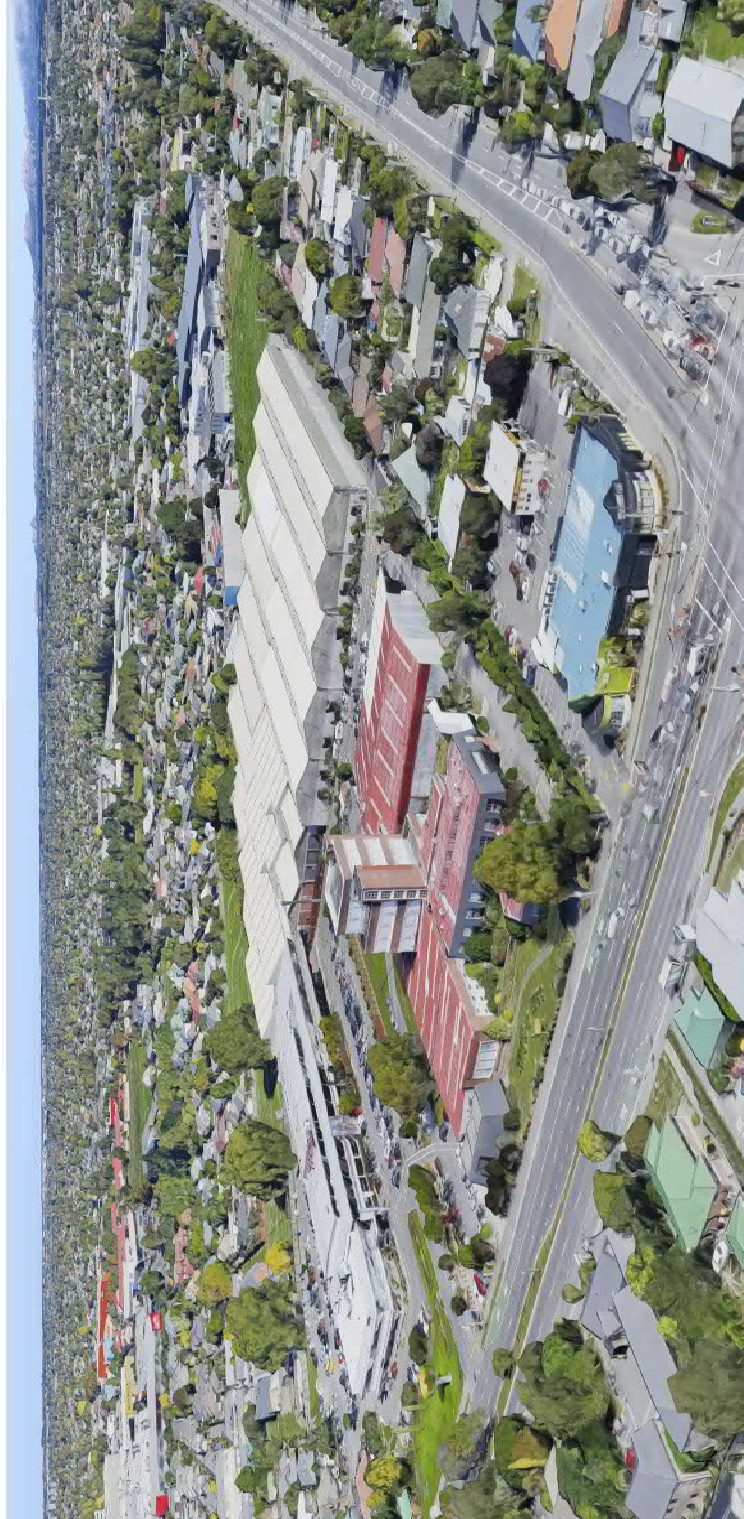
##### Campus Masterplanning

Food HQ and Massey University Campus Plans (2013-19)  
UCOL (NZ) Campus Development Plan (2015-16)  
YUW campus expansion and plan change (2015-16)  
Hutt Valley High School teaching spaces and gym (2015-17)  
Sustainable Building Campus and retail village, Ireland (2006-7)  
Edinburgh Heriot-Watt Campus Plan (1999-2000)  
Papendorp Science and technology Park, The Netherlands (1999-2000)



**Appendix B: Existing Site Aerial Photograph**

Supplied by Niko Young (McCoy Wixon)



## Appendix C: Pedestrian Counts at Main North Rd / Cranford Rd intersection

Provided by Abley Transportation Consultants

**Study Name** I2224 Cranford / Main North  
**Start Date** 14/09/2016  
**Start Time** 1:00 PM  
**Site Code** I2224 Cranford / Main North  
**Project**

### Type Crosswalk Classification Pedestrians

Start Time	A1 Main North SBD Southbound			n/a Southwestbound			A2 Cranford WBD Westbound			n/a Northwestbound			A3 Main North NBD Northbound		
	Peds CW	Peds CCW	Wds Combin	Peds NW	Peds SE	Wds Combin	Peds CW	Peds CCW	Wds Combin	Peds NE	Peds SW	Wds Combin	Peds CW	Peds CCW	Wds Combin
1:00 PM	0	0					0	0					0	1	
1:15 PM	0	0					1	2					0	1	
1:30 PM	0	0					2	2					1	0	
1:45 PM	0	0					1	1					0	1	
4:00 PM	0	0					0	3					0	2	
4:15 PM	0	0					3	4					0	1	
4:30 PM	0	0					3	0					0	0	
4:45 PM	0	0					4	2					3	1	
5:00 PM	0	0					0	3					0	0	
5:15 PM	0	0					1	3					1	0	
5:30 PM	0	0					0	2					1	0	
5:45 PM	0	0					0	1					0	3	
7:00 AM	0	0					1	1					0	0	
7:15 AM	0	0					0	1					0	0	
7:30 AM	0	0					0	0					1	1	
7:45 AM	0	0					5	5					1	1	
8:00 AM	0	0					12	1					4	1	
8:15 AM	0	0					5	0					9	1	
8:30 AM	0	0					7	14					9	8	
8:45 AM	0	0					6	5					2	3	



Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Tony Douglas Milne**

19 November 2019

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**Applicant's solicitors:**

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**anderson  
lloyd.**

## Introduction

- 1 My name is Tony Douglas Milne.
- 2 I am a Landscape Architect and director of Rough and Milne Landscape Architects Limited, which is a Christchurch based consultancy established in 2010.
- 3 I hold a Bachelor of Arts degree from the University of Canterbury and a Bachelor of Landscape Architecture degree from Lincoln University. I have been practicing as a landscape architect since 1995. Our consultancy is involved in a wide range of landscape design and land planning projects throughout New Zealand. Many projects have involved preparing reports and evidence, which address matters of visual impact and landscape effects concerning proposed developments.
- 4 My role in relation to Foodstuffs (South Island) Properties Limited's (**Foodstuffs**) application has been to provide advice in relation to landscape architecture, landscape and visual effects. Rough and Milne prepared a landscape proposal plan for the application site and I co-authored the landscape and urban design report to the Assessment of Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix E of the AEE. I have also been party to both the Urban Design and Landscape Joint Witness Statements.
- 5 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 6 I have also responded to the Council RFIs and attended a meeting held with Council officers in regard to the Proposal (an Urban Design and Landscape Meeting held 10th September 2018 to discuss the urban design questions raised in the Request for Further Information). I have attended the Urban Design Panel presentation for this project, as well as undertaken Caucusing with Council officers on Friday 25<sup>th</sup> October 2019. In the course of providing these services I have visited the application site several times and familiarised myself with its general surroundings.
- 7 In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) submissions relevant to my area of expertise (including the submission of Mr D Beck – 15 Northcote Road);

- (c) the statements of evidence prepared by Mr Burns (Urban Design), Mr Allan (RMA/Planning), Mr Colegrave (Economics) and Mr Young (Architecture) and Mr Smith (Transport);
  - (d) planning provisions relevant to my area of expertise (more specifically, within Christchurch District Plan Chapters 3, 15 and 16);
  - (e) section 42A report with respect to landscape and visual amenity matters;
  - (f) The Council's Landscape and Urban Design advice (RFI dated 10.09.2019 and subsequent email dated 09.10.2019) and;
  - (g) Other policy and guidance documentation including the NZ Urban Design Protocol, Matapopore Urban Design Guide, CCC Infrastructure Design Standard
- 8 I have visited the Application Site on numerous occasions as part of preparation of a Landscape and Urban Design Assessment to support the AEE for this Application, with the most recent site visit taking place on 6 November 2019.

#### **Code of Conduct for Expert Witnesses**

- 9 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

#### **Scope of Evidence**

- 10 I have prepared evidence in relation to the landscape and visual amenity outcome of the proposal. This includes:
- (a) Executive Summary
  - (b) the Project Process and Application Amendments
  - (c) the Existing Environment of the Application Site (landscape description);
  - (d) the Proposal and the key findings of my assessment of effects, including consideration for Crime Prevention Through Environmental Design (CPTED) and relevant Urban Design aspects such as connections and street activation;
  - (e) consideration of relevant statutory provisions;
  - (f) matters raised in the Christchurch City Council's (CCC) staff report issued under s42A of the RMA; and
  - (g) a conclusion.

## Executive Summary

- 11 There has been a long history of industrial activity on the site consistent with its zoning, and this forms part of the existing environment for neighbouring residential dwellings. Industrial operations had established on the site from at least the mid-1950s (refer Section 3.7 of the AEE). Therefore, non-residential activity, latterly displaying only a **low - moderate** level of urban amenity, is an existing feature within the landscape. Its presence already affects the environmental qualities of the surrounding environment. In my opinion, the proposed development will result in a **higher level** of urban amenity than exists.
- 12 The receiving environment is one of mixed character. The residential, business, and recreational activities located in the area result in a context that lacks high coherence and amenity. Consequently, the receiving environment has the capacity to accommodate the proposed scale and nature of the development **without significant adverse effects** on character or visual amenity.
- 13 The likely environmental effects of the proposed development on visual amenity and outlook will, in my opinion, generally be maintained, if not improved. In respect of the residential dwellings adjacent to the site on Northcote Road, the proposed supermarket building will be as visible as the large industrial building that currently exists there. Further to that, the proposed setback and height of the proposed building will present a different visual outcome to the existing. The building will have a greater horizontal proportion and its eastern façade will appear 'lighter' than the stepped verticality of the 'heavy' brick building that currently exists on site.
- 14 The development due to its compliant bulk and location, in combination with mitigation planting, in my opinion will have visual effects no greater than that anticipated by the underlying zoning.
- 15 It is considered that the landscape proposal for the Application Site will ensure that views to the site from the adjoining residential properties will be filtered by the greenery of boundary planting, and in time by internal car park tree planting. Therefore, I am of the opinion that the resulting landscape and visual effects of the proposed development will be largely positive.
- 16 It is considered that overall the landscape effects of the proposed redevelopment will be able to be readily absorbed within the existing environment. In my opinion, the proposal achieves and implements the relevant objectives and policies of the Christchurch District Plan (**CDP**) relating to landscape and visual amenity; and will be in keeping with the outcomes anticipated by the underlying zoning.
- 17 Overall, the proposed development will see a considerable improvement on the existing situation. The proposed frontage will display a **significant** increase in visual amenity, offering landscaping which has a variety of height, form and seasonal colour to the street frontage and an increase in screening and buffer planting for adjoining residential sections.



## The Project Process and Application Amendments

- 18 This section provides a brief summary of the development and the design process to date.
- 19 Since the lodgment of the Application and in part as a response to submissions and Council recommendations, several amendments have been made to the landscape proposal plan.
- 20 These include the following:
  - (a) Modification of the landscape design to improve landscape and visual amenity, and to correspond to changes to stormwater management;
  - (b) Enhanced pedestrian connectivity through the site and enhanced supermarket building entrance (planters and timber (or recycled plastic) seating);
  - (c) Information boards incorporated into the site landscaping to explain the ecological features and opportunities of the site (i.e. detailing the stormwater management approach) as an opportunity to educate the public;
  - (d) Adoption of CPTED recommendations; and
  - (e) Adjustments to the planting palette following discussion with Ms Jennifer Dray.
- 21 *Refer to Sheet 9 of the Graphic Attachment*, for the amended Application Site landscape plan which also shows the following changes described below.

These include the following:

  - (a) Widening of east to west pedestrian access paths through the car park;
  - (b) Realignment of northern pedestrian link to Commercial Local (**CL**) zone from the supermarket;
  - (c) Extended area of paving and landscape treatment to northern building entrance area;
  - (d) Treatment to roundabout (permeable paving) to allow for fuel tanker tracking;
  - (e) A new pedestrian link from the supermarket south to the existing Foodstuffs offices;
  - (f) Amended pedestrian link from the supermarket's southern entrance to Main North Road via a proposed bridge over the basement car park ramp;
  - (g) Northern façade articulation (as shown in the renders and elevations);
  - (h) Gates at both the south and north ends of the rear service area of the supermarket;

- (i) Surface treatment to areas of the supermarket car park;
- (j) Removal of the gate previously shown at the western end of the Lydia Street accessway;
- (k) Additional trees shown within the car park as well as to the Main North Road frontage;
- (l) Additional trees shown within the landscape strip along the Lydia Street accessway; and
- (m) Minor graphical amendments.

### **The Existing Environment**

22 The existing (receiving) environment is defined as that area surrounding the Application Site that may be affected by the proposed activity, although the visibility of the Proposal may extend beyond this. *Sheet 3 of the Graphic Attachment shows the application site and its immediate surrounds.*

23 A detailed description of the surrounding landscape and application site was contained within the Landscape and Urban Design Report appended to the Application. This is summarised below.

#### Description of the landscape setting of the application site

24 The landscape surrounding the application site incorporates a diversity of land uses. Local businesses, several schools, commercial offices and industrial uses exist within a primarily residential setting. *Refer to Photo Viewpoints 1 to 12 on sheets 4 and 5 of the Graphic Attachment.* This diverse mix of activities in the neighbourhood encourages activity throughout the day providing opportunity for continual 'informal surveillance'. Cross boundary issues such as noise and visual amenity are generally addressed using landscaped setbacks and fencing, although there are few large established trees.

25 The surrounding neighbourhood character is heavily influenced by the linearity, width and visual dominance of Main North Road, QEII Drive and Northcote Road. Main North Road has wide pedestrian areas and a landscaped median with established trees, breaking up the multi-laned road and providing a human scale to the dominant carriageway. It does however remain a vehicle dominated environment. Allocated cycleways and bus lanes follow Main North Road, past the site, providing easy connections around the neighbourhood for all modes of transport. *Refer to Photo Viewpoints 8 to 11 on sheet 5 of the Graphic Attachment.*

26 The presence of a key transport route (Main North Road) heavily influences the character of the area, providing a setting for a range of land use activities. The resulting interfaces currently lack coherence and face challenges in providing for cross boundary amenity between zones. Overall, I find that the existing setting displays a **low- moderate** level of landscape and visual amenity.

### Landscape description of the Application Site

- 27 Foodstuffs seek to establish and operate a supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks, and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A, and 7B Northcote Road. This would result in an area of Industrial General zoned land being used for a supermarket, petrol station, and associated parking / access and landscaping.
- 28 The Application Site is 1.5625 hectares and primarily zoned Industrial General (IG), with CL zoning for 7 Northcote Road and an access lot from Main North Road zoned Residential Suburban under the Christchurch District Plan (CDP). The site is bordered by properties zoned Residential Suburban (RS), Specific Purpose (School) and Industrial General. St Bedes College (SPS Zone) is located nearby and Marian College is proposed to be relocated to 2 Lydia Street (directly west of the proposed site - IG Zone).
- 29 The site is predominantly flat and consists of a number of large buildings which are either used for industrial activities or unoccupied. *Refer to Photo Viewpoints 10 and 11 on sheet 6 of the Graphic Attachment.* There is a generous setback to the road frontage and a discrete area in the north-eastern corner that contains maintained mixed exotic and native tree and shrub planting. A mature Lime Tree (*Tilia spp*) of good size and form is located on the street frontage and anchors the north-eastern corner of the industrial zoned land. A boxed drain runs adjacent to the northern boundary and is co-located with adjacent fencing and landscaping.
- 30 The prevailing activity on site is consistent with an industrial character, with some consideration for the amenity to the street frontage. Large sealed areas of carparking are visible and access for large vehicles is provided to support the activities on site. Views to the site are widely available, particularly from the properties located on the eastern side of Main North Road, where the buildings, due to the large block sizes, mostly face the street. The outlook from adjacent properties on Northcote Road is largely constrained by existing 1.8m – 2.0m high boundary fencing and orientation of dwellings. The existing vegetation onsite provides little screening of the redundant industrial activity and buildings on the Application Site for these properties directly opposite on Main North Road. *Refer to Site Analysis Plan on sheet 7 of the Graphic Attachment.*
- 31 Overall, the visual amenity of the site is **low - moderate**. While the road frontage provides some visual interest with provision of vegetated layers in certain areas, the empty nature of the existing buildings provides no activation to the street frontage. The resulting character is driven by the unengaging and redundant nature of industrial activity, reinforced by the linear corridor of vehicle movement.

## **The Proposal and Assessment of effects**

- 32 The landscape proposal is described in full in the Application and in the Council Officer's Report prepared by Mr Nathan Harris. The following discussion summarises the landscape components of the Proposal, taking into account the key matters outlined in the Joint Witness Statements for both Landscape and Urban Design<sup>1</sup>.
- 33 The proposed site landscaping has been designed to help provide a quality setting for the Proposal which integrates the new built form into its receiving environment. This will result in a development that is engaging and attractive to the street. The Application presents a consistent landscape treatment across the Application Site providing a high amenity and safe frontage to Main North Road. The generous setback of the supermarket from Main North Road provides an opportunity for a filigree of planting to mitigate building scale and complement the proposed architectural façade articulation, which is described further in the evidence of Mr Young. Planting and surface treatment will be used to demarcate and reinforce pedestrian access routes into and through the Application Site.
- 34 The site layout (as described in full by Mr Burns) allows for an effective and coherent landscape treatment which will soften the visual effects of built form scale and car parking from the residential properties adjoining the site and from Main North Road. This includes a tree planting strategy which recognises the qualities of both exotic and native tree species.
- 35 Exotic deciduous trees have been chosen to reflect species seen in the residential environment, provide seasonal interest, allow winter sunlight and offer a relatively quick timeframe for establishment. Exotic specimens have been chosen also for the suitability of their form to enhance the carpark environment and frontage without compromising functionality. Rough and Milne have a considerable track record with supermarket development and the tree species selected for the Application Site are 'proven winners' in regard to their success growing in similar environments.
- 36 Native tree and shrub planting reflect a desire to increase biodiversity within the site, to offset ecological effects associated with habitat loss of piping the Lydia Street utility waterway and align with various Council guidelines<sup>2</sup> along with the Matapopore Urban Design Guide<sup>3</sup>.

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<sup>1</sup> Dated 1 November 2019, prepared by Landscape and Urban Design experts: D Hattam(CCC), J Dray(CCC), A Burns(FSI), N Young(FSI) and T Milne(FSI)

<sup>2</sup> Christchurch City Council, 2016. Infrastructure Design Standard – Part 10: Reserves, Streetscape and Open Spaces

<sup>3</sup> Matapopore Charitable Trust, 2015. Matapopore Urban Design Guide – Kia Atawhai Ki Te Iwi

- 37 Tree planting adjacent to residential properties along the northern boundary provides 'higher level' screening for residents without compromising the safety of the pedestrian path along the Lydia Street access. The planting strategy for this landscape strip comprises a combination of layered native hedging or climbers, with low shrub planting and Mexican Alder trees (*Alnus jorullensis*). For the properties at 9a – 17a Northcote Road this planting, in combination with the proposed 2m high acoustic fence, will provide a significant improvement over the existing site treatment (which includes boundary fences in various states of disarray), a chain link fence between the Lydia Street drain and the site, and low-level landscaping that offers little in terms of residential amenity boundary treatment.
- 38 Planting to the proposed stormwater basin will provide habitat enhancement and stormwater treatment on site. Interpretive sign boards and the like will be integrated into the landscape design of the stormwater basins to educate the public on native flora and fauna.
- 39 The proposal offers a site and car park layout which is functional, safe and legible for all users. Pedestrian access routes are provided through the site, delineated by a change in surface treatment and reinforced by landscape planting. In places, 'pause points' are provided along these pedestrian links where users can sit and reflect. There are also larger break out spaces associated with the building entrance/exits along the eastern façade.
- 40 The most important pedestrian access route is the direct connection that will be provided to the supermarket entrance from the bus stop on Main North Road. There is an opportunity to provide an open space with seating, paving, tree and shrub planting within the Application Site and adjacent to a bus stop. This would provide an appealing, high amenity experience for this entry to the site.
- 41 Each pedestrian route is designed to offer consistent, safe, legible access routes to the supermarket entrances. Pedestrian access routes also link the supermarket with Foodstuffs Head Office to the south and to the retail within the CL to the north. The pedestrian link to the north will extend along the western façade of the retail buildings through to Northcote Road. The amended landscape plan provides a more clearly articulated and safe route for the southern pedestrian connection to the building via a pedestrian bridge over the basement carpark access ramp (*refer to sheet 9 of the graphic attachment*). This would provide an increased level of separation of pedestrians from vehicles and less circuitous route to the proposed building.

### **Summary of Landscape and Visual Amenity Effects**

- 42 The likely landscape and visual effects of the proposal relate to the scale of the building and car park proposed and associated potential effects of changes to visual amenity and outlook. The proposed change in land use and demolition of

the existing buildings on site will result in a degree of change to the site layout and function.

- 43 The Proposal will achieve the renewal of a partly derelict/underused site with activities that generally allow better scale and use relationships to nearby housing than could be achieved by industrial development on the site. The Industrial General Zone anticipates a 20m high building could be built to within approximately 15m of the residential boundary<sup>4</sup>, or alternatively for this specific location, a 6.5m high building could be to within 3m of the residential boundary<sup>5</sup>. A building of this scale potentially would result in considerable effects on residential and visual amenity.
- 44 In the context of the immediate surrounding environment, and when considered with an outcome anticipated by the underlying zoning, this proposal presents an appropriate built form and landscape response. It is obvious that the Application will change the character of its existing setting. However, it is considered that any adverse effects on the character of the existing environment will be either avoided or mitigated through the design response.
- 45 The outlook of adjacent properties on Northcote Road is largely constrained by existing 1.8m – 2.0m high boundary fencing. The majority of the dwellings and external living spaces on these properties are orientated to the north, and therefore face away from the Application Site. The outlook from properties to the east of Main North Road is typically across a combination of low fencing and planting of various heights. The foreground to these views is dominated by the carriageway and users of Main North Road.
- 46 The Application presents a different outlook to the one that exists today. Potential adverse visual effects for properties with views to the site will be mitigated by the proposed tree and hedge planting to the Main North Road frontage, planting and 2m high acoustic fencing to internal boundaries and tree planting throughout the car park. As previously mentioned, the building setback also contributes to the mitigation of potential visual effects from Main North Road. While the Application activity is not anticipated by the CDP for this site, when one considers the built form and yard based display (for example a Bunnings, Mitre 10 Mega or say a Hirepool) that could result from the underlying zoning, it is my opinion that in regard to visual effects, the proposal presents an appropriate environmental outcome.

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<sup>4</sup> Christchurch District Plan, 16.4.2.1 Maximum height for buildings (Industrial General Zone)

<sup>5</sup> Christchurch District Plan, Appendix 16.8.11 Recession Planes

- 47 The proposed fuel facility is to be located adjacent to the Main North Road boundary of the site. Operational constraints (fuel tanker access) restrict the provision of landscaping to screen this structure from all views. While accepting that the fuel station canopy structure will be visible, it will be viewed in the context of Main North Road in conjunction with the *Liriodendron* trees proposed for the Application Site frontage and the *Platanus* trees proposed for the car park. Furthermore, with the proposed changes to the design of the canopy as outlined in the evidence of Mr Young, I find that this is unlikely to be detrimental to the quality of the setting and in my opinion any adverse visual amenity effects can be satisfactorily managed.
- 48 If further design changes to the appearance of the fuel facility canopy, for example finer grain detailing, were to be considered, then adverse visual effects would be further reduced. One must also consider that a fuel station is a possible anticipated outcome under the Industrial Zoning of the Application Site, and given the typical nature of these, in the context of this Application the fuel facility renders a better environmental outcome.
- 49 Overall, the landscape and visual amenity outcomes of the proposal offer a quality and functional user experience which integrates well with the surrounding setting. The proposal for the site will offer a significantly improved frontage, with trees, low shrubs and hedge planting which will define the boundary and provide a high-quality street edge. Throughout the Application Site, low native shrub and groundcover planting with specimen trees help to provide a human scale to the spaces while still retaining sightlines. Not only will the proposed planting provide a good landscape character and visual amenity outcome, planting in association with the proposed stormwater treatment will provide habitat and ‘tell a story’. The landscape narrative of the Application Site is an important landscape outcome that provides an integrated Application Site plan.
- 50 The Application presents an opportunity to pull the various discordant landscape elements of the Application Site together. In reality, both physically and visually, the landscape outcome will result in the Application site reading as ‘one’. Planting along the Main North Road frontage will in time provide a mature treed street edge that in the absence of built form will provide a ‘soft built green edge’. A ‘treed embrace’ to a relatively harsh road environment, which I consider most appropriate for this setting.

### **Summary of Landscape-related CPTED and Urban Design Effects**

- 51 A CPTED Assessment has been undertaken by Ms Nikki Smetham as part of the Landscape and Urban Design Report (at page 28). Ms Smetham has undertaken training provided by CCC in regard to CPTED and I summarise points outlined in her report below.
- 52 The proposed activity use, associated carparking areas and landscaping provides a stronger interface with the street and surrounding neighbourhood than exists

currently. It will allow for better surveillance, activity and engagement. Vehicle and pedestrian movement is well defined, generally creating a safe environment and supporting options for alternative modes of transport.

- 53 Lighting will be provided within the carpark and along the Lydia Street entrance at night in order to discourage loitering. The basement carpark will also be gated to reduce potential areas of entrapment. Strategic placement of lighting structures and directional fittings will ensure that lighting glare effects on residential properties are avoided. The proposed conditions of consent adequately provide for this.
- 54 The safety of pedestrians is paramount and, in my opinion, clear, legible access routes to the building entrances are achieved. The northern pathway provides the most direct connection for pedestrians from Main North Road, with the southern entrance following a slightly more indirect route due to the required location of the fueling site. However, it is also considered the proposed alternative route via the air bridge at the south east corner of the building provides a more direct route for pedestrians approaching the Application Site from the south. There are also less roads and car park aisles crossings with this route. The provision for a bus stop in alignment with the northern access path would reinforce this access path as an important pedestrian route to and from the building from main North Road.
- 55 The proposal will redevelop a partly derelict/underused site with a land use activity, built form and landscape response that generally provides for a better scale and use relationship to nearby housing than could be achieved by industrial development.
- 56 A stronger interface with the street and surrounding neighbourhood will allow for better surveillance, activity and engagement. Vehicle and pedestrian movement is well defined, creating a safe environment and supporting options for alternative modes of transport. The Proposal will result in the establishment of a valuable retail destination to support the Commercial Local Centre and serve both local walk journeys and wider catchment provision. Given the location along Main North Road and Northcote Road these wider catchment connections include both bus routes and the cycle network (Northern Line Cycle Way).
- 57 While there are bike parks provided adjacent to the building, there are no separated cycle lanes through the Application Site. Cycle movement was a matter discussed at expert witness conferencing and I note is commented on within the s42A report. The proposed width of the northern pedestrian access through the car park from Main North Road means a cyclist could relatively safely use this route if they chose. It is anticipated that the majority of cyclists biking to and from the supermarket from Northcote Road would most likely use the Lydia Street access. In my opinion road marking and signage could be used to manage



this, but it is my experience it can be difficult to effectively restrict cyclists in their movement. Mr Smith also comments on this in his evidence.

- 58 The Lydia St access includes a two-way road, 1.2m wide pedestrian path and a landscaping strip of varying width adjacent to the residential boundary. Compromises between these components strike a fine balance in their ability to provide operational functionality as well as effective amenity outcomes for neighbours.
- 59 Overall, the proposal will offer a strategic community asset that provides an outcome compatible with adjacent land use activities. The proposal will result in an appropriate level of landscape and visual amenity across the site while supporting the functional operation of the proposed activity.
- 60 Potential visual dominance of a built outlook is mitigated through the generous building setback from the road and internal boundary, building façade articulation and a consistent landscape treatment across the Application Site. This will afford a high level of amenity, providing a coherent pleasant outlook, and visual filtering and softening of the car park and supermarket building.
- 61 Regarding CPTED, I find that the proposal is able to provide appropriate measures which will result in the avoidance of safety issues across the site. I acknowledge that in both the Urban Design and Landscape Joint Witness Statements there is agreement in regard to the acceptability of the Lydia Street accessway. The Application now includes gates to the 'rear service area' at both the southern and northern ends for the building and in my opinion, in combination with lighting and security surveillance assists in alleviating concerns of entrapment.
- 62 In the general context of the setting, the landscape Proposal promotes walkability and multi-modal connections to the surroundings streets and neighbourhood. Pedestrian routes through the site both to adjacent land uses and streets have an appropriate level of amenity that would encourage people into them and activate the site.

#### **Consideration of relevant statutory provisions**

- 63 Under the Christchurch District Plan (CDP) majority of the site is zoned Industrial General (IG). The wider site development includes properties zoned (IG), Commercial Local (CL) and Residential Suburban (RS). The site is bordered by properties zoned RS and IG. St Bedes College is located nearby and is zoned Specific Purpose (School) Zone.
- 64 Overall, the Application has discretionary activity status, with unlimited discretion. The Application has been considered against the relevant landscape related rules

in Chapters 16 'Industrial'<sup>6</sup> and 15 'Commercial'<sup>7</sup> of the Christchurch District Plan. This includes consideration for building height, setbacks and landscape area requirements.

- 65 The proposal will comply with the built form standards of the Industrial General zone. There are no minimum landscaping requirements within the Industrial General zone.
- 66 In my opinion, the bulk and location of the proposed buildings are also appropriate for the setting even when assessed against commercial zone provisions. The buildings are not being built right up to the road boundary (15.5.2.2 Building setback from road boundaries) however, this setback provides several benefits to the site layout in order to achieve a higher level of amenity as well as meet certain functionality and safety requirements. I also note that although the proposal would exceed permitted building height (15.5.2.1) for the commercial zone, it would not breach recession planes for this zone.
- 67 In regard to 15.5.2.6 Landscaping and Trees, the proposal provides 55 trees along the boundary with the residential zone which is 236m in length. Although not evenly spaced, this equates to approximately one tree for every 4.3m of boundary, exceeding the requirement of one tree for every 10 metres. Furthermore, for the 73m length of residential boundary, which is adjacent to the proposed building, there are at least 22 trees proposed, with 17 of these evenly spaced at 3m centres. This equates to approximately one tree for every 3m of boundary. I note that this includes proposed lancewoods which will, in time, contribute to the screening of proposed buildings. In my opinion, the landscaping response generally achieves the residential amenity and landscape outcomes sought for commercial activity in a commercial zone.

### **Submissions**

- 68 I have considered submissions on the proposal, particularly those relevant to landscape, urban design and visual amenity matters (Submitters 18 and 19).
- 69 Submitter 18 (resident of 21B Northcote Road) opposes the proposal due to concerns about the effects of the proposal on flood management, noise and traffic congestion. The submitter suggests implementation of a buffer, removal of speed bumps prior to construction and a speed limit.
- 70 Submitter 19 (resident of 15 Northcote Road) is neutral to the proposal but is concerned about the effects of light pollution from building and outdoor lighting as well as potential windows overlooking their property. The submitter suggests

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<sup>6</sup> Rules 16.4.2.1, 16.4.2.2, 16.4.2.3 and 16.4.2.6

<sup>7</sup> Rules 15.5.2.1, 15.5.2.2, 15.5.2.3, 15.5.2.4, 15.5.2.6

implementation of a three metre wide green belt adjacent to residential boundaries to the north of the proposal site. There is no room for a 3m green belt to be included within this location on the Application Site. Furthermore, it is my opinion that the proposed planting, including *Alnus jorullensis* trees planted at 3m centers, will mitigate the Submitters concerns. This species is a rapid grower, will grow in excess of 6m in height and will happily grow from the proposed landscape strip. Therefore, extra width to the planting along this boundary is not required.

- 71 As discussed at paragraph 45, outlook of adjacent properties is largely constrained by existing 1.8m – 2.0m high boundary fencing and orientation of dwellings (away from the site). Potential visual effects for properties with views to the site will be mitigated by the proposed planting to the internal boundaries and car park area. I find that for these same reasons, the effects of proposed lighting will be avoided, and this is appropriately provided for in the suite of consent conditions. There are no windows on the proposed building façade which would overlook properties.

#### **Matters raised by CCC staff report**

- 72 I have read the Council Planning Officer's s42A report, as well as Council's landscape and urban design and arborist reports prepared by Ms Dray, Mr Hattam and Mr Thornton respectively. In essence it appears that, with regard to landscape matters, there is agreement between Mr Harris, Ms Dray, Mr Hattam, Mr Thornton and myself that the potential adverse landscape and visual amenity effects of most aspects of the Application can be appropriately avoided or mitigated.
- 73 Some of the matters raised regarding CPTED and urban design solutions are driven by safety and functional requirements of the layout of the site. These and other matters raised by the reporting officers are addressed below.
- 74 Permitted Baseline
- (a) Mr Harris notes<sup>8</sup> that while there is not directly relevant permitted baseline for a supermarket in the Industrial Zone, zoning of the site would allow for activities which could have similar visual effects to the proposal but would not create the same number of customer visits. It is my opinion that the proposal will deliver an outcome which is likely to provide a high level of visual quality and experience for users. When you consider possible built form outcomes under the Industrial Zone, it is my opinion that the Application delivers a well-considered integrated outcome.

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<sup>8</sup> S42A Report, paragraph 32

Summary of Urban Design and Visual Amenity concerns:

75 Setback of buildings

- (a) The effects of setback of buildings on Urban Design outcomes is addressed in the Evidence of Mr Burns. The visual amenity outcome is one which provides for a consistent landscape treatment across the Application Site, with trees contributing to the mitigation of the potential visual dominance of buildings and filtering views through the site. The design of the setback area allows for good utilisation of the space with a balance of landscaping and pedestrian accessways which offer safe and legible routes to the proposed building and through the site.

76 Access and Pedestrian Connections

- (a) As discussed at paragraph 41, the updated landscape plan provides a more clearly articulated and safe route for the southern pedestrian connection to the building via a pedestrian bridge over the basement carpark access ramp. This would provide an increased level of separation of pedestrians from vehicles and a less circuitous route to the proposed building.
- (b) The pathways connecting north and south through the site have also been amended to allow for a higher quality and safer pedestrian experience provides better integration with the adjacent sites and surrounding environment on a wider scale.

77 CPTED

- (a) As mentioned at paragraph 51 Ms Smetham provided the CPTED review that was contained at Page 28 of the Landscape and Urban Design report. Further to the expert witness conferencing with Mr Hattam and Ms Dray, the updated proposal now includes gates at the northern and southern ends of the 'rear service area'. Based on this I believe the safety concerns in relation to the rear of the supermarket will be sufficiently addressed by the proposed combination of lighting, vehicle gating and security surveillance.

78 Landscaping

- (a) Amendments to the Landscape Proposal Plan have been undertaken in order to address the majority of the concerns raised. Exotic trees are included in the proposed planting as these species will provide an appropriate scale for the development. The majority of the shrub and groundcover planting throughout the Application Site will be native species. These are also proposed for the stormwater basins not only offsetting the loss of habitat due to the partial piping of Lydia Drain, but providing a far richer habitat than that provided by the existing boxed drain. As outlined in the JWS dated 1 November 2019 exotic deciduous specimen trees are

proposed for the street frontage and within the carpark area as they are better suited to these locations than native trees in providing for amenity outcomes. Proposed landscaping will be supported by the suite of proposed Consent Conditions. Further to that a number of the landscape conditions contained in the s42A report have been incorporated into the updated landscape plan appended to this evidence. *Refer Sheets 8 and 9 of the Graphic Attachment.*

79 Effects on Waterway

- (a) Indigenous planting and retention of existing trees that shade the waterway will assist in offsetting the habitat loss due to piping a section of the existing Lydia Drain. Native specimens are proposed to be locally sourced. As agreed with Council and presented in the proposed consent conditions, some exotic species are proposed along the street frontage and within the carpark area in order to maintain a greater level of visual amenity and landscape quality in these areas where exotic species are better suited than native.

80 Effects on Street Trees

- (a) Upgrades to Main North Road require existing street trees to be removed and works to be undertaken within 5m of the base of other street trees which are to be retained. The proposed consent conditions will ensure that adverse effects as a result of the proposal are mitigated. Measures include planting of replacement trees and protecting trees which are to remain during the construction phase.

81 Conclusion with respect to effects on the environment:

- (a) Overall the concerns of Mr Harris and Ms Dray as they relate to adverse effects of the proposal on Landscape and Visual Amenity, have been addressed by the amended landscape and architectural plans and proposed consent conditions to the degree which, in my opinion, they are satisfied. In regard to Urban Design matters, Mr Burns provides evidence on these matters, and where there is a cross over with landscape and visual amenity, I believe the proposal provides a well-considered environmental outcome.

**Proposed Consent Conditions**

- 82 A set of proposed consent conditions have been provided by the Council's Landscape Architect regarding landscape components of the proposal. I find that these are in accordance with the opinions expressed in the Joint Witness Statement prepared by myself and Ms Dray dated 1 November 2019, therefore I generally agree with the conditions proposed. A number of these conditions have been incorporated in the updated landscape plan as described in my evidence.

83 There were some outcomes that were not agreed upon at the time of writing the JWS. As described above, regarding proposed Condition 13, I do not believe this is required.

### **Conclusion**

84 The comprehensive landscaping proposed will characterise the site and aided by the site layout and building architecture will ensure that views from the surrounding environment will be afforded an appropriate level of amenity. The Proposal will achieve the renewal of a partly derelict/underused site with activities that generally allow better scale and use relationships to nearby housing than could be achieved by industrial development on the site

85 It is considered that the proposed supermarket building is appropriately located within the Application Site, and the design and appearance of the building and associated landscaping of the development ensures that the proposal is compatible within its context.

86 In regard to the proposed conditions of consent contained within Councils s42A report pertaining to landscape, with the exception of Condition 13, I agree with them. Furthermore, I am confident they will contribute to an appropriate landscape and amenity outcome for the Application Site.

87 In my opinion, any potential adverse effects on amenity and outlook of the proposed development are appropriately mitigated, and that overall the resulting landscape and visual effects of the proposed development will be largely positive. It is considered that the proposed development is appropriate for this site within the context of its setting.

**Tony Douglas Milne**

**19 November 2019**



ISSUE	DATE	STATUS
O	23/07/18	RESOURCE CONSENT
A	16/04/19	INTERNAL REVIEW
B	07/05/19	INTERNAL REVIEW
C	16/05/19	INTERNAL REVIEW
D	20/05/19	FOR RFI
E	07/06/19	FOR RFI
F	25/06/19	FOR RFI
G	14/11/19	FOR HEARING

**LEGEND**

- Cadastral Boundary**
- Brushed concrete paving**  
Insitu concrete with brushed finish
- Garden bed**  
Low native shrub and groundcover planting. Refer to indicative species list on Site Plan L1.1
- Hedge**  
Refer to indicative species list
- Carpark Tree (deciduous + exotic)**  
With strata vault tree pit
- Frontage tree**  
Upright Tulip (*Liriodendron tulipifera fastigiata*)
- Existing Median Trees**
- Proposed Median Trees to be Removed**
- Lancewood and Cabbage Tree**



- Existing boxed drain along residential boundary to be piped (refer to civil drawings) to allow for new pedestrian path and acoustic timber fencing with native climbers, trees, hedging and low shrubs
- Existing healthy landscaping to be retained between retail site and residential property. Supplement with new planting where required
- Frontage planting upgraded to complement neighbouring site and provide a greater level of amenity to existing site
- New access between existing retail site and proposed supermarket site
- Upgrade access to commercial/retail site including new frontage planting that defines entrance and references planting throughout neighbouring supermarket site
- Existing *Tilia* tree to be retained as a site landmark
- Existing site access to be altered, including a new signalled intersection
- New lawn area
- Alternative location for bus stop and shelter
- New site entrance to office carparking with relocated signage and gated access. Enhance entrance with new tree, shrub and groundcover planting
- After hours access only

**INDICATIVE SPECIES LIST**

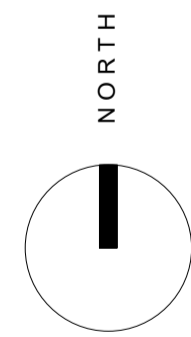
- Carparking and Street Frontage Trees**  
**Suggested species to include:**  
*Alnus cordata*  
*Cordyline australis*  
*Platanus 'Autumn Glory'*  
*Pseudopanax* spp.  
 Upright Tulip *Liriodendron tulipifera fastigiata*
- Amenity / Ornamental Planting**  
**Suggested species to include:**  
*Arthropodium* spp.  
*Carex testacea*  
*Chionochloa flavicans*  
*Hebe* spp.  
*Ligularia reniformis*  
*Lomandra 'Tanika'*  
*Lophomyrtus 'Red dragon'*  
*Muehlenbeckia astonii*  
*Penstemon* spp.  
*Poa cita*  
*Pittosporum* spp.  
*Phormium 'Green Dwarf'*  
*Phormium 'Dark Delight'*  
*Rudbeckia* spp.  
*Griselinia 'Broadway Mint'*  
*Corokia 'Gearty's Green'*  
*Acaena inermis 'Purpurea'*  
*Coprosma kirkii*  
*Coprosma acerosa 'Hawera'*  
*Muehlenbeckia axillaris*  
*Parahebe 'Snowcap'*  
*Pimelea prostrata*  
*Thymus* spp.

- Rain Garden Planting**  
**Suggested species to include:**  
*Apodasmia similis*  
*Arthropodium cirratum*  
*Astelia 'Westland' and 'Silver Spear'*  
*Carex virgata*  
*Chionochloa flavicans*  
*Coprosma* spp.  
*Dianella* spp.  
*Muehlenbeckia axillaris*  
*Pittosporum* spp.  
*Acaena inermis 'Purpurea'*
- Habitat Enhancement Planting**  
**Suggested species to include:**  
*Cordyline australis*  
*Pseudopanax* spp.  
*Astelia 'Westland' and 'Silver Spear'*  
*Arthropodium* spp.  
*Coprosma* spp.  
*Muehlenbeckia astonii*  
*Phormium 'Green Dwarf'*  
*Phormium 'Dark Delight'*  
*Griselinia 'Broadway Mint'*
- Lydia Street Tree Planting**  
**Suggested species to include (amenity / ornamental planting):**  
*Parsonsia heterophylla*  
*Alnus jorullensis*

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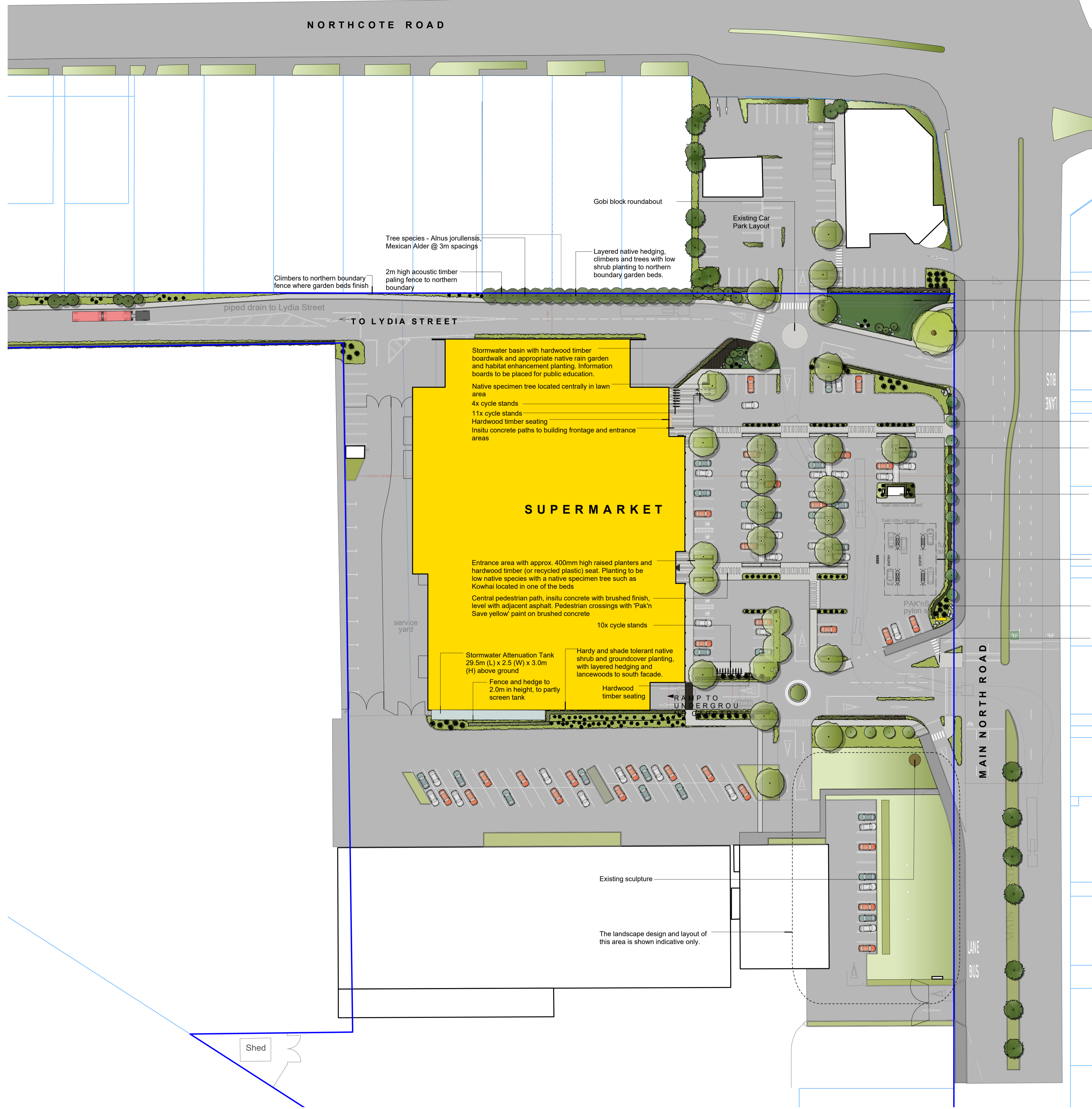
**APPLICATION SITE LANDSCAPE MASTERPLAN**  
**PAPANUI PAK'N SAVE**  
**MAIN NORTH ROAD**  
**CHRISTCHURCH**

JOB No.	17136
SCALE	1:750 @ A1
DATE	20/05/19
DESIGNED	SS
DRAWN	SS / AM
CHECKED	TM
STATUS	FOR HEARING
DRAWING No.	REVISION
RC 1.0	G
SERIES	
1 of 2	





ISSUE	DATE	STATUS
O	23/07/18	FOR RESOURCE CONSENT
A	05/04/19	CLIENT REVIEW
B	16/04/19	INTERNAL REVIEW
C	07/05/19	INTERNAL REVIEW
D	16/05/19	INTERNAL REVIEW
E	30/05/19	RFI FINAL
F	14/11/19	FOR HEARING



**LEGEND**

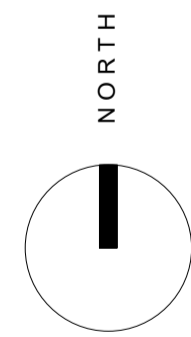
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Insitu concrete with brushed finish
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Low native shrub and groundcover planting. Refer to indicative species list
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Low native shrubs and grass planting. Refer to indicative species list
- Hedge  
To 1m high unless noted otherwise. Refer to indicative species list
- Carpark Tree (deciduous + exotic)  
With stratavault tree pit
- Frontage tree  
Upright Tulip (*Liiodendron tulipifera fastigiata*)
- Lancewood and Cabbage Tree
- Landscape rocks  
800-1200mm dia boulders overlapped to create ecological habitat pockets
- Timber seating  
400mm hardwood timber seating
- Signage  
Refer to architects drawings
- Cycle stand  
Type D - Street Furniture NZ
- Wheelstop (where required)  
Recycled plastic wheelstop with reflectors (ex. Metal Art Ltd), colour black. Disabled parks with disabled symbol routed 100m from ends, painted white

**NOTES**

1. Read in conjunction with architectural, civil and electrical engineers drawings.
2. All trees (excluding *Cordyline* and *Pseudopanax spp.*) shall have a minimum height of 2.5 - 3.0m at the time of planting, with a minimum calliper of 35 - 40mm.

**INDICATIVE SPECIES LIST**

- |  |  |
|--|--|
| <p><b>Carparking and Street Frontage Trees</b><br/> <b>Suggested species to include:</b><br/>                 Alnus cordata<br/>                 Cordyline australis<br/>                 Platanus 'Autumn Glory'<br/>                 Pseudopanax spp.<br/>                 Upright Tulip <i>Liiodendron tulipifera fastigiata</i></p>  | <p><b>Rain Garden Planting</b><br/> <b>Suggested species to include:</b><br/>                 Apodasmia similis<br/>                 Arthropodium cirratum<br/>                 Astelia 'Westland' and 'Silver Spear'<br/>                 Carex virgata<br/>                 Chionochloa flavicans<br/>                 Coprosma spp.<br/>                 Dianella spp.<br/>                 Muehlenbeckia axillaris<br/>                 Pittosporum spp.<br/>                 Acaena inermis 'Purpurea'</p>                    |
| <p><b>Amenity / Ornamental Planting</b><br/> <b>Suggested species to include:</b><br/>                 Carex testacea<br/>                 Chionochloa flavicans<br/>                 Hebe spp.<br/>                 Ligularia reniformis<br/>                 Lomandra 'Tanika'<br/>                 Lophomyrtus 'Red dragon'<br/>                 Muehlenbeckia astonii<br/>                 Penstemon spp.<br/>                 Poa cita<br/>                 Pittosporum spp.<br/>                 Phormium 'Green Dwarf'<br/>                 Phormium 'Dark Delight'<br/>                 Rudbeckia spp.<br/>                 Griselinia 'Broadway Mint'<br/>                 Corokia 'Geenty's Green'<br/>                 Acaena inermis 'Purpurea'<br/>                 Coprosma kirkii<br/>                 Coprosma acerosa 'Hawera'<br/>                 Muehlenbeckia axillaris<br/>                 Parahebe 'Showcap'<br/>                 Pimelea prostrata<br/>                 Thymus spp.</p> | <p><b>Habitat Enhancement Planting</b><br/> <b>Suggested species to include:</b><br/>                 Cordyline australis<br/>                 Pseudopanax spp.<br/>                 Astelia 'Westland' and 'Silver Spear'<br/>                 Arthropodium spp.<br/>                 Coprosma spp.<br/>                 Muehlenbeckia astonii<br/>                 Pittosporum spp.<br/>                 Phormium 'Green Dwarf'<br/>                 Phormium 'Dark Delight'<br/>                 Griselinia 'Broadway Mint'</p> |
| <p><b>Lydia Street Tree Planting</b><br/> <b>Suggested species to include (amenity / ornamental planting):</b><br/>                 Parsonsia heterophylla<br/>                 Alnus jorullensis</p>  |  |



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**APPLICATION SITE LANDSCAPE PLAN**  
**PAPANUI PAK'N SAVE**  
 MAIN NORTH ROAD  
 CHRISTCHURCH

JOB No.	17136
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DESIGNED	SS
DRAWN	SS / AM
CHECKED	TM
STATUS	FOR HEARING
DRAWING No.	REVISION
RC 1.1	F
SERIES	
2 of 2	



Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'n SAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Statement of Evidence of Niko Peter Young**

19 November 2019

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**Applicant's solicitors:**

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**anderson  
lloyd.**

## Introduction

- 1 My full name is Niko Peter Young. I reside in Dunedin.
- 2 I hold a Bachelor degree in Architecture with honours (University of South Australia) and a New Zealand Certificate in Drafting (Architecture).
- 3 I am a NZ registered Architect with over 22 years' experience working in the field of Architecture (14 as a Registered Architect).
- 4 I am a Fellow of the New Zealand Institute of Architects and a Director of the Dunedin based Architectural practice, McCoy and Wixon Architects Ltd.
- 5 McCoy and Wixon Architects Ltd is a leading design based practice and over the years has won many NZIA design awards for architecture.
- 6 The practice has been awarded 4 NZIA Design Awards for supermarkets completed for Foodstuffs – Mosgiel New World, Nelson New World, Ashburton New World, and Blenheim PAK'nSAVE.
- 7 McCoy & Wixon Architects Ltd has provided architectural services for Foodstuffs South Island Ltd for approximately 31 years on the design of supermarkets throughout the South Island. During my time working on supermarket projects, I have been impressed with Foodstuffs' attitude to strive for good sustainable design outcomes for all their projects.
- 8 As the Architect responsible for the design of the proposed Papanui PAK'nSAVE supermarket my focus has been on developing a design that is appropriate for the building type and responds well to its particular urban setting.
- 9 It is proposed to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel facility at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 10 My role in relation to Foodstuffs (South Island) Properties Limited's (**Foodstuffs**) Application has been to provide advice in relation to the Architecture and Urban Design. I drafted the Architectural Design Statement to the Assessment of Environmental Effects (**AEE**) accompanying the Application, which appears at Appendix C of the AEE.
- 11 In preparing this statement of evidence I have considered the following documents:

- (a) the AEE accompanying the Application;
  - (b) the expert evidence of other witnesses including Ms Rebecca Parish, Mr Tony Milne, Mr Rob Hay, Mr Andrew Burns Mr Keegan Brogden and Mr David Smith for the Applicant.
  - (c) planning provisions relevant to my area of expertise;
  - (d) section 42A report; and
  - (e) recommendations made by the Christchurch Urban Design Panel.
- 12 I have visited the Application Site and am fully aware of the site features and the surrounding context.

### **Code of Conduct for Expert Witnesses**

- 13 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence or work. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

### **Scope of Evidence**

- 14 The scope of my evidence is limited to design and architectural aspects of the Proposal. Where appropriate, I elaborate on the Architectural Design Statement dated 20th May 2019 which formed part of the Application at Appendix C. I do not repeat that report, but I have set out below key aspects of the design.
- 15 This includes:
- (a) Post Application Amendments;
  - (b) Site Planning;
  - (c) Scale and Form;
  - (d) Designing for IL4, future resilience and co-location as an emergency hub; and
  - (e) Matters raised in the Christchurch City Council's (**CCC**) staff report issued under s42A of the RMA.

## **Executive Summary**

- 16 My evidence outlines the planning considerations and design objectives pertaining to the Proposal. This includes further background regarding the Proposal's resilience and co-location as an emergency hub.
- 17 Since the original application was lodged, I have consulted with Christchurch City Council's Urban Designer, Mr David Hattam (including during the Urban Design and Landscape Meeting held 10th September 2018 to discuss the urban design questions raised in the Request for Further Information), and presented to the Christchurch Urban Design Panel (14 August 2019). I have also taken part in Expert Conferencing (relating to Urban Design) along with Mr Andrew Burns and Mr Tony Milne on the 25th October 2019 and am a signatory to the subsequent Joint Witness Statement dated 1 November 2019.
- 18 As a result of these attendances, I have reviewed and adapted the design of the Application to improve specific aspects that have in turn produced an improved design outcome.
- 19 Architectural drawings RCe01 to RCe15 are attached to my evidence as Appendix 1.

## **Post Application Amendments**

- 20 This section provides a brief summary of the development and the design process to date.
- 21 Consultation with the CCC has been undertaken as follows:
  - (a) Initial Urban Design consultation with Mr Hattam on 3<sup>rd</sup> September 2018 (prior to application lodgment). This has been recorded as "*Initial Urban Design Assessment – Matters for RFI*" by Mr Hattam;
  - (b) Presentation and consultation with the CCC Urban Design Panel on 14<sup>th</sup> August 2019; and
  - (c) Conferencing with the CCC. This has been recorded within the Joint Witness Statement for Urban Design dated 25<sup>th</sup> October 2019.
- 22 Since lodgement of the Application and in response to the CCC Urban Design Panel and Council recommendations, several amendments have been made to the proposed architectural design in conjunction with the proposed landscape design. Landscape revisions are referred to within Mr Milne's evidence.
- 23 These are referred to in more detail throughout my evidence and are summarised as follows:

- (a) Increased footpath width to east edge of market to provide a wider promenade;
- (b) Added amenity area to central east public entry. This consists of an extended paved area with seating, raised planter boxes and additional entry wayfinding signage;
- (c) Pedestrian bridge added to south east corner of building along with added pedestrian link to Main North Road. This bridges over the basement carpark entry to provide improved pedestrian access to Foodstuffs South Island's Head Office building and a safer connection to Main North Road pedestrian pathways;
- (d) Revised north façade to improve visual interest and provide further variation over the façade;
- (e) Secure gated entry added to west laneway between Lydia Street access point and the Foodstuffs carpark area; and
- (f) Revised material and colour palette for the fuel facility.

### **Site Planning**

- 24 The site planning design philosophy involves consideration of the specific site context and balances this with the functional aspects generally related to the building plan and the relationships within. In addition to these considerations the supermarket must also function safely, efficiently and be economically viable.
- 25 A number of arrangements were considered to determine the building location within the site. The Rectangular floor plan, noting public and servicing points of entry plays a significant part in site placement. To achieve the most efficient planning outcome, public entry must be on the front longitudinal edge with Back of House (**BOH**) service areas to the rear longitudinal edge. An enclosed loading dock is located on one of the transverse elevations and must ideally be parallel to a road entry. This has proven to be an efficient planning arrangement at the recently completed Queenstown PAK'nSAVE and Wainoni PAK'nSAVE supermarkets.
- 26 The building position is located toward the west of the site with the BOH service yard bounding the western internal boundary leaving the eastern frontage open for public carparking (102 car parks) and a PAKnSAVE fuel site easily navigated off two main access roads via Main North Road.
- 27 Noting a building plot ratio of 0.4 (footprint size of 6,265m<sup>2</sup> and a site area of 15,612m<sup>2</sup>), the rectangular proportions of the supermarket and the level of separation needed between the fuel site, the building footprint had to be located

on the western edge of the site allowing the public interface to the east along with both pedestrian and vehicle entry. Refer to the Location Plan on sheet RCe01 and the Site Plan on sheet RCe02.

- 28 Site planning configurations considered prior to the current arrangement had a higher level of operational and safety issues and are summarised as follows:
- (a) Pulling the building further forward towards the East (central to the site) creates an inefficient use of space to the west of the market. Re-locating the balance of public car parking to the rear of the market (west) is not practical due to extended walking distances (with trolley) from the front of the market noting pedestrian access would be via a pathway along the south edge of the building. This and the confined car park location creates greater CPTED and security issues. Confined public car parking located behind a supermarket and in front of the large Toll Distribution Warehouse would create isolated hidden space;
  - (b) Pulling the building further forward to align with Main North Road (with minimum 3.0m setback) requires all public carparking to be located to the rear of the market. This provides two options for public access to the market relative to the point of entry:
    - (i) If the public entry elevation was facing Main North Road, pedestrian access to the carpark would be via pathways to the rear of the supermarket. These would cross over with BOH service activities creating safety and operational issues. Further to this the building footprint would need to shrink in length to accommodate adequate pedestrian links to the carpark;
    - (ii) If the public entry faced west directly onto the carpark, the BOH area would face east towards Main North Road. The operational aspects of the BOH areas must be visually discreet and secure requiring solid fencing along the street frontage to conceal the servicing activity. This option in my professional opinion would be visually unappealing, have no street activation and would not provide a desirable street interface; and
    - (iii) Vehicle access to the rear of the supermarket for both options would be limited to one point of access from the north.
  - (c) Rotating the building clockwise and anti-clockwise presents similar functional issues for each option. Noting the rectangular building footprint and the rectangular proportions of the site, carparking becomes less efficient due to increased isle and circulation space split over two faces. Public entry for each of these options becomes focused on one corner

entry that will potentially create an unbalanced pedestrian frontage with a higher level of congestion to one corner. The BOH service areas would face either the residential boundary or the Foodstuffs South Island Head Office boundary. The noise generated from this area may present further issues requiring mitigation. This area in my professional opinion is best suited along the west boundary where no office or residential activity currently exists.

- 29 The District Plan anticipates building activity on the Application Site to be located as close as 3m from the residential zone boundary to the north and from an arterial road (Main North Road)<sup>1</sup>.
- 30 The proposed PAK'nSAVE supermarket building has the following setbacks from existing boundaries:
- (a) 69.8m from the Main North Road boundary (arterial route); and
  - (b) 11.9m from the north boundary (residential boundary);
- 31 The site layout and proposed building solution regarding the supermarket's functional needs (as referred to in Ms Parish's evidence), taking into account proximity and an appropriate setback to neighbours as noted above, considers the following:
- (a) Separation of public areas from the service areas and service delivery vehicles;
  - (b) Secure BOH service areas screened from the public directly linked to BOH entry points;
  - (c) Truck delivery to service areas and bulk store and how they enter and exit the site, Lydia Street access was key to this;
  - (d) Transportation requirements for site entry and exit points and queue space required both on entry and exit. This also allows for ramping and transitions to basement carparking;
  - (e) Carpark size and location, including undercover carparks;
  - (f) A main public entry easily accessible located directly off the carpark and separate to service areas easily navigated with trolleys;
  - (g) Internal store planning that informs the servicing and public access;

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<sup>1</sup> The offsets stated are in reference to Chapter 16 Industrial section clause 16.4.2 Built form standards - Industrial General Zone of the Christchurch District Plan.

- (h) Separation between fuel facility and supermarket operation that also allows for adequate queue space, promoting vehicle movement away from the market, and fuel delivery access;
  - (i) Environmental issues regarding orientation of carpark and building entry (orientation to north / north west);
  - (j) Minimal access points for security; and
  - (k) Adequate areas for stormwater, sewer and services on site storage related to IL4 requirements.
- 32 The architectural design in addition to the functional aspects above considers form, scale, quality of space, street appeal, urban activation, and the internal experience to further inform a better planning solution. This is set out further in my Architectural Design Statement.
- 33 The functional design needs govern the building location and design within the defined site as follows:

*Separating service areas and public areas*

- (a) Public access to the supermarket is located on the east face of the building footprint, facing Main North Road with a direct connection between public carparking and building entry. Public entry to the building as referenced on both the site plan and ground floor plan (sheet RCe02 and RCe03) is isolated from the two BOH service delivery areas.

The two BOH delivery areas are defined as the north facing bulk store (primary delivery area) and the west facing secure delivery area (secondary delivery area). The north facing bulk store allows trucks to enter under cover, within an enclosed loading area and unload onto adjacent racking using forklifts. The west facing secure delivery area serves the produce store and butchery.

*Secure BOH Areas & Truck Access*

- (b) The bulk store as indicated on sheet RCe03 (Ground Floor Plan) is orientated to the north allowing truck access through the fully contained bulk store (drive through) from the west via Lydia Street and exiting to the east towards Main North Road. Truck access serving the bulk store is separated from the public carpark area. Deliveries within the bulk store are generally packaged goods on pallets that can be easily stacked onto racking.



- (c) The secondary service area secured by chain link mesh fences and secure gates along the west boundary allows smaller rigid trucks to service the BOH butchery and produce prep areas. Adequate space is provided to allow for truck turning and unloading. Deliveries and pick-ups to this area consist of the following:
  - (i) Bulk fruit and vegetables deliveries (boxed and on pallets);
  - (ii) Animal carcasses being delivered and hooked onto meat rails that are then guided through to the butchery freezers and chillers. This area must be screened from the public; and
  - (iii) Pick-ups for enclosed skips, bins and stacked pallets that are stored within the gated area.
- (d) Noting the deliveries above the secondary service area must be a secure gated area and out of site from the public. This is for both operational and health and safety purposes. Our experience indicates that these areas must be secure to mitigate 'skip diving' and theft after hours. Note that the bulk store is secured utilising roller doors each end.
- (e) Operationally truck and forklift movements are confined within the service areas free from public.

#### *Vehicle Access*

- (f) The building footprint must be situated in such a manner as to allow adequate points of vehicular entry to the Application Site that allows for adequate queue space and promotes reduced speed vehicle flows. The main vehicle thoroughfare through the Application Site runs centrally through the car park with aisles coming off in each direction reducing the potential for speeding vehicles directly in front of the market. This aids safe pedestrian access to the supermarket both at entry and exit.
- (g) The public carparking areas provide a safe pedestrian interface between carpark and building. The external car park, isolated from the service entries provides 102 vehicle spaces with centrally located trolley bays at the end of each carparking bay to limit travel distance for public and trolley drop off, providing convenience to the end users within the site. Cycle parks are provided to the north east (15 cycle spaces) and south east corners (10 cycle spaces) of the supermarket adjacent pedestrian pathways. The basement carpark provides 168 parking spaces and 9 staff cycle parks completely isolated from the service yard areas and provides much needed under cover carparking areas that will be popular on wet days. Noting 62% of the supermarket's car parking is contained within the

basement, the visual impact of parking from the street is minimised. Pedestrian access with trolleys to the basement carpark is via a pedestrian ramp and accessible lift, both contained within the building footprint.

- (h) The fuel facility location to the eastern edge of the site (Main North Road frontage) allows adequate space for vehicle queuing and provides separation from the Northcote Road residential properties.
- (i) Further to item 'h' above, the fuel facility was located after considering swept paths for fuel tanker deliveries. The proposed location allows tankers to enter the site via the northern roundabout from Lydia Street, park adjacent to the fuel site for unloading, and leave via the southern entry / exit to Main North Road.

#### *Public Entry*

- (j) Public entry to the building is orientated centrally on the east façade and to the north east corner capturing the light and warmth of the morning sun. The building entries are linked via a north/south promenade facing onto the public carpark which also forms a pedestrian link through the Application Site. This is accessed at each end:
  - (i) from the south via a newly proposed bridge linking to Main North Road; and
  - (ii) from the north via an extended pedestrian link to the northern Commercial Local zone.

Further pedestrian links extend from each building entry through the Application Site to link with Main North Road. These are described in further detail within Mr Burns' Urban Design evidence.

- (k) The two public access nodes to the building provide secure isolated areas separated by a primary trolley bay. All public access is controlled at these two points and consolidates a higher level of activation to the public frontage.

#### *Internal store planning Informing Site location*

- (l) Within the supermarket entry foyer, the internal building layout provides the desired supermarket experience beginning via the aisle of value (south east corner) that then feeds into the produce area. This is consistently promoted as a naturally lit space in line with all our recently completed supermarkets such as Wainoni PAK'nSAVE, Rangiora PAK'nSAVE and Queenstown PAK'nSAVE. Exit from the supermarket is via checkout counters, which again maintain a double height highly glazed façade facing

east to provide a naturally lit end destination for completing the shopping experience.

- (m) High level glazing to the south elevation provides natural light into the produce area. From my experience natural light from the south presents fruit and vegetables better than any artificial lighting. Direct sunlight must be avoided to prevent chilled produce going off quicker. Sun shading can be achieved utilising automated blinds, however south natural light is preferred noting that heat buildup can occur behind sunlit blinds. In my professional opinion sun shading is managed more effectively from the exterior. This considers orientation to the sun and shading devices in the form of roof overhangs, setbacks and screening.
- (n) The exterior glazing to the east elevations and proximity to Main North Road allows the public within the supermarket to engage with the exterior street context, emphasising the wayfinding through the store.
- (o) BOH areas with centralized servicing are located on the back face of the store with direct access to the serviced delivery areas as noted above. This provides efficient internal planning with minimized travel distances between loading, storage areas and preparation areas.

*Adequate Areas for IL4 related building services*

- (p) As an IL4 designed and resilient building there are a number of building services features that need to be accommodated within the site and the building footprint. These are referred to in more detail within Mr. Brogden's evidence for Civil design. The IL4 features to be accommodated within the site are:
  - (i) Wastewater and fresh water tanks enabling a 3-day storage supply in times of emergency. These are located within the basement carpark represented as six 30,000lt water storage tanks.
  - (ii) Permanent on-site generators for essential power supply with significant fuel supply for continued long term use (provided by the fuel site). The generator is located within the building on the western mezzanine floor (above Butchery & Bakery).
  - (iii) Existing on-site well (M35/1472) to be used for emergency purposes pursuant to a separate resource consent.
  - (iv) A 29.5m x 2.5m stormwater attenuation tank is also located on the southern boundary providing onsite stormwater storage.

## Scale & Form

- 34 The Application Site has a permitted height of 15m, with recession planes applied to the north where adjacent to a residential boundary as referenced in Christchurch District Plan (**CDP**) Chapter 16 Industrial section clause 16.4.2 Built Form Standards - Industrial General Zone.
- 35 The proposed PAK'nSAVE supermarket building has a maximum building height of 12.6m taken from ground floor level to the top of the eastern parapet wall. The building ridge line running east west is 12.0m above floor level. The building eaves heights are 7.7m above floor level to the south elevation (facing the Foodstuffs South Island Head Office building) and 7.8m above floor level to the north elevation (facing the residential boundary). The building envelope falls well within the permitted height and recession planes, noting recession planes are only applicable to the north of the site (Northcote Road properties) as identified on sheet RCe04.
- 36 It is worth noting that a permitted industrial activity in accordance with CDP rules could result in a greater scale of built form, with a building significantly higher and more abrupt relative to the northern residential neighbours and Main North Road frontage.
- 37 The Proposal is set back from the south west corner of a busy road intersection noting the following neighbouring contexts:
- (a) the north aspect is bound by single storey residential activity and single storey Commercial Local activity;
  - (b) the west boundary borders the Toll Logistics bulk storage buildings; and
  - (c) the south boundary faces the existing two storey Foodstuffs South Island Head Office buildings.
- 38 I refer to Rough & Milne Landscape Architects' Landscape and Urban Design Report, page 15 for further detail regarding the localised context and urban form.
- 39 Responding to the existing urban context and noting the industrial zoning of the site, the design approach was to create an honest urbanised industrial shed form that clearly expressed the IL4 structure with a robust industrial material palette. A simple expressed gable roof form facing the Main North Road car park frames the internal volumes below and reveals the activity within utilising depth, shadow and transparency.



Figure 1: East Perspective View

- 40 The intent of expressing the robust IL4 building structure was to clearly put on show the visual nature of the building's performance rating. This will consist of robust steel columns and portal frames, bracing elements and bolted connections.
- 41 The eastern façade gable form is punctuated by a large yellow lightweight parapet wall (consistent with PAK'nSAVE brand standard building frontages) providing variation to the roof line and provides a base for the 15.9m(L) x 3.6m(H) PAK'nSAVE signage. Designed as a lightweight insulated façade panel the parapet also acts as a generous way finding tool at the macro scale for day to day public entry and for civil defence emergencies. Noting the 69.8m setback from main north road, the proposed plantings indicated within Rough & Milne's Landscape Concept Plan and the relationship to a 6-lane arterial road it is, in my professional opinion that the yellow façade and signage is at an appropriate size and scale viewed from the Main North Road approaches. Refer to sheets RCe10 for street view perspectives. Mr Burns also refers to this within his evidence noting that the highly "*visible signage is appropriate*" at the macro scale.
- 42 For reference the PAK'nSAVE brand standards note that all stores should:
- (a) have a PAK'nSAVE yellow fascia with a large main fascia sign in black; and
  - (b) the main fascia sign should appear in the same format nationwide. The only variation should be in the size it appears and the details of the lighting.
- 43 At the Intermediary scale it is noted within Mr Burns' evidence that there is a lack of modulation in the building façade that does not translate strongly with the projections and recessions of the plan. With reference to the images below presented at the intermediary scale it is worth noting the layers of filtered fenestration, structural steel colonnade and façade recessions relative to the roof form providing added articulation and depth. Vertical recessions are evident and are defined largely by the shadow play cast from both roof line and canopy lines. This will vary pending the intensity of sunlight and the time of day. Both the roof overhang and canopies below provide much needed weather protection and sun shading. This is most evident at the south east corner and north east entry where the deeper recessions occur.



*Figure 2: South East View (with bridge pedestrian link)*



*Figure 3: North East Perspective View*

- 44 I acknowledge the recess in plan at the central public entry does not translate as strongly as the north east recession however the design intent was to highlight this recess at the human scale. The promenade along the building edge allows pedestrians to encounter entry at the finer scale. Further entry way finding is provided utilising signage integrated within further landscaped amenity areas. Note the widened footpath (promenade) and additional amenity area were added in response to feedback obtained from Mr Hattam during the Initial Urban Design Assessment dated 3<sup>rd</sup> September 2018.





*Figure 4: Central Eastern Entry View*

- 45 Activity within the store is highlighted further in the evening when artificial light takes effect and there is less reflection generated from the exterior glazed envelope.
- 46 PAK'nSAVE signage to the north elevation as referenced below is placed on the eastern end of the frontage elevated 4.0m above ground level. The signage proposed is a pronounced rectangular form set approximately 100mm off the building façade providing a defined shadow line around the sign's perimeter. Noting this sign was referenced as a concern within Mr D Hattam's Urban Design Assessment (page 9) I have provided further imagery below outlining the visual effect on neighbouring residences. The view below is from Number 11 Northcote Road (Mr Hattam notes residents at No's 9 & 11 Northcote Road as potentially affected by this sign). As presented in Mr Milne's evidence additional trees have been added along the northern edge of Lydia Street. Mexican Alders are proposed at 3.0m centres and provide filtered screening reducing the visual impact of the sign from residential neighbours.



*Figure 5: View from 11 Northcote Road (with trees)*



*Figure 6: View from 11 Northcote Road (without trees)*

- 47 With further reference to the image above I note the revised façade treatment. With reference to paragraph 34 of Mr Burns' evidence, a revised façade treatment is now proposed that provides variation to the wall treatment to further improve scale integration with the residential neighbours. A varied bottom and top edge of the upper profiled cladding breaks up what was a linear strip and provides further punctuation utilising black cut-outs across the building eaves line. Considering the residential, and local commercial neighbours to the north and the Foodstuffs South Island Head Office building to the south, the design has addressed these edges with a lower roof eaves height, in addition to distancing the building as far away as possible from the northern internal boundary. Note the existing carpark to the south provides a significant buffer towards the existing office building facade.
- 48 The building mass of the north elevation is broken up utilising, cast in horizontal profiled cladding panels at high level in a varied modular set out with natural grey precast concrete panels below (timber plank formed) providing a residential scale weatherboard/plank material engaging with the neighbouring residential context. Landscaping along this elevation as indicated on sheet RCe05 softens the building edge.

#### *Additional Design Considerations*

- 49 The design of this supermarket in addition to the above considers the environmental impact it has on both the local and wider context. Environmentally sustainable design plays a significant part in the development of Foodstuffs supermarkets and is evident in the proposed Papanui PAK'nSAVE. The initiatives incorporated within the Papanui PAK'nSAVE design currently include:
- (a) Insulation values that exceed Building Code requirements;
  - (b) Use of New Zealand Green Building Council approved products;
  - (c) Argon filled low-E double glazing used throughout (including main entry glazing);
  - (d) Use of natural light throughout the main retail areas;



- (e) CO<sub>2</sub> refrigeration systems (no C.F.C. Coolants) with heat recovery from for heating hot water;
- (f) LED Energy efficient light fittings and intelligent Dali lighting control;
- (g) Passive solar design; and
- (h) Stormwater retention utilising a stormwater basin and soakage has been provided on the north east corner of the Application Site. This is integrated within the landscape design as referenced on Rough & Milnes Landscape Concept Design contained within the Landscape and Urban Design report.

#### **Designing for IL4, Future Resilience and Co-location as an Emergency Hub**

- 50 Considering the effects of the 2011 Christchurch earthquakes and the responsibility to provide essential food supplies in such events Foodstuffs propose to establish, operate and maintain a resilient supermarket with associated fuel site, providing an essential emergency coordination facility for the area. The resilient essential building services features are indicated under paragraph 33(p) of my evidence.
- 51 Further to essential building services identified above the following features also form part of the Resilient Design:
- (a) Use of the supermarket building for essential food distribution;
  - (b) Building structure designed to IL4 rating;
  - (c) Large carpark area for assembly, distribution and adequate space for helicopter landing area (on adjacent Foodstuffs Head Office car park area) to assist in wider region distribution in major events (site carpark levels are elevated to mitigate flood risk);
  - (d) Direct access onto a major arterial route (Main North Road), linking the city center to the Northern suburbs and linkage to Northcote Road linking the east and west; and
  - (e) Direct access to the Foodstuffs South Island Head Office.
- 52 Co-location considerations in a Civil Defence emergency have influenced both the site layout and decision making for site selection. Locating the PAK'nSAVE supermarket directly beside the Foodstuffs South Island Head Office provides opportunity for shared space and direct access between each facility that will assist in food distribution in a major event.

- 53 The existing Foodstuffs South Island Head Office car park as indicated below provides a central localised area for helicopter landing. There is sufficient space for two helicopters clear of obstructions with direct access to both the supermarket and offices. A pedestrian link bridge has now been provided (refer to Fig. 2 above) to the south east corner that will assist with direct access between the helicopter landing area and the store entry.



Figure 7: Helicopter Landing Locations

- 54 The basement carpark area provides up to 5436m<sup>2</sup> of additional area that can be handed over to Civil Defence in an emergency event. Vehicle access and the vast area of space available provides opportunity for a range of activity within in a facility that will be designed to remain fully operational in a significant event.

#### **Matters raised by CCC staff report**

- 55 I have read the Council Planning Officer's Section 42A report, as well as Council's urban design report prepared by Mr Hattam.
- 56 The matters raised within the CCC Section 42A report relating to the supermarket building design and site layout are referenced under *Urban Design and Visual Amenity* within the report. The key concerns noted by Mr Harris within his *Conclusion with Respect to Urban Design and Visual Amenity* are:
- (a) Site Layout;
  - (b) Pedestrian Connections; and
  - (c) Safety.

In addition to the above I note the concerns raised regarding the fuel facility location and design that were also raised by the Urban Design Panel.

### Site Layout

- 57 The site layout and the basis for locating the building in its proposed position has been discussed in detail within paragraphs 25 – 33 above and I note Mr Harris' comments acknowledging that the "underlying zoning does not set particularly rigorous standards and that the proposal meets those standards".
- 58 The building footprint and location within the site has been driven by functional requirements that promote customer convenience, service delivery safety, convenient and safe car parking, security, and the best CPTED outcomes. This is in line with Foodstuffs' ethos as referred to in Ms Parish's evidence.
- 59 Efficient building planning has been generated from experience with recently completed PAK'nSAVE supermarkets in Queenstown and Rangiora providing optimised use of space with proven success.

### Pedestrian Connection

- 60 In response to the concerns raised by both Mr Hattam and Mr Harris regarding the southern pedestrian access to Main North Road, our design team has reviewed the access from the south and have designed an improved alternative access solution that provides a more direct access route from Main North Road along the north boundary of the Foodstuffs South Island Head Office to the central public entry.
- 61 The solution provides an alternative pathway to the market entry utilising a 2m wide pedestrian bridge (an extension from the eastern promenade) that provides access over the basement carpark ramped vehicle entry. The bridge, in addition to its functional purpose provides improved visual interest to the south east corner providing a pleasant pedestrian journey from Main North Road (via the 1.6m wide pathway) without having to navigate the southern vehicle entry and exit.
- 62 Refer to Figure 8 below indicating a cross section through the bridge and ramped vehicle entry. This is further referenced in Figure 2 above and indicates the human scale and relationship between bridge and ramp.

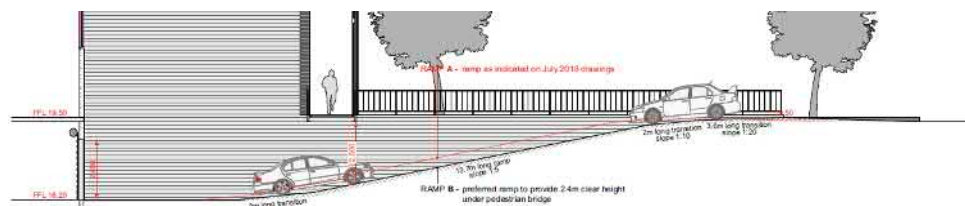
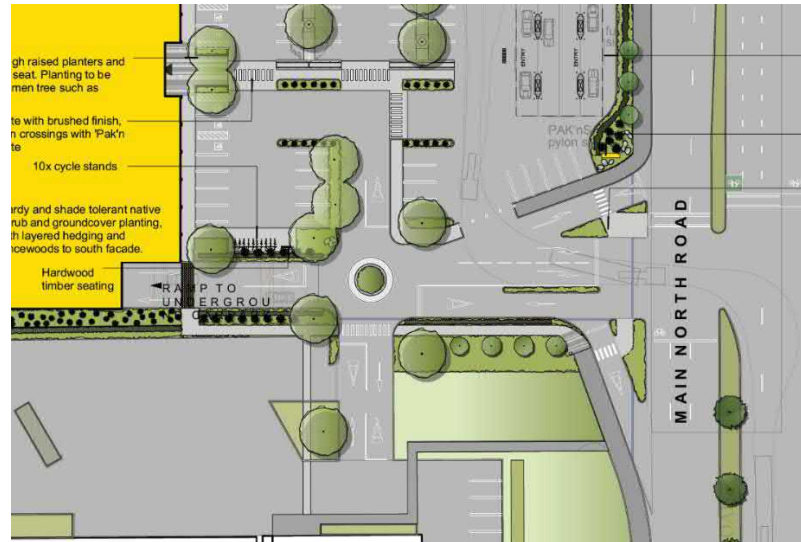


Figure 8: Cross Section Through Basement Vehicle Ramp

- 63 The bridge link in addition to the access improvements noted above, now provides a direct link from Foodstuffs South Island Head Office building to the

supermarket public entry. This addresses a further concern raised by Mr Hattam in his report and aids better links between sites in an emergency event as noted in paragraph 55.

- 64 The proposed alternative pedestrian link in my opinion addresses the concerns raised by both Mr Harris and Mr Hattam



65 *Figure 9: Plan of Southern Pedestrian Access*

### Safety

- 66 Issues raised regarding the western rear yard were raised as a concern and discussed during post application conferencing. This is referenced in the Urban Design Joint Witness Statement.

- 67 In response to this concern and further to earlier proposals presented, the plan indicated below in Figure 10 demonstrates a proposed secure gated option. Secure access gates are provided at both the south end and north end of the western access way. The gates are proposed to remain open during the day and closed off after hours with secure entry for after-hours access. This in my opinion addresses the CPTED concerns raised for this area without compromising the supermarket operations.

- 68 I note that the BOH secure fence running central to this space is proposed as a 2m high chain link fence to promote light and open visibility.

- 69 Truck movements, gate size and accessibility after hours have determined the northern gate locations. I note that Fire Trucks must access sprinkler valve sets free of these gates. The valve set location will be proposed on the north west corner adjacent to the bulk store entry and gates.

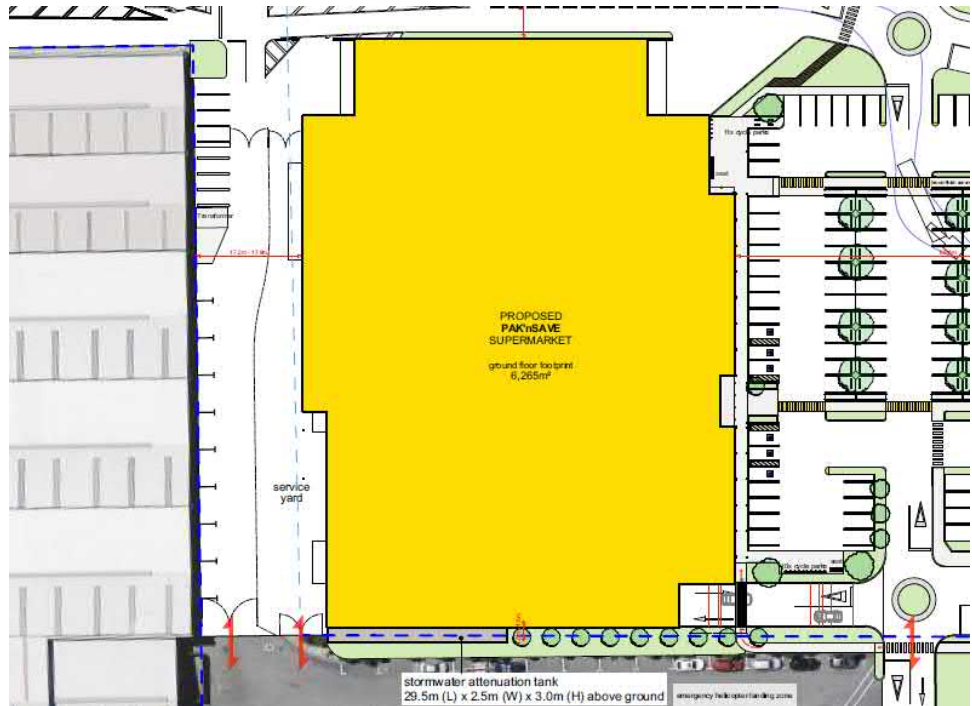


Figure 10: Western Secure Access

70 I refer to the evidence of Mr Milne for further CPTED analysis.

*Fuel Site Design*

71 Within Mr Hattam’s evidence he notes a concern with the heavy and solid form of the fuel facility structure commenting that there was “no use of sympathetic or visually complex materials”.

72 Noting Mr Hattam’s concerns regarding the proposed fuel facility design and further commentary within Mr Burns’ evidence I have reviewed the material Palette in order to provide a more sympathetic dialogue with the supermarket building. With reference to Figure 11 below, I propose a material palette consistent with the Queenstown PAK’nSAVE fuel facility that was noted by Mr Hattam as an improvement. The proposed material and colour changes are:

- (a) Yellow roof edge changed to a neutral Sandstone Grey colour;
- (b) High level support shrouds changed to black steel consistent with palette on the supermarket; and
- (c) Fuel Pump shrouds changed to Sand Stone Grey.



*Figure 11: Queenstown PAK'n SAVE Fuel Site*

- 73 I refer to sheet RCe14 for the revised material and colour palette along with sheet RCe10 for updated street views that now include the existing Foodstuffs South Island Head Office in the background providing the wider context. It is worth noting that the fuel facility blends into its surrounding context looking south from the road intersection. The neutral tones align with the office building behind and is filtered through tree plantings to the street edge.
- 74 In my opinion, noting the 6 lane arterial road interface and landscaping amenity to the road edge the revised material palette addresses a number of the concerns raised and is appropriate in this context.

### **Conclusion**

- 75 The design of the Proposal has considered the Application Site's context, functional needs, appropriateness of scale, and the aspirational qualities of space and form. Each façade has been articulated with varied volume and depth to reduce the overall perceived bulk as much as possible.
- 76 Potential adverse effects on amenity and outlook of the proposed development including site layout and built form of both the proposed building and fuel canopy have been considered by the Applicant and the design team and in my opinion are appropriately addressed.
- 77 I have been continually working on design improvements in collaboration with our design team and the applicant in response to concerns raised by CCC since the Application was submitted and, in my opinion, an improved design outcome has ensued.

78 Designing the IL4 supermarket to act as a food distribution hub with the opportunity to act as a civil defence hub in a major emergency event brings a valued and much needed asset to Papanui and the wider community. I consider the Proposal appropriate for this prominent site within its urban context. It will provide a much needed amenity for the local Papanui community.

**Niko Peter Young**

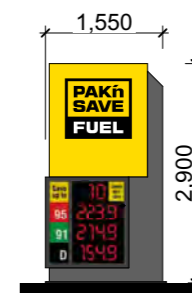
**19 November 2019**



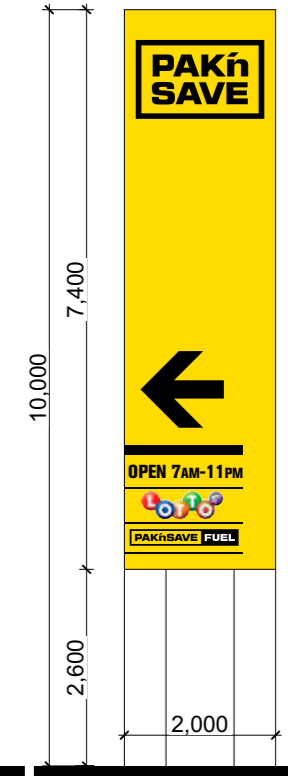


adjust existing garden and carparking to suit new pedestrian link

walkway under canopy

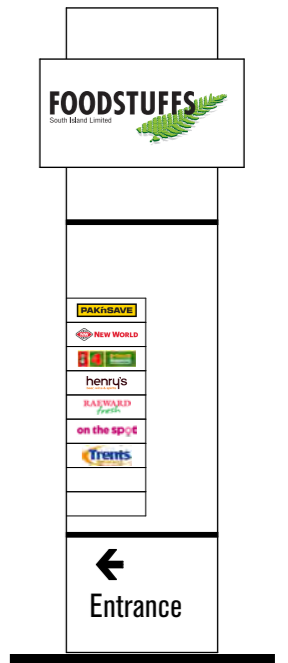


proposed PAK'nSAVE fuel sign



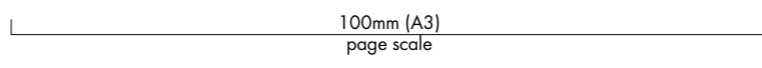
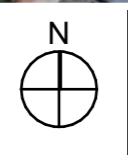
proposed PAK'nSAVE pylon sign

- Main panel Aluminium Composite Panel outer skin over steel frame in PAK'nSAVE Yellow
- Structure Aluminium Composite Panel outer skin over steel frame in ALUMINIUM
- Graphics Black computer cut vinyl lettering and directional arrow
- Font Akzidenz Grotesk Bold Condensed upper case
- Lotto & Fuel Digitally printed vinyl
- Lighting as per lighting plan (Pedersen Read)



existing Foodstuffs South Island sign relocated

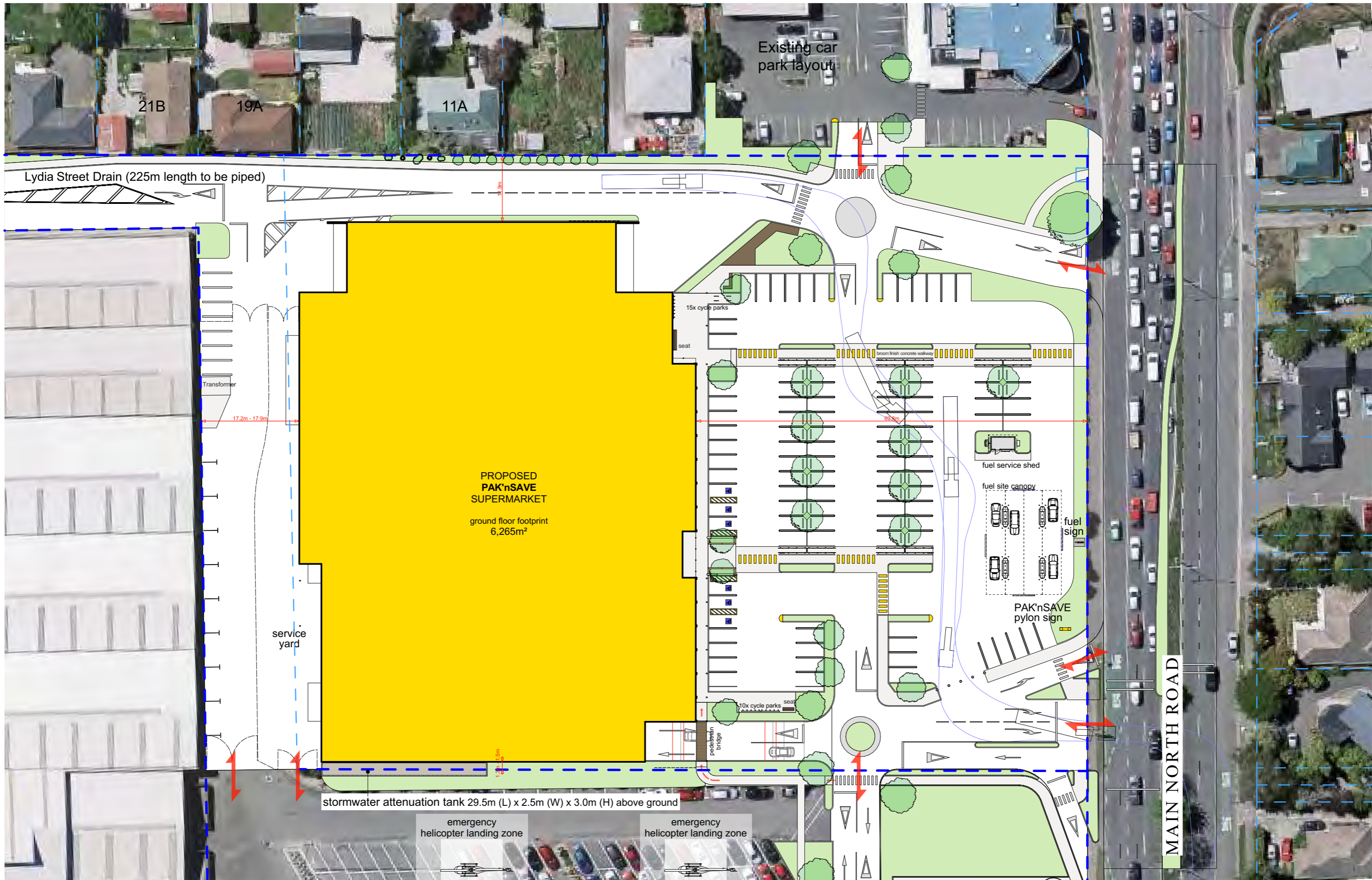
**PAPANUI PAK'nSAVE**  
 location plan  
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 project number 5544  
 printed 19/11/2019 2:02 PM  
 status **RESOURCE CONSENT**

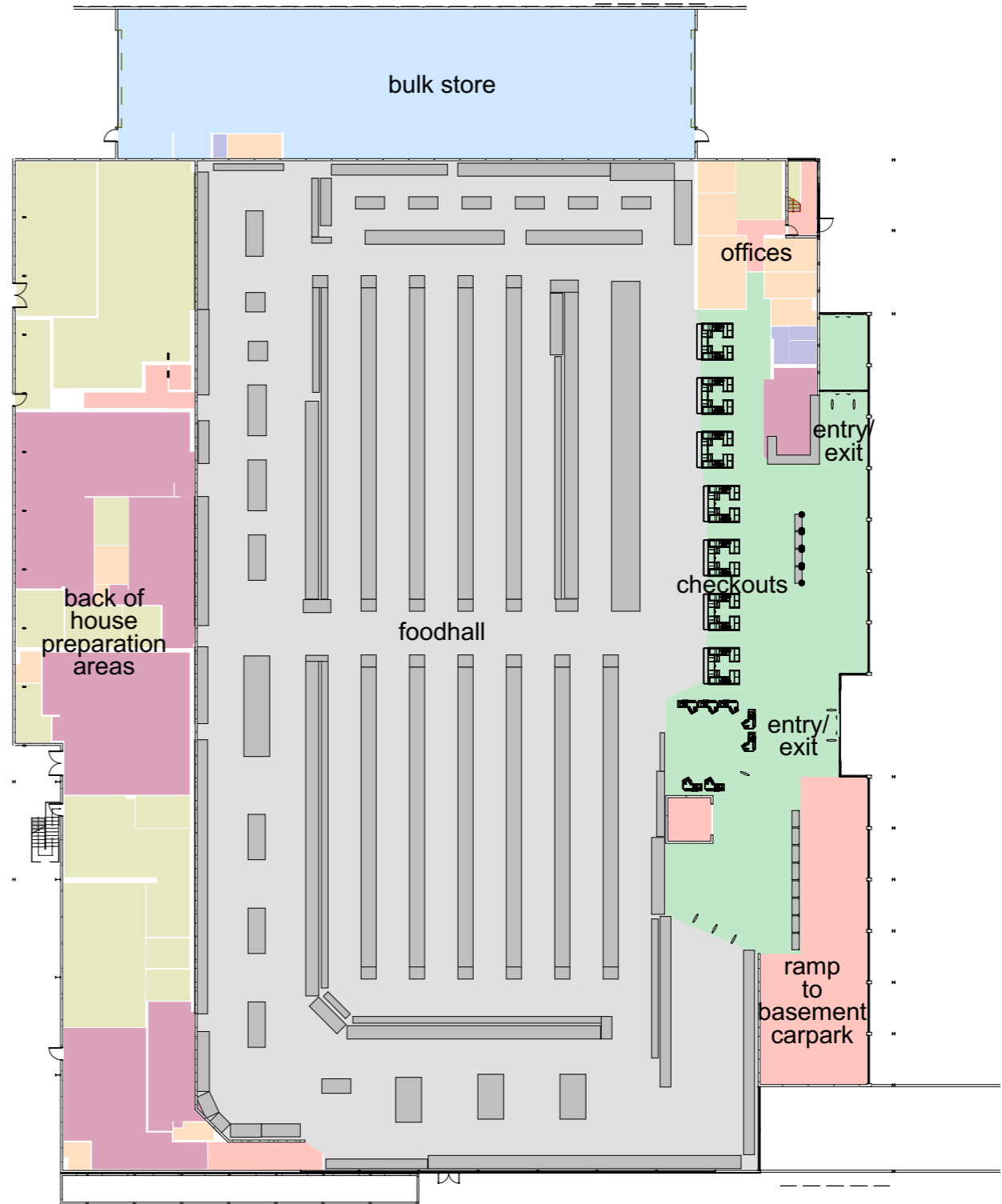
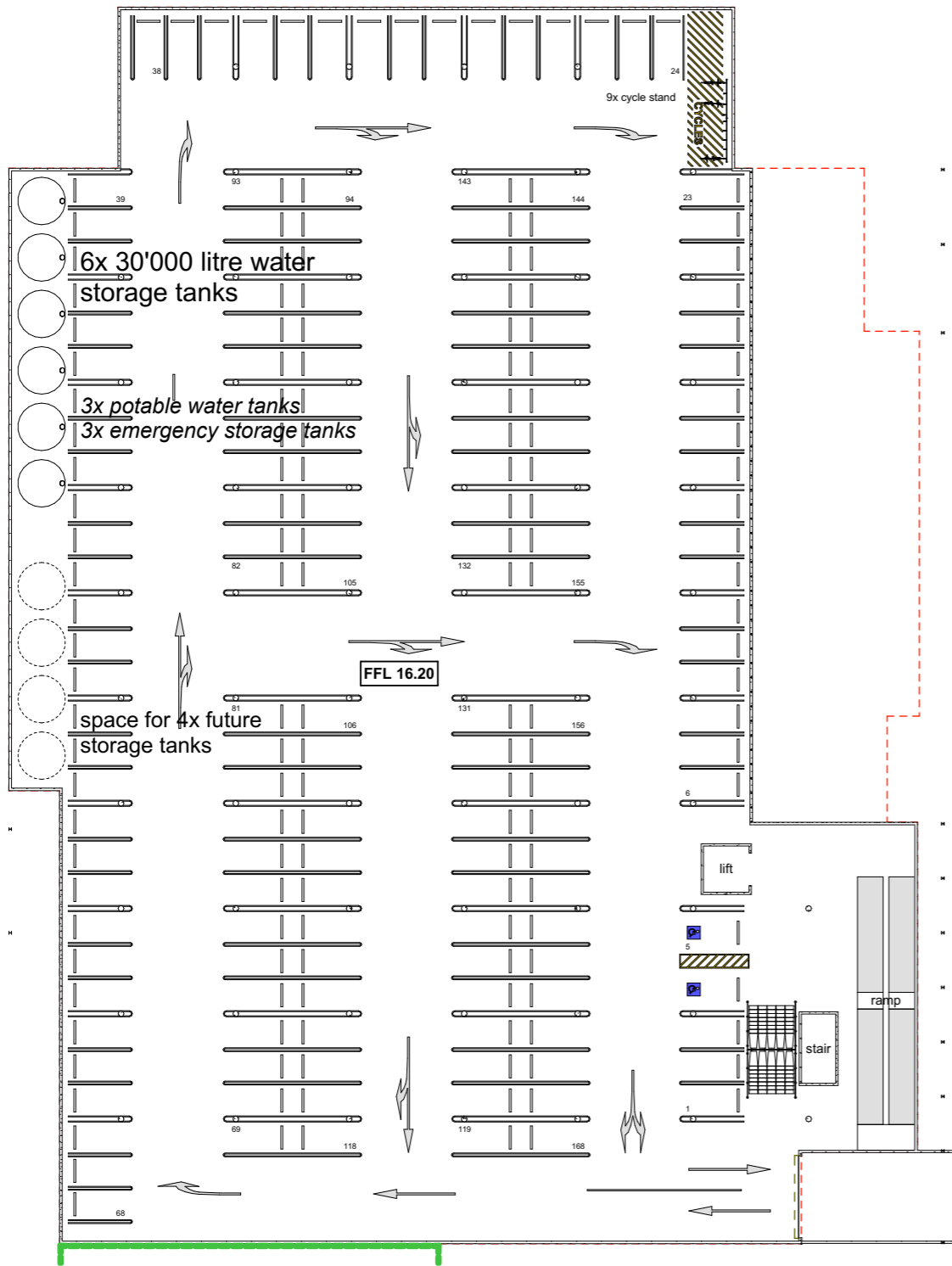


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**RCE01**  
 rev.









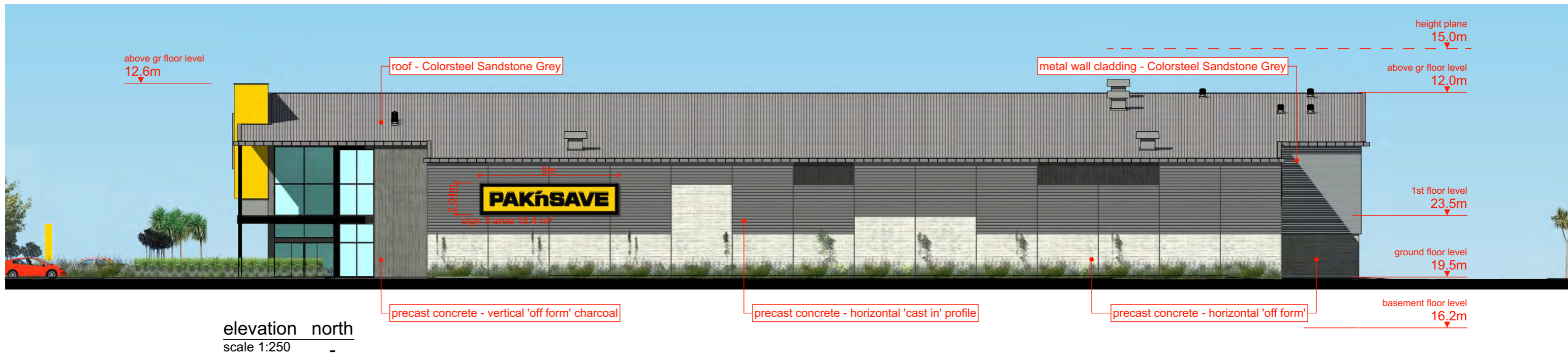


perspective elevation east

55° recession  
plane angle  
2.3m above  
ground level at  
boundary



elevation east  
scale 1:250

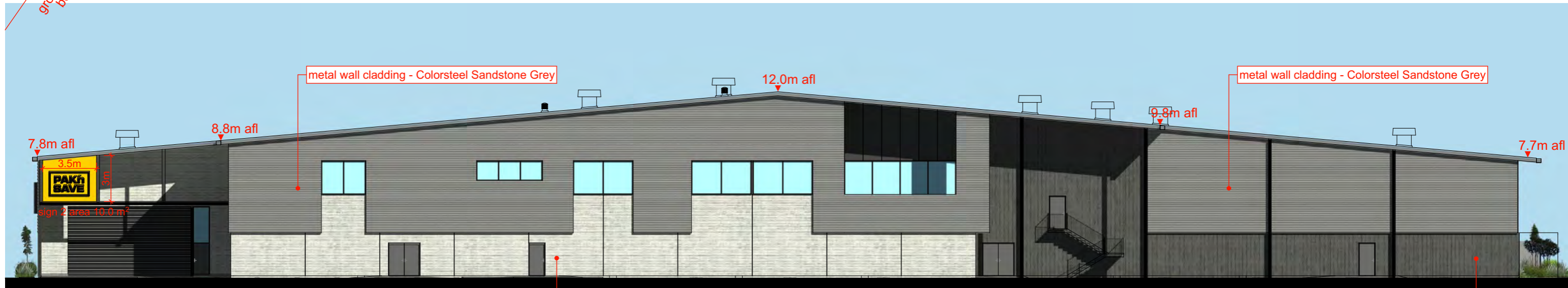




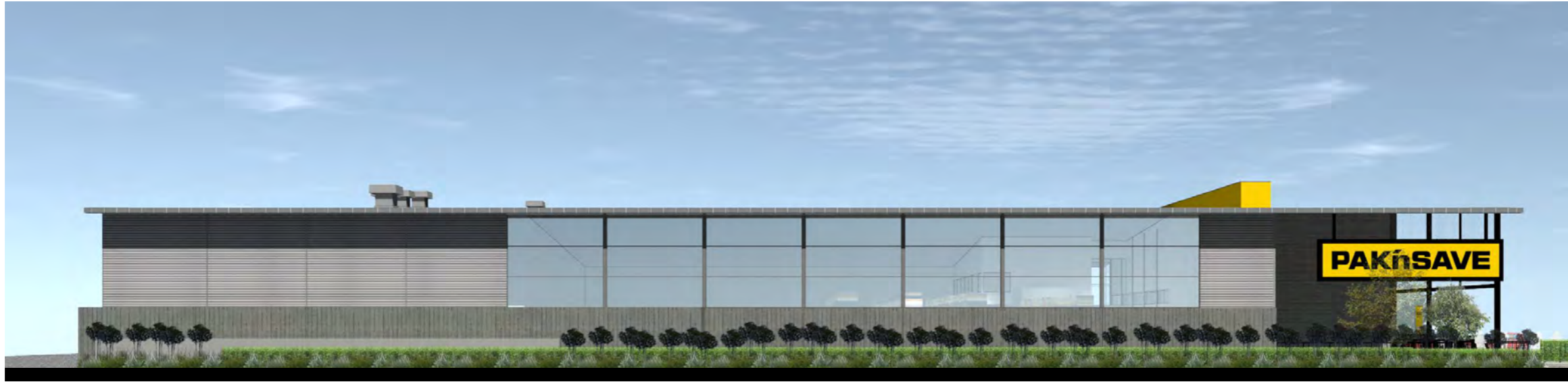


perspective elevation west

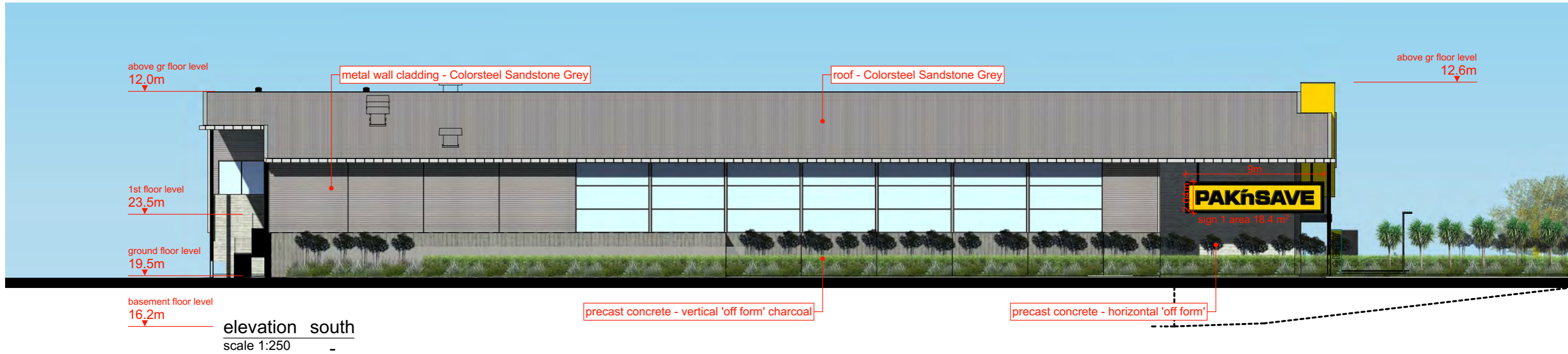
55° recession  
plane angle  
2.3m above  
ground level at  
boundary



elevation west  
scale 1:250



perspective elevation south







**PAPANUI PAK'nSAVE**  
view from north east corner

project number 5544  
printed 19/11/2019 2:03 PM  
status **RESOURCE CONSENT**

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**RCe08**  
REV.





**PAPANUI PAK'nSAVE**  
view from south east corner

project number 5544  
printed 19/11/2019 2:03 PM  
status **RESOURCE CONSENT**

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**RCe09**  
REV.





**PAPANUI PAK'nSAVE**  
views from Main North Road

project number 5544  
 printed 19/11/2019 2:03 PM  
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**RCe10**  
 rev.





**PAPANUI PAK'nSAVE**  
supermarket perspectives

project number 5544  
 printed 19/11/2019 2:03 PM  
 status **RESOURCE CONSENT**

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**RCe11**  
REV.





**PAPANUI PAK'nSAVE**  
views of entry

project number 5544  
 printed 19/11/2019 2:03 PM  
 status **RESOURCE CONSENT**

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**RCE12**  
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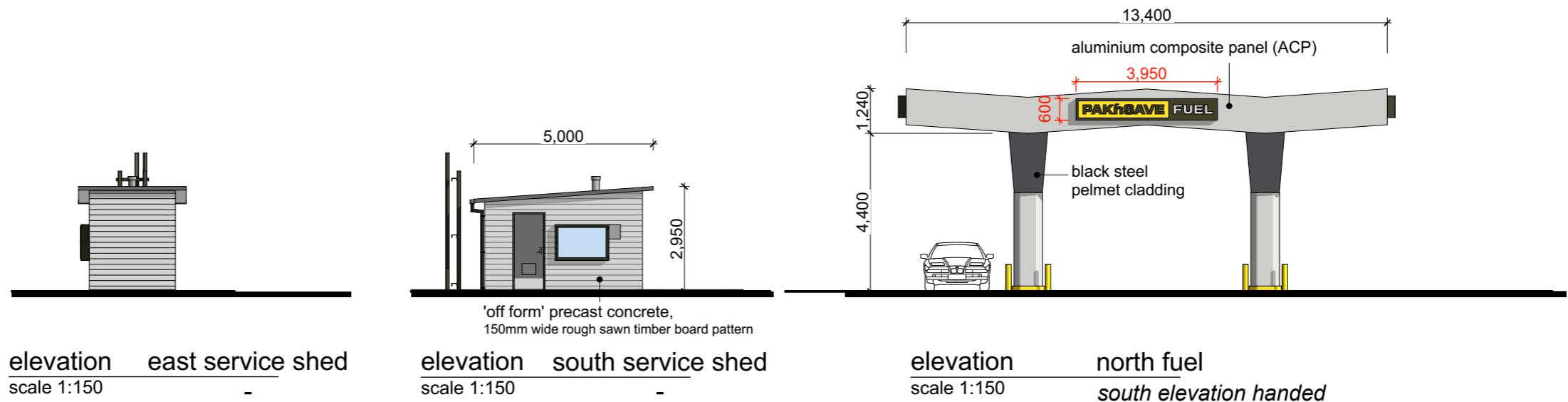
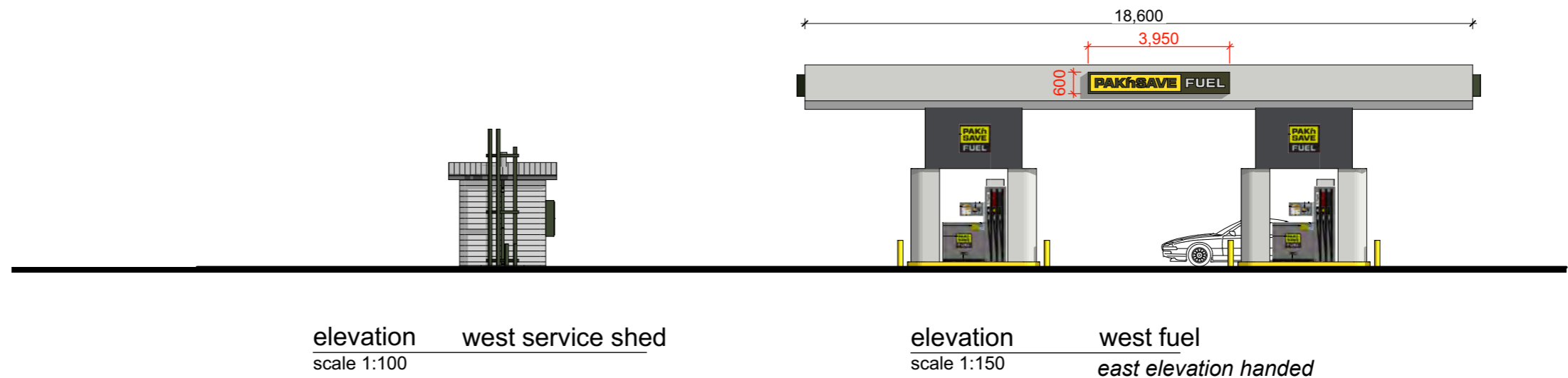
**PAPANUI PAK'nSAVE**  
corner views

project number 5544  
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 status **RESOURCE CONSENT**

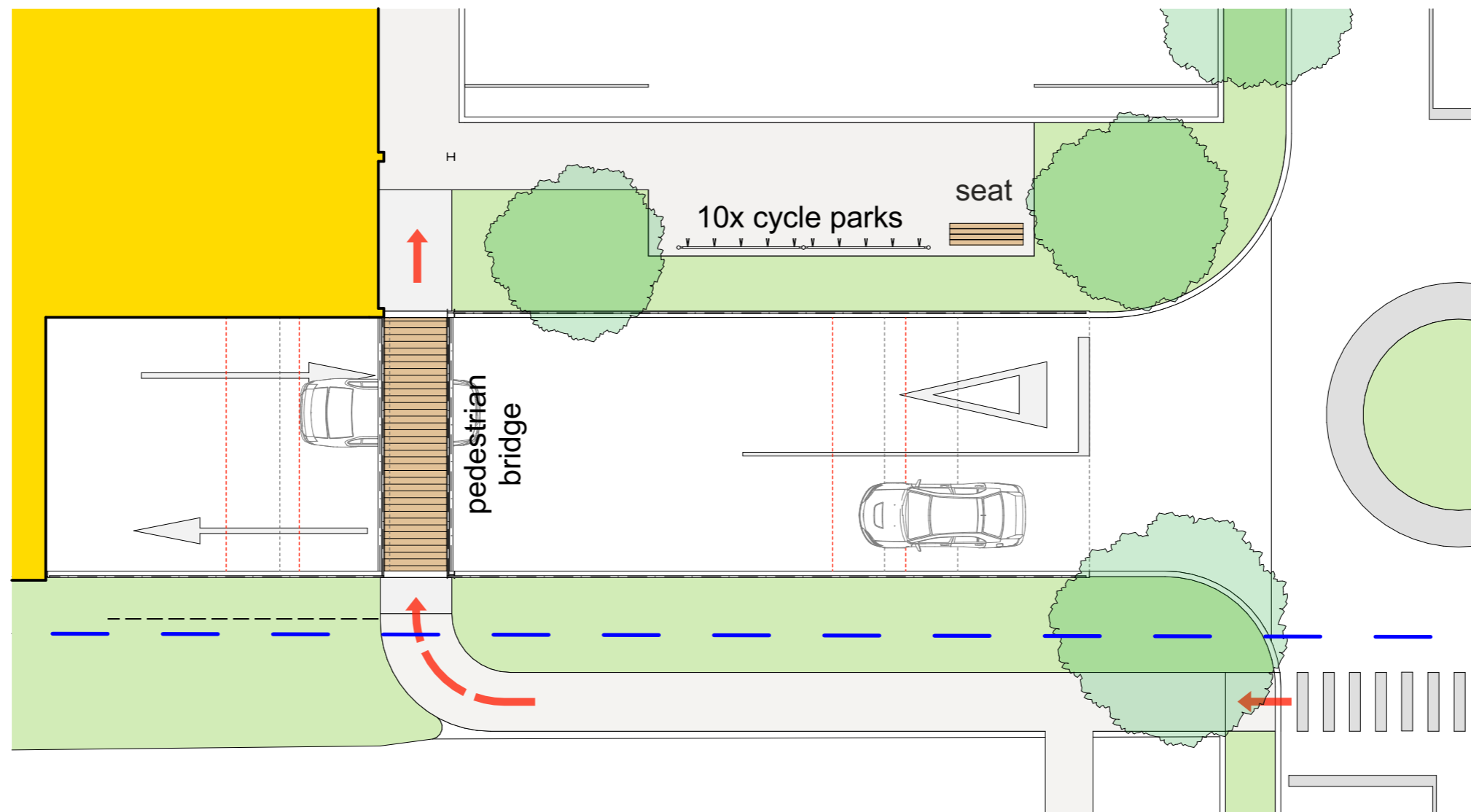
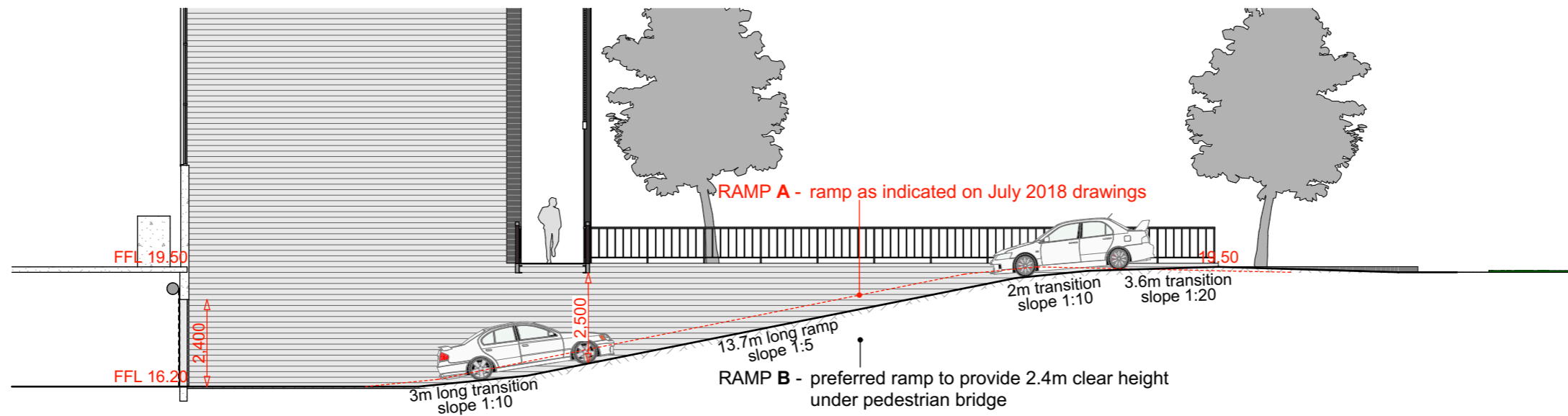
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**RCe13**  
 rev.







Before the Independent Commissioner

Under the Resource Management Act 1991

In the matter of

an application by Foodstuffs (South Island) Properties Limited for the establishment and operation of a PAK'nSAVE supermarket with ancillary offices, self-service petrol station, emergency coordination facility, car parking, roading realignment (addition of a signalised intersection along Main North Road), signage, earthworks and modifications to the Lydia Street Drain (a network waterway) at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (RMA/2018/2029)

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**Evidence of Mark David Allan**

19 November 2019

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**Applicant's solicitors:**

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**anderson  
lloyd.**

## Introduction

- 1 My name is Mark David Allan.
- 2 I hold the qualification of Bachelor of Resource and Environmental Planning (Hons) from Massey University.
- 3 I am currently employed as a Director: Environment and Planning – Advisory with Aurecon New Zealand Limited, an international engineering, surveying and planning consultancy. I have held that position since 2012, and been employed by Aurecon since 2003.
- 4 My previous work experience that is most relevant to this application includes:
  - i. lead planning consultant for Foodstuffs South Island in respect of their land holdings and development proposals throughout the South Island since 2008;
  - ii. preparing resource consent applications, providing strategic advice for plan reviews and undertaking due diligence in the acquisition of sites for new and expanded supermarket developments;
  - iii. preparing and presenting evidence for Foodstuffs South Island on its submissions to the Christchurch Replacement District Plan; and
  - iv. policy and rule development through private plan changes for residential, commercial and industrial rezoning requests in Christchurch and other South Island districts.
- 5 Foodstuffs (South Island) Properties Limited (**Foodstuffs**) propose to establish and operate a PAK'nSAVE supermarket with ancillary offices and self-service fuel station at 171 Main North Road, Papanui (the **Proposal**), and to establish car parking and access, roading realignment, signage, earthworks and modifications to the Lydia Street Drain and an Emergency Coordination Facility at 171 and 165 Main North Road, 7, 7A and 7B Northcote Road (the **Application and Application Site**).
- 6 My role in relation to the Application has been to provide planning advice on the feasibility of establishing a new supermarket on the Application Site. I was responsible for oversight and ultimate delivery of the Assessment of Environmental Effects (**AEE**) accompanying the Application, and the subsequent RFI response. In 2015 I presented planning evidence in relation to Foodstuffs' submission on the Proposed Christchurch Replacement District Plan, in which Foodstuffs sought a Commercial Core Zone for the Application Site.
- 7 In preparing this statement of evidence I have considered the following documents:



- (a) the AEE accompanying the Application;
- (b) the Christchurch District Plan (**CDP**);
- (c) the submissions on the Application;
- (d) the Council's section 42A report prepared by Mr Harris, and supporting specialist assessments (**Officer's Report**); and
- (e) the expert evidence of other witnesses, including Mr Roger Davidson, Ms Rebecca Parish, Mr David Smith, Mr Paul Durdin, Mr Fraser Colegrave, Mr Niko Young, Mr Andrew Burns, Mr Tony Milne, Mr Rob Hay, Mr Mark Taylor and Mr Keegan Brogden for Foodstuffs.

8 I have visited the Application Site on numerous occasions since 2015.

#### **Code of Conduct for Expert Witnesses**

9 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

#### **Scope of Evidence**

10 My evidence focuses on the planning issues associated with the Application, and my conclusions on these matters are informed by the evidence of Foodstuffs' other experts. I do not intend to revisit any detailed subject matter that has already been covered in evidence for Foodstuffs, or where there is general agreement between the experts and Officers. It is on this basis that I have limited my evidence to a consideration of the following:

- (a) Actual and potential effects of the Application;
- (b) Provisions of the CDP of relevance to the Application; and
- (c) Matters raised in submissions and the Council Officer's section 42A Report (**Officer's Report**).

11 I note there are a number of matters on which the Council Officer, Mr Harris, and I are in agreement in respect of matters that do not relate to effects on centres, urban design and traffic. Instead of repeating the analysis contained in the Officer's Report, I explain these areas in my evidence below where applicable. For any

matters where I do not agree with the Officer's Report I also give reasons in my evidence.

### **Executive Summary**

- 12 The key planning related issues in my opinion are:
- (a) whether the Proposal is an appropriate use of the Application Site;
  - (b) whether the Proposal will result in the expansion of the adjacent Local Centre and/or maintain the role of the Local Centre and other centres;
  - (c) how the Application Site is developed recognising its location in the context of the strategic road network, surrounding land uses and the operational requirements of the Proposal;
  - (d) how the Proposal addresses the planning framework of the CDP;
  - (e) whether the Proposal will deliver a sustainable outcome; and
  - (f) how any potential adverse effects are avoided, remedied or mitigated, particularly in regard to urban design and the road network.
- 13 Based on my own and Foodstuffs' specialist experts' detailed analyses and assessments, I conclude that:
- (a) The Proposal does not present a conflict with a fair appraisal of the objectives and policies of the CDP when read as a whole;
  - (b) The Proposal will not undermine the centres-based framework, either in terms of altering the role of the adjacent Local Centre or undermining the function of other centres;
  - (c) The Proposal is appropriate on the Application Site and the considered building design and site layout fits well in the context and character of the mixed use receiving environment whilst achieving operational requirements;
  - (d) The Proposal can operate, with appropriate mitigation measures in place, without creating adverse effects on the immediate neighbourhood or wider environment, including the transport network; and
  - (e) overall, the Proposal represents an efficient use of the land resource and a sustainable development in this part of the City.

## The Proposal

- 14 The Proposal has been comprehensively described in the application documents and summarised in the Officer's Report and by Foodstuffs' other witnesses. These descriptions are accurate, and I do not repeat them here.
- 15 Ms Parish and Mr Young have outlined the site planning design philosophy for the Proposal. I know from experience that Foodstuffs consider development options for new sites over a lengthy period of time, carefully weighing up functional, operational and environmental considerations. In this case, development options for the Application Site were influenced by:
- the need to meet operational requirements of the Proposal, including vehicle entry and exit points and convenient car parking, separation of public areas from service areas and delivery activities, and security;
  - the need to size the Proposal to cater for the catchment size;
  - the desire to achieve an identifiable character along the Main North Road frontage;
  - adequate areas to provide for resilient building design and layout including provision of essential emergency management facilities;
  - consideration of the existing built form (including residential dwellings, local commercial neighbours to the north, the Foodstuffs head office building to the south, and the large industrial building to the west); and
  - separation between the fuel facility and supermarket to reduce vehicle and pedestrian interaction, and cater for efficient vehicle circulation.
- 16 These matters have together helped inform the layout and design of the Proposal. In my opinion, it is particularly relevant that the Proposal delivers the dual benefits of increased engagement, vibrancy and attractiveness at the Main North Road frontage than presently exists, and maximising separation from residential properties.
- 17 It is relevant to note that the Proposal has undergone design changes and refinement in response to Council feedback before notification, as a result of expert conferencing, and most recently to address matters raised in the Officer's Report. Foodstuffs' design experts have outlined the nature, extent and effect of these changes, which I summarise here as:
- A more direct pedestrian linkage has been provided from the south, including the provision of a pedestrian bridge over the basement ramp, which will enable a more safe and direct connection to/from the Foodstuffs Head office and Main North Road;
  - A revised, widened (3.8m) and enhanced east-west pedestrian connection from the northern supermarket building entrance to Main North Road;

- Provision of a more direct, realigned pedestrian linkage to and within the Commercial Local Zone connecting to Northcote Road;
- Additional trees located in a north-south alignment through the car park and along the Main North Road frontage, and change in surface treatment to areas of the car park (20 exotic specimen trees are now proposed within the car park and an additional 10 exotic specimen frontage trees proposed);
- Enhanced landscape design at the northern supermarket building entrance to further emphasise this entrance;
- Amendments to the colour and material of the proposed fuel facility canopy and shrouded structure to reduce its visual dominance at the street edge;
- Provision of gates to the rear service area to contain this area to the north and south;
- Removal of the gate previously shown at the west end of the Lydia Street RoW;
- Revisions of the cladding articulation on the northern building facade;
- Additional trees (*Alnus joreullensis*) provided at 3m spacings within the landscape strip along the Lydia Street RoW, as agreed in the Landscape Joint Witness Statement;
- Two additional cycle stands (25 customer cycle parks now proposed);
- Installation of wayfinding and an electronic messaging board in the supermarket foyer to advise customers of bus services and arrival times; and
- Revised treatment for the roundabout located on the Lydia Street RoW to accommodate vehicle tracking for the fuel tanker (Gobi block permeable paving replaces the original stormwater basin/ rain garden planting).

18 Lastly, Mr Burns has recommended the provision of a plaza space where the primary east-west footpath connects with Main North Road and co-located with the proposed relocated bus stop. This would provide a greater level of connectivity, amenity and public invitation to the Application Site. I understand this will be accommodated on a revised drawing set for the hearing.

19 The evidence demonstrates that the collaboration between Foodstuffs' specialists and their counterparts at Council has had a positive impact on the overall design and outcome of the Proposal. It is also reflected in the level of agreement between the experts. The design changes serve to minimise adverse effects on the existing and receiving environment, without unduly compromising the operational requirements of the Proposal.

- 20 In my opinion the amended Proposal is within the scope of that which was publicly notified. The changes serve to address concerns expressed by the submitters and Council Officers. No new non-compliances arise. The activity status remains the same as the original Proposal, i.e. discretionary. The changes do not disadvantage any person currently, or who may have otherwise chosen to be, a party to these proceedings. Accordingly, I believe the Commissioner has the authority to consider the amended Proposal within the scope of the original Application. All other aspects of the Proposal remain unchanged from that contained in the Application as notified.

### **District Plan Matters**

- 21 The Application Site is located primarily within the Industrial General Zone (171 and 165 Main North Road), with the remainder in the Commercial Local Zone (7, 7A and 7B Northcote Road) and an access lot providing staff access from Main North Road in the Residential Suburban Zone. Relevant overlays and notations affecting the Application Site include Flood Management Area, Liquefaction Management Area, network waterway (Lydia Drain), Minor Arterial Road (Main North Road), Major Arterial Road (Northcote Road, also designated for corridor widening and intersection improvements) and Local Road (Lydia Street).
- 22 The Industrial General Zone recognises and provides for industrial and other compatible activities that can operate in close proximity to more sensitive zones due to the nature and limited effects of activities including noise, odour, and traffic<sup>1</sup>. Limited non-industrial activities are provided for as permitted activities, with other non-industrial activities subject to assessment through the resource consent process as a discretionary activity.
- 23 The CDP definitions for “supermarket” (and, by inference, “retail activities” and “commercial activities”), “emergency service facilities” (and, by inference, “critical infrastructure” and “community facility”) and “service station” collectively capture the various elements of the Application.
- 24 The AEE contains a comprehensive assessment of the Application against the relevant rules of the Industrial, Transport, Natural Hazards, General Rules and Procedures, and Natural and Cultural Heritage Chapters of the CDP, as does the Officer’s Report.
- 25 Overall the Proposal has discretionary activity status by virtue of Rule 16.4.1.4, i.e. a supermarket is not an activity provided for as a permitted, controlled, restricted discretionary, non-complying or prohibited activity in the Industrial General Zone. Discretionary activity consent is also required under the National Environmental

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<sup>1</sup> Policy 16.2.1.3a.i.

Standard for Contaminated Land (**NES**) for the total volume of soil disturbance where a Detailed Site Investigation (**DSI**) has not yet been undertaken.

- 26 All the other rules that trigger the need for resource consent are summarised in the Officer's Report<sup>2</sup> and have, individually, restricted discretionary activity status. There is no disagreement between Mr Harris and I in respect of the rules triggered by the Proposal and the overall activity status of the Application.

### **Council Officer's Report**

- 27 Mr Harris has concluded that the Proposal will have adverse urban design effects that will be more than minor, and transport effects that will be potentially significant (para 130, page 30). His position is informed by Council's experts on these matters (Mr Hattam and Mr Gregory, respectively). The Officers did not have the benefit of the subsequent changes that have been made to the Proposal in response, or the independent traffic modelling peer review undertaken by John Falconer (QTP Peer Review of Traffic Modelling).
- 28 In all other respects, Mr Harris' opinion is that the adverse effects of the Proposal will be no more than minor and capable of being appropriately managed by conditions of consent. I agree with Mr Harris' position on effects relating to economic/ retail distribution, the piping of Lydia Street Drain, stormwater, flooding, environmental health (noise, lighting, fumes and soil contamination) and construction works.
- 29 Where Mr Harris and I part ways is in respect of our conclusions on the objectives and policies of the CDP. It is Mr Harris' opinion that the Proposal is contrary to the intent of the policy framework (para 227, p54), on the basis that the commercial use of industrial land will undermine the centres-based framework. He also considers the Proposal to be inconsistent with, and potentially contrary to, transport-related policy (para 228, p54). Consequently, Mr Harris also expresses concern in relation to precedent and plan integrity. This leads him to recommend that the Application should be declined.
- 30 In my opinion, Mr Harris' concerns regarding precedent and plan integrity is inadvertently narrow, and his conclusion that the Proposal is contrary to the objectives and policies does not appear to be based on an overall consideration of the purpose and intent of the CDP. While I accept the Proposal may challenge one or two provisions, as a planner I would find it to be a considerable leap to then conclude that the Proposal is contrary to the objectives and policies of the CDP when read as a whole. This is particularly so where the policy framework is largely effects-based, and it is agreed (or demonstrated) that the effects of the Proposal

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<sup>2</sup> Para 14, pages 7-8, Officer's Report

will be acceptable in the context of the receiving environment. I return to this later in my statement.

### **Statutory Framework**

- 31 The statutory framework relevant to a determination of a discretionary activity will be outlined in legal submissions and will be well known to the Commissioner.
- 32 Section 104(1) of the Resource Management Act 1991 (**RMA**) provides that when considering such an application, the consent authority must have regard to:
- any actual and potential effects on the environment;
  - any relevant provisions of a policy statement or plan; and
  - any other relevant matters.
- 33 I understand no one matter has pre-eminence over another and that weight is to be afforded to each as is appropriate to the circumstances, all the while subject to Part 2. In this case, the CDP is a relatively recent planning instrument which accurately reflects the Council's current strategic thinking in terms of industrial land supply and its centres hierarchy. I consider the CDP provisions appropriately give effect to Part 2 and, from a practical perspective, no further consideration under Part 2 is necessary in this case.
- 34 Section 104B of the RMA allows the consent authority to grant or refuse consent and, if consent is granted, to impose conditions.
- 35 The following sections of my evidence address the relevant s104 and 104B matters.

### **Assessment of Effects**

- 36 Acknowledging my agreement with the Officer's Report in respect of effects pertaining to economic/retail distribution, Lydia Street Drain, stormwater, flooding, environmental health, street trees and construction works, I do not repeat those assessments here. Instead, I focus on the following matters that I consider require further consideration:
- Urban design and visual amenity
  - Transport
- 37 Before addressing these, I highlight the positive effects of the Proposal, which have attracted only passing comment in the Officer's Report, and economic effects given their relevance to an analysis of the centres-based objectives and policies of the CDP.

### **Positive Effects**

- 38 I consider positive effects to be influential in this case, particularly as potential adverse effects are considered to be acceptable and readily managed by conditions of consent.
- 39 The Officer Report covers positive effects in paragraph 37 (p12), where it is agreed that the Proposal will have positive effects in terms of improved site utilisation and the important potential function that the Application Site can service during an emergency. While I acknowledge that the day-to-day operation of the Proposal will be that of a supermarket, I consider it appropriate to consider the value the Application will provide during an emergency event, both in terms of food supply and resilience, and for emergency response coordination activities.
- 40 Mr Young has detailed the additional design considerations factored into the building and site layout to accommodate resilience requirements for a future emergency. The Application is consistent with Foodstuffs' Resilience Strategy outlined in Ms Parish's evidence and while the day-to-day operations of the Proposal are commercial in nature, I consider the co-location benefits are relevant. The very nature of the scale of emergencies that the Proposal has been designed to support (such as the anticipated rupture of the Alpine Fault) are that they will be infrequent but of a high magnitude and that the positive effects of this provision should not be overlooked.
- 41 Designing the building to IL4 standards and ensuring the provision of resilient elements adds substantial design and construction costs, however this will provide a valuable community asset both in terms of ensuring the uninterrupted supply of essentials to the community and, where required, enabling the Canterbury Civil Defence Emergency Management Group (**CDEM Group**) the ability to use the Application Site to coordinate an emergency management response. The CDEM Group's submission reinforces the benefits of the Application.
- 42 In addition to the emergency response and resilience benefits, I consider the Proposal will have the following positive effects:
- the comprehensive redevelopment of a large brownfield site will improve the economic efficiency and appearance of the land;
  - an enhanced visual appearance of the Application Site will generate superior urban design outcomes for the Application Site and its context than existing;
  - helping to foster and support the intended role and function of the adjacent Local Centre;



- the sustainable design and efficiency improvements incorporated as minimum standard for the new store which look to reduce energy use, water consumption and waste production; and
- local employment opportunities within the supermarket.

***Economic Effects***

- 43 Effects of the Proposal on the role and functionality of commercial centres have been assessed in detail within the application material and in the evidence of Mr Colegrave for Foodstuffs and Mr Heath for the Council. The economic experts are in agreement that the Proposal will not adversely affect the rebuild and recovery of the Central City area, the function of the District Centres / Key Activity Centres at Papanui/Northlands and Northwood/Belfast, or any other nearby centre; that retail distribution effects would be minimal and that the loss of industrial land to a commercial use will not result in any adverse implications for industrial land supply in the City. I consider these findings, and the level of agreement, to be significant in terms of the centres-based framework of the CDP, which I discuss later in respect of objectives and policies.
- 44 Mr Colegrave has concluded that the Proposal will not transform the role and function of the adjacent Local Centre and will not result in the de-facto creation of a Neighbourhood Centre, given its limited role and function. The Local Centre will continue to be a group of convenience shops and not include the broader range of activities anticipated within a Neighbourhood Centre. Instead, Mr Colegrave considers the Proposal will help ensure that the Local Centre fulfils its intended role and function (something he considers is not currently occurring).
- 45 I also note that Mr Harris accepts Mr Heath’s evidence that the Proposal will not result in adverse effects to such a degree that the role, function, vitality or growth potential of any centres will be undermined (para 41, p.13). Mr Colegrave concurs, outlining that the Proposal will help to foster and support the strategic role and function of the City’s centres network and help give effect to the CDP’s objectives and policies for commercial areas.
- 46 For the reasons outlined above I consider that any adverse economic effects of the Proposal will be acceptable in the context of the CDP’s centres-based framework.

***Urban Design and Visual Amenity***

- 47 In terms of urban design and visual amenity effects associated with the Proposal, I consider it appropriate to consider: the current state of the Application Site; what could be considered an appropriate and anticipated urban design and visual amenity outcome in the Industrial General Zone; and what is considered

appropriate for the proposed land use whilst being cognisant of the surrounding receiving environment.

- 48 I also consider it necessary to balance this against the operational requirements of the Proposal, noting the evidence of Mr Young and Ms Parish that describes the rationale for the site layout and design of the Proposal. What they have described are all functional aspects that are essential to the successful operation of a supermarket and therefore integral to the overall design.
- 49 Mr Burns has commented in his evidence on the existing views of the Application Site from Main North Road and Northcote Road. He notes that the larger scale Murdoch Manufacturing buildings do not signal public invitation, describing the presentation of blank walls onto the street while other structures near the frontage offer no meaningful relationship, effectively creating 'backs' to the road frontage.
- 50 In the planning context, the Industrial General Zoning of the land contains minimal built form standards regarding the bulk, massing and location of buildings. For instance, the CDP does not require or encourage buildings to be brought forward and directly address the road frontage, and there are no urban design triggers associated with permitted or restricted discretionary activities. This provides a baseline for the built form and visual amenity outcome anticipated for the Application Site. That aside, I note Mr Burns has identified a range of 'general urban design matters' that are relevant to the Proposal and the specific conditions of the Application Site and its context, using the objectives, policies and matters of discretion in the Commercial Chapter as a guide. I agree this is an appropriate approach to adopt for assessing urban design and visual amenity impacts in this instance.
- 51 I rely on the expertise and evidence of Mr Burns and Mr Milne to inform my own consideration of the relevant urban design and visual amenity effects of the Proposal. I consider the changes made to the Proposal (as described by Foodstuffs' design experts and summarised at paragraph 17 above) in response to the Officers' Report, and specifically Mr Hattam's assessment, have improved the Proposal's engagement with Main North Road and the visual amenity outcome of the Application Site.
- 52 Mr Burns has observed that supermarkets typically seek a commercial built form and site layout that comprises larger footprint buildings influenced by their use / operational requirements and where having easy access to the car is critical for the success of the operation. He acknowledges that while this is not as conducive to active transport modes, this built form still has a place and the contextual location of the Application Site is an example of this.
- 53 The proposed site layout has sought to locate and contain the service functions for the supermarket (visually and physically) away from the public street front, ensuring

the more engaging activity (the glazed retail frontage) addresses the car park and the Main North Road frontage. Both Mr Young and Mr Burns have considered the anticipated outcomes if the supermarket building were to be located closer to the Main North Road frontage as suggested by Mr Hattam (para 36, p 7, Appendix D, Officer's Report). This would bring the building closer to the street but require customer car parking to be located elsewhere on the Application Site (potentially split between the front and rear of the supermarket building), with the building frontage consequently facing the rear or side of the Application Site away from the Main North Road frontage. I consider this would result in an inferior outcome in terms of supermarket legibility and functionality, and introduce CPTED and security issues with public car parking areas confined behind the supermarket, and connecting pedestrian routes conflicting with back-of-house service areas.

- 54 Contextually appropriate landscape planting is provided along the Main North Road frontage with a coordinated design of avenue of trees and other planting throughout the Application Site. Mr Milne considers the Proposal will facilitate the renewal of a partly derelict and underused site and result in a significantly improved frontage, with trees, low shrubs and hedge planting defining the boundary and providing a high-quality street edge. He considers that potential adverse visual effects for properties with views to the Application Site will be mitigated by the landscape proposal, including road and residential boundary interface treatment and car park planting. In contrast to Mr Hattam, he considers the proposed setback of the supermarket will contribute to the mitigation of potential visual effects from Main North Road.
- 55 Mr Young describes how the architectural detailing contributes to a visually attractive setting and street edge. The renders appended to Mr Young's evidence provide greater detail of the proposed recess of the public entrance to the supermarket building and of the proposed roof overhang and canopies providing weather protection and sun shading along the promenade.
- 56 The fuel facility has specific operational requirements that determine its location, orientation and layout, as detailed by Mr Young. Mr Burns considers that the fuel facility does not support pedestrian amenity at the street edge, to the same extent as other built form and edge treatment would. He would, however, be satisfied with an outcome that provides an additional quality plaza space. In this regard, I note that some amendments have been made to the fuel facility design and the plaza recommended by Mr Burns has been introduced, and I further note that service stations are an anticipated development outcome in the Industrial General Zone. Overall, Mr Burns concludes that he supports the Proposal from an urban design perspective, acknowledging that it will generate superior urban design outcomes for the Application Site and surrounding area than either existing or permitted industrial functions.

- 57 The Officer's Report identifies concerns with pedestrian connectivity, particularly the northern and southern pedestrian connections to the Application Site from Main North Road. The amended Proposal responds directly to these concerns, which I comment on below.
- 58 An enhanced, widened northern pedestrian access is now proposed to connect the northern supermarket building entrance to Main North Road. This will provide a direct east-west connection across the Application Site and have the additional benefit of connecting with a relocated bus stop to provide public transport passengers safe and efficient access to the store. Mr Burns is supportive of these site improvements noting that while the coarse grain of the street / block context and arterial status of Main North Road supports larger scale vehicle-based retail activities, it is important that provision is made for local pedestrian trips to the Application Site and for integration to enable cross-site connections to the north, south and east.
- 59 A more direct pedestrian linkage to the supermarket has also been provided from Main North Road south of the new signalised access. This will improve connections both from Main North Road and within the Application Site. The provision of a pedestrian bridge over the basement ramp will enable a safe, mode-separated and direct pedestrian connection to the supermarket from both the Foodstuffs head office and Main North Road.
- 60 Mr Burns concludes that the Proposal will provide important cross-site connections and will support increased pedestrian movement. Based on the changes to the Proposal, which have been informed by Mr Burns' specialist input, I do not share Mr Harris' concerns regarding pedestrian accessibility, and consider pedestrian connectivity issues have been satisfactorily resolved.
- 61 Overall, I consider the site layout and built form will achieve a legible and attractive development outcome, with suitable pedestrian provision and connectivity with the established commercial activities on the Application Site, neighbouring residential properties, and the public domain. The evidence of Foodstuffs' design experts has assessed the key urban design and visual amenity concerns expressed in the Officer's Report, many of which have been effectively resolved or at least assisted by the subsequent design changes made to the Proposal. For these reasons, I consider that the urban design and visual amenity outcomes of the Proposal will be appropriate in the context of the receiving environment.

### ***Transport***

- 62 Transport effects from the Proposal have been addressed in the AEE and ITA, Foodstuffs' responses to Council requests for further information (including extensive traffic modelling) and in the evidence of Mr Smith. Several conferencing sessions between the various transport experts also occurred to address the areas

of concern to Council and submitters. This resulted in additional transport modelling, and agreement amongst the experts as to appropriate mitigation measures. I rely on the expertise and opinion of Mr Smith, supported by Mr Durdin who had oversight and agrees with Mr Smith's assessment, in respect of transport effects arising from the Proposal.

- 63 Safety, traffic generation and effects of the Proposal on operations of the surrounding road network has been a point of contention between Foodstuffs' and the Council's traffic experts. I also note this is the primary point of concern for some submitters. The technical experts have undertaken a comprehensive assessment of these matters, which informs my analysis. I comment on this in the following paragraphs of my evidence.
- 64 Mr Smith has outlined the extensive transport modelling that has been undertaken for the Proposal in collaboration with Council's traffic engineers. An independent peer review by Mr Falconer has confirmed that the modelling undertaken can be relied upon to inform the assessment of traffic effects. Mr Smith discusses the modelling results in his evidence and outlines the effects on the performance of the transport network due to the extent of infrastructure improvements provided as part of the Application. The infrastructure improvements include the proposed new signalised access on Main North Road providing a safer and more efficient access for vehicles to and from the Application Site and improved pedestrian access across Main North Road. Mr Smith consider this, when combined with the optimised operation of the Main North Road corridor, would result in a reduction in potentially dangerous U-turn manoeuvres, and in local traffic circulating through residential streets to connect to the wider network.
- 65 Mr Harris concludes, based on Mr Gregory's assessment, that adverse effects as they relate to transportation matters will be more than minor and potentially significant (para 67, p17). While there appear to be considerable concerns, Mr Harris helpfully identifies six outstanding issues that would need to be addressed in order for Mr Gregory and himself to be satisfied that the Proposal is appropriate in this location (para 66, pp16-17):
- Safeguarding of the public transport route;
  - Integration with the public transport corridor;
  - Functionality of the Lydia Street entrance/exit if exclusively left-in and left-out;
  - Confirming all access movements operating safely and modelling risks suitably managed;

- Demonstrating access to dentist (186 Main North Road) operating safely; and
  - Confirming provision of safe cycle and pedestrian access.
- 66 Mr Smith's evidence addresses each of these concerns in turn, as well as residual matters from the Road Safety Audit. Based on this, and acknowledging the changes to the Proposal and recommended mitigation measures, he demonstrates that the Proposal can be supported from a transport perspective. The conditions of consent recommended by Mr Smith have been developed to specifically address traffic safety, integration and efficiency concerns of the Council and submitters.
- 67 Mr Smith is of the view that the surrounding network can accommodate the additional demands and traffic redistribution of the Proposal without deterioration in network performance. Indeed, he has shown that some elements of the network will experience improved performance due to the introduction the signalised access on Main North Road and safer and more efficient lane configuration and phasing proposed at the QEII / Main North Road signals.
- 68 I also note that the independent peer reviewer, Mr Falconer, considers the models provide sufficiently strong evidence that traffic effects associated with the Proposal will be less than minor, even when making an allowance for the identified model inconsistencies, for the specific development scenario modelled.
- 69 Having considered the technical evidence on this issue, I accept Mr Smith's overall conclusion that the Proposal can be supported from a traffic and transportation perspective. I am of the opinion that adverse traffic effects arising from the Proposal can be appropriately avoided or mitigated, and will be acceptable.

### **Objectives and Policies**

- 70 The Planning Policy conferencing session agreed the following in respect of the policy framework relevant to the Proposal:
- The Canterbury Regional Policy Statement (**RPS**) has been given effect to through the CDP, such that assessment of the Proposal against the provisions of the RPS is not required;
  - Chapter 3 Strategic Directions of the CDP is given effect to by the objectives and policies in the other chapters of the CDP, such that a discrete analysis of Chapter 3 objectives is not required;
  - As relevant to the Proposal, the objectives and policies contained in Chapters 4 Hazardous Substances and Contaminated Land, 5 Natural Hazards, 6 General Rules and Procedures, 8 Earthworks, and 9 Significant and Other Trees of the CDP can be appropriately addressed by way of

conditions of consent, such that the Proposal can be considered consistent with them;

- The Proposal's consistency or otherwise with the objectives and policies contained in Chapter 7 Transport of the CDP will be informed by specialist transport evidence, these provisions being effects-based;
- The objectives and policies of Chapters 15 Commercial and 16 Industrial of the CDP that are relevant.

- 71 The Planning Policy Joint Witness Statement (**JWS**) records the above in greater detail. I note that there is nothing in the Officer's Report that deviates from the JWS, and for this reason I do not repeat those policy matters where the planning experts agree.
- 72 I agree with the conclusions reached in the Officer's Report that the Proposal is consistent with the relevant objectives and policies in Chapters 4, 5, 6, 8 and 9, based on the availability of appropriate conditions of consent that can adequately address the respective issues. This is consistent with the AEE. My focus will be instead on those objectives and policies in the Industrial, Commercial and Transport chapters that are in contention.

### ***Chapter 16 Industrial***

- 73 Foodstuffs seeks resource consent for the Proposal in the Industrial General Zone. I therefore consider the provisions of the Industrial chapter first, these being most relevant to the Application.
- 74 The Industrial chapter provides for industrial and other compatible activities to occur in the City's industrial zones. The Industrial General Zone recognises and provides for activities that can operate near more sensitive zones due to the nature and limited effects of activities. In the case of the Application Site, this refers to the Residential Suburban Zone and the Commercial Local Zone. This contrasts with the Industrial Heavy Zone, where the potentially significant effects of activities in the zone necessitate separation from more sensitive activities<sup>3</sup>.
- 75 In limited circumstances, the resource consent process provides for non-industrial activities to locate out-of-centre in the Industrial zones provided they do not compromise industrial activities and strategic infrastructure (which includes the strategic road network), or adversely affect the strategic role of the Central City, District Centres and Neighbourhood Centres<sup>4</sup>. The rule framework supporting this

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<sup>3</sup> Policy 16.2.1.3 Range of industrial zones

<sup>4</sup> Policy 16.2.1.4 Activities in industrial zones, sub-clauses b. and c.



reinforces the differences between the Industrial General and Industrial Heavy Zones, the former providing for non-industrial activities as a discretionary activity and the latter as a non-complying activity. I consider this distinction an intentional signal as to the appropriateness, or otherwise, of the industrial zones for non-industrial activities.

- 76 The overriding Industrial objective is to support and strengthen the recovery and growth of the District's industry in existing and new greenfield industrial areas. While I accept the Proposal does not relate to industrial activity, supporting *Policy 16.2.2.1 Sufficient land supply* provides further context that is relevant. The economic experts for Foodstuffs and Council agree the Proposal will not threaten the supply of industrial land to meet future demand. To this end the Proposal is consistent with this policy, which Mr Harris agrees.
- 77 *Policy 16.2.1.2 Enable the development of industrial areas to support recovery* seeks to encourage the redevelopment of existing industrial zones for industrial activities. The rule framework implements this through the range of permitted activities. The rule framework also provides for non-industrial activities as either permitted or discretionary activities. Accordingly, the fact the Proposal relates to a non-industrial activity does not render it inconsistent with this enabling (and non-directive) policy. I disagree with the Officer Report in this regard.
- 78 Policy 16.2.1.3 describes the range of industrial zones and their different functions. Considering the description afforded the Industrial General Zone in the context of Objective 16.2.1 and 16.2.1.2, and the rule framework that implements the same, I do not consider the Proposal is inconsistent with this policy. The Industrial General Zone recognises and provides for industrial and other compatible activities that can operate in close proximity to more sensitive zones based on their effects being compatible. Mr Harris appears to consider "compatible activities" used in this sense relates only to the permitted activities in the Zone. Given the avail of the discretionary activity status for non-industrial activities, which I discuss below, I do not hold such a narrow interpretation. Expert evidence demonstrates that effects such as noise, lighting and traffic can be appropriately mitigated and/or managed by conditions of consent, such that compatibility with the adjacent more sensitive zones (i.e. Residential Suburban and Commercial Local) will, in my opinion, be ensured.
- 79 From my reading of Policy 16.2.1.4, it is clearly evident that non-industrial activities are an anticipated outcome for the industrial zones – it is the nature of those non-industrial activities, and the locations in which they seek to establish, that is controlled through the rules that implement this policy. For instance, in the Industrial General Zone the type of non-industrial activities listed in sub-clauses i. - vii are provided for as permitted activities (restricted discretionary in the case of commercial services). Any other non-industrial activity, e.g. a supermarket, is a

discretionary activity. By contrast, in the Industrial Heavy Zone the list of permitted non-industrial activities is more limited, commercial services are full discretionary, and any other non-industrial activity, e.g. a supermarket or trade supplier, is non-complying.

- 80 Objective 16.2.2 and supporting policies (16.2.2.1 and 16.2.2.2) provide for the redevelopment of appropriate brownfield sites that does not compromise the function of the wider industrial area for primarily industrial activities. The CDP definition of “brownfield” is “*abandoned or underutilised commercial or industrial land...*”, which the Application Site presents as. Further, as agreed by the economic experts, redevelopment of the Application Site would not adversely affect the supply of land for industrial activities. In addition, the Application Site is not surrounded by industrial activities, and the Proposal would not undermine the function and amenity levels of those parts of the Industrial Zone not subject to development (Policy 16.2.2.1). According to Policy 16.2.2.2, the redevelopment of brownfield sites is supported for residential activities or mixed-use activities including a limited quantum of commercial activities. While the Proposal is not being promoted as ‘brownfield redevelopment’, I consider the ultimate environmental outcome of the Proposal would be a more efficient use of underutilised industrial land in a manner that is consistent with the fundamental intent of these provisions.
- 81 It has been demonstrated in economic evidence that sufficient industrial land is available throughout the City, and that the “loss” of the Application Site to commercial activity would be “immaterial” in the context of the abundant supply of industrial land. By not compromising the ability of industrial zoned land to meet the City’s future demand up to 2028, I consider the Proposal is consistent with the CDP’s recovery and growth aspirations.
- 82 Based on the economic evidence, I do not consider the non-industrial element of the Proposal would be detrimental to the centres-based framework, and that the Central City, District Centres and Neighbourhood Centres would continue to function as focal points for commercial and community activities. This is consistent with Policy 16.2.1.4c, which I note does not include reference to Local Centres, reflecting their position in the centres hierarchy. Although a supermarket does not correspond to the type of non-industrial activities provided for under sub-clause a. i. – vii (these effectively corresponding to permitted activities in the Industrial General Zone), that does not, in itself, challenge the policy framework given the CDP provides for determination of out-of-zone activities on a case-by-case basis through the discretionary activity consent process.

## **Chapter 15 Commercial**

83 I consider the potential for distributional effects to arise is central to an assessment of the Proposal against the objectives and policies contained in the Commercial chapter. Foodstuffs' and Council's economic experts have both considered the potential adverse effects that would be generated by the Proposal and conclude that no relevant RMA effects arise. Specifically, they both agree that there is no scope for adverse effects to be experienced by the closest and most at-risk centre (Papanui/Northlands). There are no differences of opinion, and there is no other evidence that contradicts the substantive findings of those experts.

84 Under the banner 'Recovery of commercial activity', Objective 15.2.1 recognises the critical importance of commercial activity to the recovery and long term growth of the City, and Objective 15.2.2 establishes the centre-based framework to facilitate and support commercial centres. In the broadest sense, there is no evidence to suggest that the Proposal will undermine the recovery or growth of the City's commercial activity.

85 Together, these objectives look to focus commercial activity within a network of centres (comprising the Central City, District, Neighbourhood, Local and Large Format centres) to meet the wider community's and businesses' needs in a way and at a rate that (amongst other matters):

- *Supports intensification within centres (15.2.2 a. i.);*

While the Proposal could not be said to support intensification within centres, conversely it does not preclude or frustrate it. Further, given the CDP provides for the outward expansion of commercial centres (*Policy 15.2.2.4 Accommodating growth*), as well as non-industrial activities in the Industrial General Zone, such forms of development will inevitably be at odds with the desire for intensification within centres. I do not consider this fatal based on a holistic consideration of the CDP provisions.

- *enables the efficient use and continued viability of the physical resources of commercial centres and promotes their success, vitality, and amenity, reflecting their critical importance to the local economy (15.2.2a. ii.);*

The economic experts both recognise the value of the Proposal in supporting and fostering the role and function of the adjacent Local Centre, without transcending its convenience shopping purpose.

- *is consistent with the role of each centre as defined in Policy 15.2.2.1 – Role of centres Table 15.1 (15.2.2a. iii);*

As above, the economic experts agree the Local Centre with the Proposal will still retain its convenience shopping role and function.

- *supports a compact and sustainable urban form that provides for the integration of commercial activity with community, residential and recreational activities in locations accessible by a range of modes of transport (15.2.2a. vi.);*

Foodstuffs' design and transport experts have demonstrated that the Proposal represents an efficient use of underutilised land that will effectively integrate with its context, including established commercial and residential activities and the multi-modal transport system.

- *enhances their vitality and amenity and provides for a range of activities and community facilities (15.2.2a. viii.);*

As above, it has been demonstrated the Proposal will enhance the adjacent Local Centre, whilst maintaining its role (which I discuss further below in relation to Policies 15.2.2.1 and 15.2.2.4);

- *manages adverse effects on the transport network and public and private infrastructure (15.2.2a. ix); and*
- *is efficiently serviced by infrastructure and is integrated with the delivery of infrastructure (15.2.2a. x.).*

While there is some tension between the Foodstuffs' and Council's transport experts, I consider Mr Smith's response to the concerns expressed in the Officer's Report, together with the transport-related changes that have been made, bring the Proposal more in line with these matters.

- 86 Policy 15.2.2.1 emphasises the Central City and commercial centres as the focal points for the community and business. It provides for intensification within centres that supports the 'centres-based' approach, i.e. giving primacy to the Central City, supporting and enhancing the role of District Centres, and maintaining the role of other commercial centres (Neighbourhood, Local, Large Format).
- 87 The Application Site includes the existing "commercial centre" occupying the Commercial Local Zone at the corner of Main North Road and Northcote Road. This has the status of a Local Centre as defined in Table 15.1, the role of which is described as "*a small group of primarily convenience shops and, in some instances, community facilities. Accessible by walking, cycling from the area served and on a bus route in some instances. Also includes standalone supermarkets serving the surrounding residential community. The extent of the centre is the*

*Commercial Local Zone, except Wainoni and Peer Street where the Commercial Core Zone applies.”*

- 88 Policy 15.2.2.4 seeks to accommodate commercial activity growth within existing commercial centres, or by outward expansion of commercial centres. Reinforcing the centres-based approach, any outward expansion must maintain the centre’s role within the network of centres, while not undermining the function of other centres (sub-clause b. i.). It must also be integrated with the provision of transport infrastructure (b. ii.), manage adverse effects at the interface with the adjoining zone (b. iii.), and be consistent with the scale of increasing residential development opportunities to meet intensification targets in and around centres, and revitalising the Central City as the primary community focal point (b. iv. A and B).
- 89 In relation to the above, I acknowledge that the Proposal does not neatly “fit” within the zoning and associated policy framework of the CDP. The Officer Report also recognises this, noting that the Proposal will neither result in a centre that fulfils all the functions of a Neighbourhood Centre, or that is consistent with the role of a Local Centre<sup>5</sup>. To reconcile this challenge, the Officer Report has fixated on the labels assigned to the various centres, namely the size of the respective centres as noted in Table 15.1 – Centre’s role (i.e. Neighbourhood Centre size 3,000 to 30,000m<sup>2</sup>, and Local Centre size up to 3,000m<sup>2</sup>). As a consequence, the Officer Report appears to place undue focus on an arbitrary size threshold for centres, rather than whether the role of Neighbourhood or Local Centres will be maintained (Policy 15.2.2.1 a. iii.).
- 90 Except for 3-7 Northcote Road (Commercial Local Zone – Local Centre), the Application Site is not zoned Commercial and is not within an existing commercial centre. To this end the Proposal is not consistent with the primary statement under Objective 15.2.2 insofar as commercial activity will not be “focussed within a network of centres”. That is not to say the Proposal, by consequence, necessarily fails to “meet the wider community’s and businesses’ needs” as assessed against the relevant measures in sub-clauses i. – xi.
- 91 The economic evidence for both Foodstuffs and the Council concludes that the Proposal would not compromise the function and vibrancy of existing centres, and it can be extrapolated that it would not preclude intensification within centres, or enable their efficient use and continued viability. Indeed, Mr Colegrave has outlined the positive impact the Proposal would have in terms of promoting the success and vitality of the existing Local Centre on the Application Site. That the Proposal involves the establishment of a supermarket on Industrial zoned land next to a Local Centre does not, in itself, translate to the role of that Local Centre changing.

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<sup>5</sup> Para 145, p34, Officer’s Report

Considered in conjunction with my preceding discussion of the Industrial policy framework, whereby non-industrial activities are to be avoided where they could adversely affect the strategic role of the Central City, District Centres and Neighbourhood Centres<sup>6</sup> (notably Local Centres are omitted from this list), it is my opinion that the Proposal is not inconsistent with the policy intent behind the centres-based framework.

- 92 This is best summed up by Mr Heath, who concludes that “the application is for a convenience activity in a convenience centre that does not adversely affect the role and function of any centre in the city’s centre network.”. Mr Colegrave’s evidence reinforces this, concluding that the establishment of a supermarket (i.e. a convenience facility) near to an existing commercial area does not create anything beyond a Local Centre simply by virtue of its size. I agree that centre size is but one criterion, and am guided by the economic experts’ position that the other criteria, namely role and function, are more relevant determinants of the Proposal’s consistency with the centres framework. I also place importance on the evidence that says the Proposal will help foster and support the Local Centre, which is not currently fulfilling its role and function.
- 93 It is relevant to note that nothing in the CDP prohibits the establishment of commercial activity outside of a centre, and that, as noted above, commercial activity in the Industrial General Zone generally triggers discretionary activity assessment (not non-complying). Rather, the overriding policy intent is the recovery and long-term growth of the City facilitated by the centres-based framework. What this means is that commercial activity not focussed within an existing centre should pass the test of not undermining the outcomes sought by this approach. Overall, while not entirely consistent with the abovementioned provisions, I do not consider the Proposal is inconsistent with their overriding intent. I reach this conclusion on the basis of the findings of the specialist economic and transport assessments, and a broader interpretation of a centre’s role beyond simply a suggested size.
- 94 Objective 15.2.4 and its supporting policies (15.2.4.1 and 15.2.4.2) relate to the scale, form and design of development in centres. Again, while the Proposal is not located within a centre, I consider the policy direction is relevant given the nature and scale of the proposed development and its location in the context of established commercial activities. The design evidence for Foodstuffs is that the Proposal will deliver an urban form that responds positively to local character and context, recognises the functional and operational requirements of a supermarket, and manages adverse effects on the surrounding environment by respecting the sensitive residential interface and addressing the road frontage. I consider the

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<sup>6</sup> Policy 16.2.1.4c.

Proposal will be transformational for the external appearance of the Application Site. It will be redeveloped from an underutilised industrial premise that, in my view, offers minimal contribution to the amenity of the built environment, to one that is visually compatible with the Application Site's context.

- 95 The height, position and orientation of the Proposal recognises the existing built form – it would ensure compatibility with the Head Office to the south and warehouse to the west, and be clearly distinguishable from lower adjacent commercial and residential development. The building design is focused on the street-facing (eastern) elevation and roof line, with consideration for the visibility of the southern and northern elevations that relate to the Head Office and residential properties, respectively. The large floor plate is mitigated through articulation and modulation of the primary front façade. The Proposal achieves good integration with the street edge and a high level of pedestrian amenity along that edge through quality surface treatment, planting and legible connections into the Application Site. Critically, the Proposal would reinforce the presence of the existing adjacent commercial centre, which would be supported by consolidation and integration of the existing and proposed activities.
- 96 For these reasons, and as further described in the specialist evidence, I consider the Proposal is generally consistent with the scale, form and design outcomes sought for developments of the type proposed in the context of the receiving environment. While not within a centre, the development responds positively to the fundamental urban design principles and would contribute to an urban environment that is substantially enhanced from that which currently exists, and would be significantly better than what is anticipated by the Industrial General Zone.

### ***Chapter 7 Transport***

- 97 A key transportation objective of the CDP is to achieve an integrated multi-modal transport system that is safe and efficient, responsive to current and future needs and enables economic development, maximises integration with land use, and promotes the use of public and active transport<sup>7</sup>. The general approach is to ensure the management and provision of all transport infrastructure and transport modes is well connected and undertaken in an efficient and integrated manner.
- 98 The evidence of Mr Smith has comprehensively addressed the potential adverse effects of the Proposal on the surrounding transport network. Following significant traffic modelling undertaken utilising the Council's preferred model, and further traffic modelling undertaken and conferencing between traffic experts, Mr Smith has concluded that the transport network will continue to operate safely and to an

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<sup>7</sup> Objective 7.2.1 Integrated transport system for Christchurch District



acceptable level of service with the proposed design and improvements to existing transport infrastructure.

- 99 Against this effects-based backdrop, Mr Durdin has assessed the Proposal as being supportive, or at least partially supportive of Objective 7.2.1 and the relevant associated policies, noting enhanced safety and efficiency outcomes, high accessibility and integration with the surrounding community, and promotion of multi-modal travel options. These matters were agreed in the transport conferencing and, in the case of accessibility, enhanced by amendments that increase the directness of pedestrian connections to and through the Application Site.
- 100 Enabling the transport system to provide for the transportation needs of people and freight whilst managing adverse effects from the transport system<sup>8</sup> is relevant to the extent that the Proposal involves some changes to the transport system, namely the establishment of a new signalised access, modifications to the Main North Road/QEII Drive intersection layout, and relocating bus stops. As Mr Durdin notes, each of these mitigation measures were agreed through the conferencing process and have been subject to a Road Safety Audit (RSA). In terms of the supporting policies, which seek to manage effects from the strategic transport network<sup>9</sup>, enable activities for transport purposes within the Transport Zone<sup>10</sup>, and manage effects of activities within the Transport Zone<sup>11</sup>, I consider the Proposal to be consistent with their intent based on Mr Smith's conclusions, which factor in the changes made to the proposal and recommended mitigation.
- 101 Policy 7.2.1.2 focuses on high trip generating activities, seeking to manage their adverse effects on the transport system. This is generally implemented by the corresponding rule requiring applications for high trip generators to be supported by an Integrated Transport Assessment.
- 102 The modelling results also indicate that the transport network is expected to operate satisfactorily due to the proposed signalised access and modifications at the Main North Road/QE II Drive intersection, which collectively will better manage the flow of traffic while avoiding significant queuing effects on the wider network and enabling vehicles to safely enter/exit the Application Site. Adverse effects on the transport system will therefore be avoided and mitigated to the extent that they will be acceptable in terms of the operations of the wider transport system. In this regard, Mr Durdin has acknowledged the evidence of Mr Smith, and the slightly

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<sup>8</sup> Objective 7.2.2 Adverse effects from the transport system

<sup>9</sup> Policy 7.2.2.1 Effects from the strategic transport network

<sup>10</sup> Policy 7.2.2.2 Activities within the Transport Zone

<sup>11</sup> Policy 7.2.2.3 Effect on adjacent land uses to the Transport Zone

more conservative assessment of the QTP Peer Review of Traffic Modelling, and concluded that the Proposal is largely supportive of this policy.

- 103 The access arrangements and immediate transport network surrounding the Application Site has been redesigned following an iterative RFI and conferencing process among transport experts to ensure the Proposal will maintain the safe and efficient operation of the transport system. Transport evidence for Foodstuffs shows that access and site layout has been designed to ensure that all transport modes are appropriately provided for in a safe and effective manner. Adherence to minimum design standards in the CDP (as agreed through traffic conferencing) and conditions of consent will ensure all users of the Application Site are adequately served in a transport sense. This speaks to consistency with policies relating to vehicle access and manoeuvring (Policy 7.2.1.3), car parking and loading (Policies 7.2.1.4 and 7.2.1.5), public transport and active transport (Policy 7.2.1.6), and effects from transport infrastructure (Policy 7.2.1.8), as addressed in the ITA.
- 104 Mr Durdin has reached the position that the Proposal is generally supportive or partially supportive of the transport objectives of the CDP. On this basis, my conclusion is that the Proposal is not inconsistent with the same.

#### **Matters raised by Officer's Report**

- 105 I have addressed the issues raised in the Officer's Report throughout my evidence. The overall recommendation in the Officer's Report is to decline consent on the basis that adverse urban design and transport effects are considered to be more than minor and potentially significant, and the Proposal is contrary to the objectives and policies of the CDP. I disagree with the basis of that recommendation.
- 106 Foodstuffs' evidence outlines and assesses the amendments to the Proposal arising from the expert conferencing process, and further in response to the Officer's Report. Based on these changes and the detailed evidence, I am of the view that any adverse transport and urban design/visual amenity effects will be acceptable in the context of the receiving environment.
- 107 The Officer's Report helpfully sets out the key concerns to be overcome in order that the Proposal be supported from a transport perspective. Mr Smith has outlined the level of agreement and amendments to the Proposal arising from the traffic conferencing process. He has demonstrated how all of Mr Gregory's concerns can be satisfactorily addressed through aspects of the design or through conditions of consent. And he has addressed each of the outstanding matters from the Road Safety Audit and areas of disagreement from the conferencing. Based on the robust interrogation of the modelling approach, changes in design, and the detailed evidence of Mr Smith, particularly in direct response to Mr Gregory's assessment, I consider any adverse transport efficiency and safety effects will be appropriate.

### **Proposed consent conditions**

108 Appendices P and U of the Officer's Report contain possible conditions of consent. I am mindful that these do not necessarily represent an exhaustive list, they have not had the full benefit of specialist input, and that subsequent changes to the Proposal may have rendered some of them obsolete. A revised set of proposed conditions will be tabled at the hearing.

### **Conclusion**

109 In my view, the Proposal is ideally suited to the Application Site. The location of the Proposal is appropriate in terms of the operational needs of the activity, integration with the established commercial activities, and in relation to its residential neighbours. It represents a scale, form and design of development that is suitable for the Application Site and the surrounding context and character of the area. The economic evidence shows that the Proposal will result in a more efficient use of the Application Site without undermining the role, function, vitality and growth potential of commercial centres.

110 While there appears to be a tension between Foodstuffs' and Council's transport experts, in my view Mr Smith has demonstrated how any residual concerns can be allayed through conditions of consent or aspects of the design. This is reinforced by Mr Durdin's evidence that the Proposal is supportive of the transport objectives and policies of key strategic planning instruments.

111 Foodstuffs' expert design evidence establishes that the Proposal will deliver appropriate urban design outcomes, particularly considering the state of the existing environment and understanding the inherent conflict between urban design aspirations and commercial realities.

112 While the Proposal will introduce change to the setting, the extent of change is considered appropriate in the context of the receiving environment. Having considered the policy framework in the round and in the context of the overarching direction of the CDP, I am of the opinion that the Proposal does not create any challenges that could be considered contrary to the objective and policy framework of the CDP. Further, any environmental effects will be acceptable and able to be managed by appropriate conditions of consent.

**Mark David Allan**

**19 November 2019**