Before the Commissioners appointed by
Christchurch City Council

Under	The Resource Management Act 1991 (**the Act**)
In the matter of	an application by the Youth Hub Trust for the construction and operation of a community facility at 109 Salisbury Street, Christchurch, including a café, sheltered housing and six residential units (RMA/2020/405)

Statement of Evidence of Andrew David Carr

22 September 2020

Qualifications and experience

1 My full name is Andrew ("Andy") David Carr.

2 I am a Chartered Professional Engineer and an International Professional Engineer (New Zealand section of the register). I hold a Masters degree in Transport Engineering and Operations and also a Masters degree in Business Administration.

3 I served on the national committee of the Resource Management Law Association between 2013-14 and 2015-17, and I am a past Chair of the Canterbury branch of the organisation. I am also a Chartered Member of Engineering New Zealand (formerly the Institution of Professional Engineers New Zealand), and an Associate Member of the New Zealand Planning Institute.

4 I have more than 31 years' experience in traffic engineering, over which time I have been responsible for investigating and evaluating the traffic and transportation impacts of a wide range of land use developments, both in New Zealand and the United Kingdom.

5 I am presently a director of Carriageway Consulting Ltd, a specialist traffic engineering and transport planning consultancy which I founded over six years ago. My role primarily involves undertaking and reviewing traffic analyses for both resource consent applications and proposed plan changes for a variety of different development types, for both local authorities and private organisations. I am also a Hearings Commissioner and have acted in that role for Greater Wellington Regional Council, Ashburton District Council, Waimakariri District Council and Christchurch City Council.

6 Prior to forming Carriageway Consulting Ltd I was employed by traffic engineering consultancies where I had senior roles in developing the business, undertaking technical work and supervising project teams primarily within the South Island.

7 I have been involved in a number of proposals which have involved assessing the traffic generation and effects of residential and mixed-use developments throughout the South Island, including developments in Invercargill, Dunedin, Wanaka, Ashburton and Christchurch. In the months immediately following the 2011 earthquakes, I was asked by the Recovery Authority to be part of the team that was overhauling the then-operative District Plan to support recovery, and this included drafting many of the transportation components of the Plan, which were subsequently integrated into 'An Accessible City' and then into the new District Plan.

8 A core part of my evidence is a peer review of the transportation-related aspects of the application. I have carried out peer reviews through my career, and have

previously undertaken reviews of incoming applications for Invercargill, Ashburton, Selwyn, Christchurch, Waimakariri, Hurunui, Buller, and Nelson City Councils.

9 I have carried out commissions in Christchurch for more than 15 years. As a result of my experience, I consider that I am fully familiar with the particular traffic-related issues in the city and also the transportation characteristics of mixed-use resource consent applications.

Code of Conduct for Expert Witnesses

10 While this is not a hearing before the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2014 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of Evidence

11 In this matter, I have been asked by two submitters, the Salisbury West Community Preservation Group, and the Victoria Neighbourhood Assoc Incorporated (**the submitters**) to:

(a) Assess and evaluate the transportation related matters of the application document, and in particular, to identify any errors or omissions;

(b) Comment on the Applicant's Statements of Evidence, particularly that of Mr Nick Fuller, the Applicant's traffic engineer; and

(c) Comment on the Council Officers' reports, particularly that of Mr Andy Milne, Senior Transport Planner at the Council.

12 For clarity, I have not been involved in any matters relating to the application prior to undertaking this commission.

13 I visited the site in September 2020.

Review of the Application

14 In undertaking this review, I have applied the same methodology that I have used on previous commissions for independent peer reviews. Broadly, this is assessing whether:

(a) The information set out in the application is up-to-date and accurate;

(b) Any assumptions made are reasonable, and whether different assumptions would lead to different conclusions; and

(c) Any relevant information or analysis that has been omitted from the application.

15 My review has been set out under the same headings used in the Novo Group Integrated Transportation Assessment (**ITA**) included as Appendix 7 of the application.

16 At the outset I note that the proposed activity has non-complying status for this zone.

Introduction (ITA Paragraphs 1 to 5)

17 This section of the report is an overview of the report contents and a summary of the outcomes, and I comment in more detail on these below.

Transport Environment (ITA Paragraphs 6 to 10)

18 Having visited the site, I largely agree with the description of the characteristics of Salisbury Street and Gracefield Road.

19 While on-site, I took the opportunity to undertake a parking survey on both roads. I found that at around 3:30pm, there were 3 available parking spaces on Salisbury Street but due to drivers leaving a large gap between their vehicles, with better parking there would have been space for one further vehicle. My observation of 4 vacant spaces shows a higher demand than the 7 vacant spaces observed by Novo Group.

20 On Gracefield Road I identified 11 vacant spaces, compared to the 14 vacant spaces observed by the Applicant's traffic engineer, again indicating a higher demand. Overall though, both Novo (in paragraph 53 and others of the ITA) and myself are of the view that there is relatively little available parking on-street on the two roads surveyed.

21 It is noted in the ITA that no traffic counts have been carried out on Salisbury Street for the past six years. While this is correct in respect of the daily traffic flow on the road, there were peak hour surveys undertaken in 2018 and the results are available on the Council's website. These show 468 vehicles in the morning peak hour and 674 vehicles in the evening peak hour. These volumes are 31% and 89% higher than stated in Table 1 of the ITA.

22 The peak hour figure in the ITA appears to have been based on an assumption that the peak hour volume is around 10% of the daily flow. This is a common (and in my view reasonable) 'rule of thumb' that is often applied by traffic engineers. In that context though, it is implausible that a peak hour volume would be up to 19%

of the daily volume (as would be the case here for the evening peak hour[1]). In my view this indicates that the daily traffic flow on Salisbury Street is much greater than has been allowed for in the ITA. Therefore, any applying the same 'rule of thumb', this indicates that the daily traffic flow on Salisbury Street will be around 5,700 vehicles.

23 With regard to cycling, the ITA sets out that the cycleway provided on Colombo Street will "*provide a good level of service for the site*". However, Colombo Street lies to the east of the site and Salisbury Street carries one-way traffic flow (west to east). A cyclist would therefore not be able to travel directly from Colombo Street to the site on Salisbury Street without either riding against the traffic flow or riding on the footpath. Both of these are unlawful.

24 I agree that the closest off-street car park is adjacent to the Durham Street North / Salisbury Street intersection (**the Casino car park**). It is relevant to note that there is only one entrance to this, which is located off Peterborough Street, and that both Durham Street North and Salisbury Street carry one-way traffic. I discuss this later.

The Proposal (ITA Paragraphs 12 to 36)

Car Parking Demands (ITA Paragraphs 14 to 22)

25 The application itself sets out there are 13 organisations proposed to be based at the site, of which at least 2 will be staffed full-time. Table 1 of the application is helpful in identifying that up to 50 staff may be present for these activities.

26 I have extracted the expected staffing and visitor numbers from the application, together with the assessment of car parking demand set out in the ITA, and the results are shown overleaf.

[1] An observed peak hour volume of 674 vehicles against the daily flow stated in the ITA of 3,556 vehicles

Activity	Capacity As Stated in the Application	ITA Parking Calculation
Healthcare	8-12 staff + average 30 visitors per day	10-14 spaces
Sheltered residential accommodation	2 staff + 22 residents	10 spaces
Independent residential accommodation	16-32 residents	
Managers unit	1-2 residents	
Café	3-5 staff + up to 35 customers	8 spaces
Market garden	12 staff + up to 25 visitors	24 spaces
Recreation / arts centre	2-4 staff + up to 50 visitors	25-40 spaces
Events centre	2-4 staff + up to 200 visitors	
Offices	20-50 staff + 1 visitor per office per hour	10 spaces
Meeting spaces	Expected 30 people at any given time maximum of 40 people	
Welcome space	2 staff + 3 volunteers	Not mentioned

Table 1: Site Occupancy (People) and Calculated Parking Demand

27 During the daytime, the information provided shows that there could be up to 50 staff associated with just the offices, with a further 8-12 staff for healthcare (plus demand from other activities). Assuming that 1 space is reserved for the manager's residential unit, then this leaves a total of 5 parking spaces for staff and these spaces are also shared with residents.

28 Put another way, 91% of staff would need to travel by non-car modes, or if using a car, would need to park on-street. This is an extremely high rate of non-car use.

29 In passing, I understand that the Applicant may not currently anticipate that this number of staff will be on-site at the same time (Bagshaw statement paragraph 41 and 42) but there are no restrictions proposed on staff numbers through conditions of consent. I have therefore relied on the information presented in the application.

30 The similar matter arises for residents. The ITA notes that as the proposed activity has a particular focus on youth, the majority of visitors will not be driving. However,

it is legal to drive at the age of 16½ (with a restricted license) and the proposed development is aimed at "*young people between the ages to 10 to 25*". Furthermore, it is reasonable in view to expect that younger children will have a relationship with their caregivers, who will drive to and from the site, or be visited by friends as Dr Bagshaw highlights (her evidence paragraph 68). Car use can therefore be expected.

31 A total of 4 car parking spaces are provided for visitors, which are intended not only for visitors to residents but also those attending the site for healthcare, community services, offices, meeting spaces, the café, and any other events. However as can be seen in the above table, the application indicates that up to a maximum of around 350 visitors might be present at a time (35 at the café, 25 at the market garden, 50 at the recreation/arts centre, 200 at the events centre, 40 in meeting rooms). I expect that this will occur infrequently, if at all, but taking all activities into account, it would not be unreasonable in my view to allow for a total of 100 visitors to be present fairly regularly.

32 I therefore agree with the Applicant's traffic engineer that the proposal will generate off-site parking.

33 In respect of the potential off-site demand for parking, I understand that because the activity has non-complying status, it is relevant to assess parking demand and the effects of this. I agree with the calculation of Appendix 2 of the ITA, that if assessed under the District Plan parking ratios, 153 parking spaces are required which can be reduced to 71 spaces when taking into account a Parking Reduction Factor of 54%.

34 Importantly though, the Parking Reduction Factors are based on the extent to which on-site parking can be reduced. Of the calculated 54% reduction, 6% relates to the ability of people to park off-site in a public parking area. It is therefore not correct to say that total parking demand reduces from 153 to 71 spaces. Rather, on-site parking demand reduces from 153 to 80 spaces, and it can be expected that demand for 9 of these 80 spaces will be accommodated in public parking areas.

35 Calculated in this way then, as 10 spaces are provided on-site, there could be an increase in off-site parking demand for 70 spaces.

36 I also largely agree with the basic calculation of 87 to 106 parking spaces if demand is calculated from other sources (although I note that no allowance has been made for the manager's unit parking or other staff accommodation). Novo has then applied the 54% Parking Reduction Factor to this on the basis that the parking rates used are "*based on suburban parking ratios*". However, this is evidently not the case for the market garden (where the parking ratio is based on first principles and

already allows for demand to be reduced by 36%), and there is little evidence to show that the other parking ratios are all sourced from suburban areas as claimed.

37 That said, I agree that the Central City location means that there will be a reduction in parking demand due to the ability to travel by other means. Applying a 43% reduction to account for walking, cycling and bus use means that demand for 72 spaces could be expected which then suggests that increased demand for 62 off-site spaces would arise.

38 These two approaches indicate an off-site parking demand in the range of 62 to 70 spaces.

39 I note that the ITA sets out that a Travel Management Plan is proposed (paragraph 47 of the ITA) in order to reduce car parking, and Ms Seaton confirms this (Seaton evidence paragraph 54). However, the relevant Condition of Consent (Condition 3 of the s42A report) is simply that such a Travel Management Plan is prepared and submitted to the Council. This is wholly different to actually implementing the Plan. Moreover, if the Travel Management Plan is ineffective, there are few measures that can be taken to address the situation (and practically no enforcement measures are available to the Council).

40 The Travel Management Plan could also not be binding on third parties, such as the staff of other organisations/tenants and visitors to the site, but rather only on the consent-holder. However the ITA makes it clear (Tables 4 and 6) that the bulk of travel demand and parking is related to third parties and therefore the Travel Management Plan could not be enforced.

41 I therefore do not consider it is appropriate to make any allowance for the Travel Management Plan within my calculations.

42 As set out in the application, I agree that the bulk of the parking demand will arise between 9am and 5pm on weekdays.

Traffic Generation (ITA Paragraphs 23 to 25)

43 I have again compared the expected use of the site as set out in the application with the traffic generation figures from Table 5 of the ITA, as shown overleaf.

Activity	Capacity As Stated in the Application	ITA Peak Hour Traffic Generation Taking into Account Reduction Made of 54%
Healthcare	8-12 staff + average 30 visitors per day	9- 13 vehicle movements
Sheltered residential accommodation	2 staff + 22 residents	4 vehicle movements
Independent residential accommodation	16-32 residents	
Managers unit	1-2 residents	
Café	3-5 staff + up to 35 customers	1 vehicle movement
Market garden	12 staff + up to 25 visitors	11 vehicle movements
Recreation / arts centre	2-4 staff + up to 50 visitors	5 vehicle movements
Events centre	2-4 staff + up to 200 visitors	
Offices	20-50 staff + 1 visitor per office per hour	4 vehicle movements
Meeting spaces	Expected 30 people at any given time	
Welcome space	2 staff + 3 volunteers	Not mentioned

Table 2: Site Occupancy (People) and Calculated Traffic Generation

44 In my view, some of these traffic generation figures are implausibly low. For example, with up to 50 staff being present at the offices, I would expect that there would be considerably more than 5 vehicle movements generated as they arrive or leave work. With 35 seats provided at the café, having just one vehicle movement in the peak hour also seems intuitively low.

45 That said, the ITA acknowledges that the calculated traffic generation appears to be low when compared to the overall parking demand (ITA paragraph 24) and therefore suggests that 74 to 83 vehicles per hour may be the 'upper end' of the expected traffic generation. In my view this is a pragmatic response in the ITA, and so in my view this is the more appropriate figure for assessment of the expected traffic-related effects.

46 With that in mind, the peak hour traffic generation (extracted from Table 6 of the ITA) would be:

(a) Residents: 8 trips

(b) Staff: 24 trips

(c) Visitors: 51 trips

47 These traffic volumes correspond reasonably well with the lower end of the range for my calculation of total parking demand, at 72-80 spaces (my paragraphs 35 and 27 above). In my view this again supports an expected off-site parking demand of around 62 parking spaces. I have therefore used this figure within the remainder of my evidence.

District Plan Compliance Assessment / Assessment of Effects (ITA Paragraphs 37 to 85)

Parking and Loading (ITA Paragraphs 40 to 55)

48 The ITA notes that six staff/residents spaces are proposed in total, and four of these are reserved for staff, which this leaves two spaces for residents and these are "*effectively for the caretaker and overnight managers*" (ITA paragraph 43). However, 8 trips are expected to be made in the peak hour from these 2 spaces. This can only occur if each of the spaces are entered and exited multiple times, which is unrealistic. The ITA sets out that the residents' spaces are sufficient to practically meet the demand of the people living at the site (paragraph 42 of the ITA) but the traffic generation data shows that a proportion of residents' parking must be occurring off-site.

49 For staff parking, the ITA sets out that there would be demand for 10 off-site spaces (ITA paragraph 43). However, Table 6 of the ITA shows that there would be up to 24 staff vehicle movements in the peak hour. The only way that this can occur is that in the peak hour, each staff parking space is entered once and vacated once (or vice versa). Given that most staff will arrive at the start of the day and leave at the end of the day, it is extremely unlikely that there will be one entry and one exit movement for every staff parking space in the same hour. On this basis, I consider that the extent of off-site car parking is likely to be greater than calculated in the ITA.

50 Similarly, for visitor car parking, the ITA anticipates 51 vehicle movements in the peak hours. This does not align with the expectation that "*a demand for approximately 33 visitor car parks has been estimated throughout the majority of the day*" (ITA paragraph 45) because it would require an exit movement as well as an entry movement at the bulk of these car parking spaces in the peak periods.

51 Overall then, I consider that the expected parking demand and the expected traffic generation set out in the ITA do not correspond to one another. Taking account of the expected activities and number of people on the site, in my view this again confirms that the extent of off-site car parking has been under-estimated. Rather, I consider that the calculation shows that there would be off-site demand for 62 spaces.

52 It is common ground between myself and Novo Group that there will be off-site car parking, although we differ on the extent of this (in my view it will be 62 spaces, and Novo states it will be 10 staff spaces plus 29 visitors, making 39 parking spaces in total). The ITA sets out that as there is little on-street capacity remaining during the working day, staff and visitors will be able to use the Casino car park, where there is ample vacant space.

53 One issue with this parking solution is that it fails to take into account driver behaviour. Since there is some on-site visitor parking, I consider that there is a high likelihood that visitors and staff will firstly enter the site to see whether there is a vacant space for them to use. Given the extent of the shortfall, it is unlikely that there will be vacant spaces, and drivers will then have to exit the site. However, as there are no on-site turning areas provided, they will need to reverse back onto the frontage road.

54 I expect that in large part the movements of vehicles to/from the staff car park can be managed, but there has been no assessment made of the road safety effects associated with multiple reverse movements being made onto Salisbury Street by visitors, especially taking into account the much higher peak hour traffic flows than have been assumed in the ITA. I also note that drivers exiting the site will also need to reverse across the footpath and also the informal cycle lane provided along the northern side of the road, with potential adverse road safety consequences.

55 Once a vehicle has exited the visitor car park, the ITA anticipates that it will then move to park in the Casino car park. However, the one-way system of Salisbury Street means that vehicles cannot turn west to drive directly to the car park, rather, they must travel east and away from the car park. It would be possible for drivers to travel as far as Colombo Street, but alternatively, drivers could turn northwards onto Gracefield Avenue to search for a parking space close to the site. I consider that this is likely to be an attractive option partly because it means drivers can remain close to the site, partly because it does not involve driving away from the site and having to double-back, and partly because it presents a logical search route for a parking space (Gracefield Avenue, Durham Street North and then the Casino car park).

56 The efficiency and safety effects of additional traffic volumes using Gracefield Road have not been assessed.

57 A second matter at the Casino car park relates to capacity. The ITA describes (in paragraph 10) that there are around 350 spaces within this car park of which "*there are typically 140 available spaces*" (the source of the occupancy data is not cited). This therefore means current demand is for around 210 spaces.

58 The site comprises of four lots, with 373 Durham Street North and 56-72 Salisbury Street having consent for parking to 2023 only (that is, for around the next three years), but with permanent parking provided on 51 Peterborough Street and 356 Durham Street North.

Photograph 1: Areas of Temporary and Permanent Parking at the Casino Car Park

59 The permanent spaces are marked, showing that the capacity in this area is 184 spaces. However, as the existing parking demand set out in the ITA at the Casino car park is for 210 spaces, this means that when the temporary consent lapses, demand for the spaces will exceed capacity. There will be no available capacity to accommodate parking generated by this application.

60 I also highlight that at this stage there is no certainty that a further consent for temporary parking will be applied for, and even if such a consent was lodged, that it would be granted. The ITA also mentions that the car park is an attractive option because it is free for the first two hours (ITA paragraph 46). However there is no certainty that this arrangement will continue, and in the event that a fee was to be charged, it can be expected that the car park would be less attractive for patrons of the proposal than attempting to park on-street.

61 In my view then, there can be no reliance on this car park to accommodate the expected overflow irrespective of whether my calculation of 62 spaces, or the Novo

calculation of 39 spaces, is used. This is because once the temporary consents lapse, there will be no vacant spaces for any parking associated with this proposal.

62 The ITA notes that car parking on Salisbury Street and Gracefield Avenue is already heavily used, and with the inability to use the Casino car park, there is no information as to whether these 39-62 vehicles could be parked. I discuss this later when responding to Mr Fuller's evidence.

63 The ITA sets out that a Travel Management Plan will reduce the demand for car travel, discourage on-street parking on Gracefield Avenue and manage the on-site car parking. I set out above that I have concerns that the Condition of Consent requires no action other than the provision of a Travel Management Plan to the Council. However, even if the Travel Management Plan was to be enforceable and somehow binding on the consent-holder, it is simply not possible for the Plan to discourage parking on Gracefield Avenue as staff and visitors are able to park their vehicle in any lawful location, or drive their vehicle along any legal road. Visitors and staff of tenants are also third parties insofar as they relate to Conditions of Consent, and so even a highly robust Travel Management Plan cannot apply to them.

64 Finally, the ITA sets out a hypothetical application for an 'alternate development scenario' of 22 residences, all of which could be developed without car parking. This is used to show that there is a 'baseline' for a minimum of 22 cars to be parked on-street. However, I am advised that the District Plan requires resource consents to be sought where a site proposed more than 3 residences, and therefore that a development of 22 residences could not occur as of right.

65 If, for the sake for argument, a situation with 22 vehicles parking on street was to be considered, this remains considerably less than the 39 spaces that Novo calculates (or 62 vehicles that I calculate), with a consequential higher potential for adverse effects.

66 Furthermore, if a residential development within the Central City was not to provide any car parking as per the Novo scenario, there would be a 'self-selection' amongst the people choosing to live or buy there as to whether car parking is an important part of the residential offering. In other words, people who do not have a car would be more likely to choose to live in such a development, whereas people that have one or more cars would be less likely to live there. This will tend to diminish the extent of residential on-street parking. Irrespective, the bulk of parking generation for this proposal arises from visitors who will be infrequent travellers to the site, be less aware of bus routes and alternative travel choices, and be more likely to use a private vehicle.

Car Park Layout (ITA Paragraphs 56 to 59)

67 The plans show that it is not possible for a vehicle to enter the car park, find all spaces occupied and then turn around to exit the car park in a forward direction. Rather, the vehicle must reverse from the car park. Given the shortfall in parking spaces, I expect this to occur on a regular basis.

68 In practice, the staff car park can be managed to allocate spaces to certain staff and traffic flows on Gracefield Avenue are relatively light. I therefore do not consider that the arrangement will lead to adverse safety or efficiency effects. However, it will not be possible to manage the visitor parking to the same extent, meaning vehicles reversing from the site will need to emerge onto Salisbury Street (which has a 50km/h speed limit and traffic flows nearly twice as high as set out in the ITA). They will also reverse across the footpath and informal cycle lane, with potential adverse safety effects.

Cycle Parking (ITA Paragraphs 60 to 62)

69 The plans show that the covered cycle parking can only be accessed by cycling through the car parking areas. No assessment has been made of this unusual arrangement, particularly in light of the potential for drivers to reverse out of the site when cyclists are entering.

Loading (ITA Paragraphs 63 to 65)

70 The ITA sets out that the visitor car park will be used for loading, and this will be managed by the Travel Management Plan. I have set out my concerns about the Travel Management Plan previously, but in reviewing the version included as Appendix 4 to the ITA, it appears that courier vehicles are expected to enter the visitor car park to deliver items, with the parking area being partially or fully coned off when more deliveries are expected. For instance, it is noted that one space may be coned off when deliveries are made to the market garden with the whole car park being coned off for a "*prolonged use*" of the area.

71 This necessarily means that courier vehicles will also have to reverse across the footpath and informal cycle lane, and into the stream of traffic on Salisbury Street. For the time that the courier vehicle is present, it will block entry or exit to the parking spaces.

72 A further issue which does not appear to have been discussed is that the parking spaces provided are suitable for cars and small vans. Any larger van or small truck cannot manoeuvre within the car park but will need to be stationary within the parking aisle, before then reversing out onto Salisbury Street.

73 Finally, eliminating the use of this car park necessarily displaces more vehicles to use off-site parking. As set out above, there are no identified locations where these could be parked.

Access Arrangements (ITA Paragraphs 66 to 70)

74 The ITA does not address the matter of drivers entering either access and having to reverse back out, as I have discussed in detail previously.

75 The ITA discusses the traffic generation of the Event Space. Table 4 sets out that there could be demand for 25 to 40 parking spaces for the Event Space, with Table 5 setting out that there would be 11 vehicle movements per hour. Conversely, paragraph 73 indicates that there would be demand for 44 parking spaces (ITA paragraph 73) with a total of 89 vehicle movements per hour (ITA paragraphs and 74)[2]. This again supports the conclusion that the parking and traffic generation figures set out in the earlier parts of the ITA are likely to be underestimated.

76 I also note that if such an event was held at a time when even a small portion of the remainder of the site was operational (generating just 31 vehicle movements), the traffic generation would be 120 vehicles and therefore require a Full ITA rather than a Basic ITA as has been provided.

Wider Network Effects (ITA Paragraphs 84 to 85)

77 In considering the efficiency or safety concerns on the network, no assessment has been made of:

(a) The effects of drivers circulating to find a vacant parking space given the lack of spaces in the area. This will increase traffic flows and also lead to risky behaviour such as waiting within live traffic lanes when it appears that another vehicle is preparing to exit, drivers focusing on seeking spaces

[2] In passing, the calculation in ITA paragraph 74 is a little misleading because it relates to the drop-off area only. The full calculation is:

- It is stated in paragraph 73 that there could be 200 people attending an event and 1 car per 3 attendees. This results in 67 vehicles being generated.
- It is then stated that one third of these would drop-off attendees. Thus, there would be 22 vehicles entering the site and 22 vehicles exiting again for drop-off (44 vehicle movements in total)
- The remaining 45 vehicles would still travel to the site but would park elsewhere
- Therefore, the total number of vehicle movements for an event is 22 vehicles entering the site + 22 vehicles exiting the site + 45 vehicles parking elsewhere = 89 vehicle movements in total

rather than paying heed to the traffic environment around them, and vehicles stopping for short periods of time to drop off or pick up passengers;

(b) The effects of multiple vehicles reversing out of the Salisbury Street access, not only for loading/unloading vehicles but also for drivers that have entered the car park been unable to find a space and had to exit again; and

(c) Changes in traffic volume on Gracefield Road, in view of this being an attractive circulation route for drivers unable to find a space.

Summary and Conclusion (ITA Paragraphs 86 to 100)

78 For the reasons set out above, I disagree with the conclusions of the report that the transport effects are less than minor and acceptable. On the contrary, the proposal will generate demand for off-site parking and it has not been shown that this can be accommodated. It will also introduce road safety concerns associated with multiple reversing movements on Salisbury Street.

Review of Mr Fuller's Statement of Evidence

79 An important matter raised in Mr Fuller's evidence is the relevance of the National Policy Statement in Urban Development, and in particular, the removal of criteria that require a minimum number of car parking spaces to be provided (Fuller evidence paragraphs 17 and 18). Whether this is a document to which regard should be had is not a traffic engineering matter, but for the purposes of the following paragraphs, I have assumed that it is a relevant matter for consideration.

80 I am advised, and Mr Fuller confirms (ITA paragraph 40) that because the activity is non-complying "*this enables consideration of the car parking supply and demand*". It is common ground between myself and Mr Fuller that the site will generate car parking demand that is not accommodated through on-site parking. Mr Fuller's ITA sets out that this would be 39 spaces and my calculations indicate that it would be 62 spaces.

81 Mr Fuller says that even with the removal of the temporary car parking at the Casino car park, there would be parking retained here (Fuller evidence paragraph 38). However, on the data provided within his ITA, there is no capacity for the Casino car park to accommodate the parking generated by this proposal.

82 Equally, both Mr Fuller and myself are of the view that the parking on Salisbury Street and Gracefield Avenue is well-used, and cannot accommodate this additional demand.

83 This then leaves a demand for 39 to 62 extra parking spaces that is not readily met in the immediate area.

84 Where car parking demand exceeds supply, there are a number of outcomes:

(a) Drivers circulate to seek a car parking space, meaning that traffic flows increase due to circulating vehicles.

(b) Drivers focus on looking for a vacant space rather than paying full attention to the surrounding road environment.

(c) Drivers are more likely to stop across driveways or in no-parking areas to drop-off or pick-up passengers.

(d) Drivers are more likely to stop within live traffic lanes when they see that a car head appears to be preparing to leave.

85 In this case, there are a small number of visitor parking spaces provided. This further exacerbates these issues because drivers will enter the car park, in many cases find all spaces full, and will then need to reverse onto Salisbury Street. This will adversely affect passing pedestrians, cyclists and vehicle users within the movement lanes.

86 In my view, these behaviours diminish the efficiency of the road network and increase road safety risk.

87 In the absence of parking ratios, and taking account of this being a non-complying activity, I have reverted to considering the Objectives and Policies of the District Plan:

(a) Objective 7.2.1ai includes "*an integrated transport system for Christchurch District that is safe and efficient for all transport modes*".

(b) Policy 7.2.1.1ai includes "*identify a road network that connects people and places and recognises different access and movement functions for all people and transport modes, whilst supporting the safe and efficient operation of the transport network*"

(c) Policy 7.2.1.2aiv includes "*manage the adverse effects of high trip generating activities … on the transport system by assessing their location and design with regard to the extent that they do not compromise the safe, efficient and effective use of the transport system*"

(d) Policy 7.2.1.3a is "*provide vehicle access and manoeuvring … compatible with the road classification, which ensures safety, and the efficiency of the transport system*"

(e) Policy 7.2.1.4bi includes "*within the Central City enable activities to provide car parking spaces and loading spaces, whilst minimising any adverse*

effects on the efficiency and safety of the transportation networks, including public transport, to the extent practicable"

(f) Policy 7.2.1.5ai includes "*require that car parking areas and loading areas are designed to operate safely and efficiently for all transport modes and users*"

88 It is clear that the District Plan places a high emphasis on the safe and efficient operation of the transportation network. These Objectives and Policies remain, even where a National Policy Statement removes specific requirements for car parking. Put another way, it is my professional opinion that the writers of the National Policy Statement did not intend that the removal of car parking requirements would over-ride any expectations that the transport networks would operate efficiently and safely. Given the current government's emphasis upon road safety (such as expressed in the December 2019 'Road to Zero' national road safety strategy) it would be the antithesis of government policy for a National Policy Statement to have this effect.

89 In my view, the application does not achieve the Objective and Policies listed above. Rather, the absence of a practical solution to accommodate the expected off-site car parking leads to adverse effects on efficiency and safety that have not been considered.

90 I note that Mr Fuller places considerable weight on the Travel Management Plan (such his paragraph 31 "*The Travel Management Plan will also require the Salisbury Street car park to be managed when events are taking place*…"). The Condition of Consent has no such "*requirement*" (or any requirements), but rather, the only requirement is that a Travel Management Plan is written and provided to the Council.

91 Further, as I have discussed above, a Condition of Consent for a Travel Management Plan is problematic in respect of the ability to affect travel and parking by third parties, and for enforcement by the Council.

92 It will be evident from my assessment above that I do not concur with the bulk of Mr Fuller conclusions. However, to avoid repetition I have not set out a point-by-point rebuttal of his Statement of Evidence.

Review of Dr Bagshaw's Statement of Evidence

93 Dr Bagshaw's evidence addresses operational matters but I note that she mentions that the site was selected to be close to local amenities and lists Tūranga, the Margaret Mahy playground, the Bus Exchange and the future Metro Sports complex as being within walking distance (paragraphs 33 and 53).

94 I have evaluated the walking distances and journeys for each of these.

(a) Tūranga is 770m from the development site and pedestrians have to cross 4 roads to walk between them

(b) The Margaret Mahy playground is 350m from the development site and pedestrians have to cross 4 roads to walk between them

(c) The Bus Exchange is 1,280m from the development site and pedestrians have to cross 9 roads to walk between them

(d) The future Metro Sports complex is 2,240m from the development site and pedestrians have to cross 15 roads to walk between them

95 Even assuming a high average walking speed of 1.5m/s, and allowing an average of just 15 seconds to have to wait to cross a road, this means that:

(a) Tūranga is a 9.6 minute walk from the site

(b) The Margaret Mahy playground is a 4.9 minute walk from the site

(c) The Bus Exchange is a 16.5 minute walk from the site

(d) The future Metro Sports complex is a 28.6 minute walk from the site

96 Given these distances and times, I do not consider that the Bus Exchange or the Metro Sports facility lie within a realistic walking distance. In my view, walking will not be an attractive mode of transport for journeys between the site and these locations.

Review of Mr Milne's Technical Memo (Appendix 5 of the s 42A Report)

97 Mr Milne's assessment is largely based around the non-compliances of the application, but he largely disregards the matter of car parking. However, his paragraph 14 is helpful, and I discuss each of these in turn.

98 Mr Milne notes that the traffic generation of the site may be lower than calculated because there is an interaction between the various activities on-site (his paragraph 14a). However, I highlight that a similar reduction does not apply to parking provision because a person stays longer within (any) site when they are visiting multiple activities. Hence their vehicle remains occupying the parking space for longer.

99 In his paragraph 14b, Mr Milne identifies that the residential component is primarily displaced teens who are unlikely to own vehicles, and that this will therefore reduce traffic and parking demands even further from the values in the ITA. However, the ITA itself already makes it clear the analysis takes this into account. Irrespective,

the residential traffic generation is less than 10% of the total traffic generation and so any such effects are minor.

100 Mr Miles sets out that providing more parking encourages more people to drive (his paragraph 14c). While I agree that this is the case, the scope of this argument is limited – it could not be argued for instance that providing no parking results in no car use at all. With that in mind, the ITA already reduces the initial calculation of parking demand by more than 50%. Mr Milne also appears to suggest that a greater reduction in car parking could be claimed, even though the District Plan already sets out a tested and accepted way to allow for reduced car parking. I do not consider that Mr Milne has set out any evidence to show that the District Plan Parking Reduction Factors are inherently conservative or could robustly be changed.

101 Finally, Mr Milne sets out that the proposal offers a Travel Management Plan, and this will reduce traffic generation and parking demand (his paragraph 14d). The Conditions of Consent however simply require that a Plan is produced and sent to the Council. There is no requirement for it to be implemented, or for it to be monitored, or what actions would be taken for parts of the Plan that are ineffective.

102 In stating that "*effective travel plans can reduce traffic generation and parking demands significantly*", Mr Milne appears not to have realised that more than 90% of the traffic and parking generation arises from staff and visitor use (ITA Tables 4 and 6) who are third parties and on whom the Travel Management Plan could not be binding.

103 I therefore do not agree with Mr Milne's views, that the traffic and parking generation will be lower than set out in the ITA.

104 Setting that aside for one moment, at no stage has Mr Milne considered how the extent of off-site parking described in the application will be accommodated, nor the effects of this on the safety and efficiency of the roading network.

Conclusions

105 Having reviewed the ITA submitted with the application, I consider that:

(a) The proposal will generate off-site parking demand (identified as 39 spaces in the ITA but in my view could be 62 spaces). In both scenarios, this increase by a further 4 parking spaces at the times when the on-site visitor parking is repurposed as a loading bay and is unable to be used by visitors.

(b) There is little available on-street car parking in the area. When the temporary resource consents for the Casino car park expire in three years, the remaining permanent parking spaces will be operating at maximum capacity.

(c) The ITA has not identified anywhere in the immediate vicinity of the site that is able to accommodate this increased parking demand.

(d) The increase in off-site parking demand will lead to potential adverse efficiency and road safety outcomes on the roading network which have not been assessed in the ITA.

(e) There is reliance on a Travel Management Plan to reduce even further the extent of car-borne travel, and to limit traffic volumes and demand for parking on Gracefield Avenue. However, the wording of the Condition of Consent does not guarantee an effective Travel Plan, nor that the Council could take enforcement action if it is not implemented. Moreover, redrafting the Condition of Consent would not resolve this because more than 90% of the traffic and parking generation arises from staff and visitors who are third parties and for whom a Travel Management Plan cannot be enforced.

106 I am therefore of the view that the proposal has adverse efficiency and road safety effects that have not been assessed, and the primary mitigation measure of the Travel Management Plan will be ineffective. In my view, consent should not be granted for the proposal from a transportation perspective.

ANDREW DAVID CARR

Dated this 22nd day of September 2020