

Before the Hearings Commissioner  
at Cambridge

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*in the matter of:* A Private Plan Change to the Waipa District Plan under Schedule 1 of the RMA by Waikato Regional Airport Ltd/Titanium Park Ltd and an associated Notice of Requirement, by the NZ Transport Agency, for an alteration to designation as per section 181 of the RMA

*to:* **Waipa District Council**

*applicant:* **Waikato Regional Airport Ltd/Titanium Park Ltd**

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Statement of Evidence by **Cameron Beswick Inder** on behalf of Waikato Regional Airport Ltd/Titanium Park Ltd

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Date: 1 May 2019

## 1. INTRODUCTION

### *Qualifications and Experience*

- 1.1 My name is Cameron Beswick Inder. I am a Transportation Engineer at Bloxam Burnett & Olliver (BBO), a firm of consulting engineers, planners and surveyors based in Hamilton and have held this position since 2004.
- 1.2 I have twenty years' experience in transportation and traffic engineering gained through 16 years employment in New Zealand and approximately 4 years in the UK. My qualifications are a Bachelor of Engineering Civil (Hons) from the University of Auckland. I'm a Member of Engineering NZ (MEngNZ), A Chartered Professional Engineer (CPEng) and a member of the Engineering NZ Transportation Group.
- 1.3 In relation to this hearing I am presenting expert traffic engineering evidence on behalf of Waikato Regional Airport Ltd/Titanium Park Ltd (the Applicants). The Applicants are seeking a private Plan Change to the Operative Waipa District Plan (District Plan) to amend the transport network and land use pattern for the Central and Southern Precincts of Titanium Park Business Park (Titanium Park) at the Hamilton Airport. The plan change described as Plan Change 10 (PC10) to the District Plan.
- 1.4 Concurrent to PC10 a Notice of Requirement (NoR) for an alteration to designation is being sought to amend Designation D43 to account for the upgrade of the main Airport intersection with State Highway 21 (SH21). This alteration is being sought by the NZ Transport Agency as the requiring authority for D43.
- 1.5 I have read and agree to comply with the Code of Conduct for Expert Witnesses in the Environment Court, Practice Note (2014). This written 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 expressed in this evidence.
- 1.6 I have been providing traffic engineering advice to the Applicant since the development of the original plan change (Plan Change 57) that rezoned the land from rural to Airport Business. As such, I have visited the site numerous times and am across the background that resulted in the current Structure Plan/access arrangements.
- 1.7 I also prepared the Integrated Transport Assessment (ITA) report, dated April 2018, in relation to PC10 and the NoR.
- 1.8 I have experience in transportation and traffic engineering matters associated with resource management, including effects assessment for resource consents, Plan Changes and District Plan Structure Plans; experience in the design of traffic infrastructure and facilities such as roads and intersections; and in road safety engineering, traffic calming, urban design, subdivision design, and traffic modelling.

- 1.9 I have specific experience with respect to the assessment of Plan Change transportation effects matters before this Hearing, including:
- a. Providing traffic engineering advice and design for transport-related aspects of District Plan changes, reviews, variations and Notice of Requirements, including the Waikeria Prison expansion Board of Inquiry in 2017 (for Otorohanga District Council);
  - b. Consultant civil/transportation engineer for developers and landowners assisting in preparing or reviewing the transportation assessments for Private Plan Changes, road projects and consent applications, including PC50 to the Matamata Piako District Council for Hobbiton (2018/19) and PC46 for Ingham's Waitoa Processing Plant (Matamata-Piako District Council, 2015);
  - c. Assisting road controlling authorities including NZ Transport Agency, Hamilton City Council and Tauranga City Council with traffic engineering and transport planning and design of local and highway road network infrastructure, including Cobham Drive / Wairere Drive Interchange (HCC), Papamoa Eastern Interchange (TCC) and Waikato Expressway and Tauranga Northern Link projects (NZ Transport Agency).

***Purpose of Evidence***

- 1.10 The purpose of my evidence is to describe the road transport access and network changes proposed under PC10, and any expected effects of the proposal on the transport environment, along with the mitigation measures recommended to address those effects.
- 1.11 The information in the ITA report remains current, except where I otherwise state in my evidence, so the ITA should be referred to for the complete assessment detail. This evidence provides a summary of the ITA and conclusions reached, and whether I consider those conclusions remain valid in light of the s42A report and submissions that have been received in relation to transportation matters. A concept plan set of the proposed access configuration and changes to neighbouring site accesses is in Attachment 3 of Ms Drew's evidence.
- 1.12 Specifically, my evidence will cover:
- a. Background to the revised access strategy of PC10;
  - b. The proposed access configuration
  - c. A summary of the key traffic characteristics of the Plan Change;
  - d. A summary of the effects assessed and mitigation measures to be implemented;
  - e. Comments on transportation matters in submissions and the s42A report; and
  - f. My conclusion.

- 1.13 In preparing this evidence I have read the opinions expressed through the submissions that have been received during the submission process. I will address the submissions relating to traffic matters, in this evidence.
- 1.14 I have read the transportation related aspects of the s42A report and supporting comments from Council's Roading Manager, Mr Bryan Hudson.

## **2. BACKGROUND TO THE PROPOSED PLAN CHANGE**

- 2.1 The background to PC10 and the associated alteration to designation is set out in the evidence of Mr Mark Morgan on behalf of the Applicant. The following is therefore a brief summary of this background to provide context to this evidence.
- 2.2 The Applicants have undertaken a review of the original masterplan and the Airport Business Zone Structure Plan with respect to the Central and Southern Precincts of the Titanium Park. They concluded that some fundamental changes to the access strategy were needed to ensure that the access arrangements were future proofed with respect to the Applicants core focus, being the growth of the Airport and terminal operations, with the development of Titanium Park business being secondary in support of that.
- 2.3 Currently the Structure Plan road network defines that transport access into the Central and Southern Precincts would initially be from the existing Airport terminal intersection on SH21 for up to 8ha of Business Park land use, and after that or should adverse effects require it earlier, a new roundabout intersection would be constructed on SH21 in a location near Lochiel Road. The existing SH21 / Airport intersection and the Lochiel Road intersection with SH21 would both be permanently closed. This Structure Plan access arrangement was originally proposed as the gateway into Titanium Park servicing both the Business Park and airport operations.
- 2.4 Both the Central and Southern Precinct were to be accessed from the new roundabout on SH21 via an internal spine road (now partly constructed and called Ossie James Drive). The Southern Precinct traffic would have continued along this internal road, past the Airport terminal and car parking areas and traverse the gully into the Southern Precinct. This transport arrangement meant that all traffic, including Heavy Commercial Vehicles associated with the Southern Precinct would pass through the Central Precinct and past the Airport terminal.
- 2.5 Now with a change in focus to the core Airport operations, PC10 seeks to amend that access arrangement so that:
- a. The Airport terminal is the prominent focal point upon entry from SH21;
  - b. The SH21 roundabout location is amended to achieve the above objective, whilst also servicing the Central Precinct; and

- c. The Southern Precinct is accessed from SH21 independently of the Central Precinct, via a new right turn bay 'Tee' intersection, with restrictions in place concerning the types of land uses that can establish in the Southern Precinct.

### 3. SITE LOCATION AND PROPOSED ACCESS CONFIGURATION

#### *Location*

- 3.1 The location of the Central and Southern Precincts relative to the Airport environs is demonstrated in Figure 1 below. This figure also shows the existing and proposed new accesses from SH21, including the existing Structure Plan access near Lochiel Road to be removed.

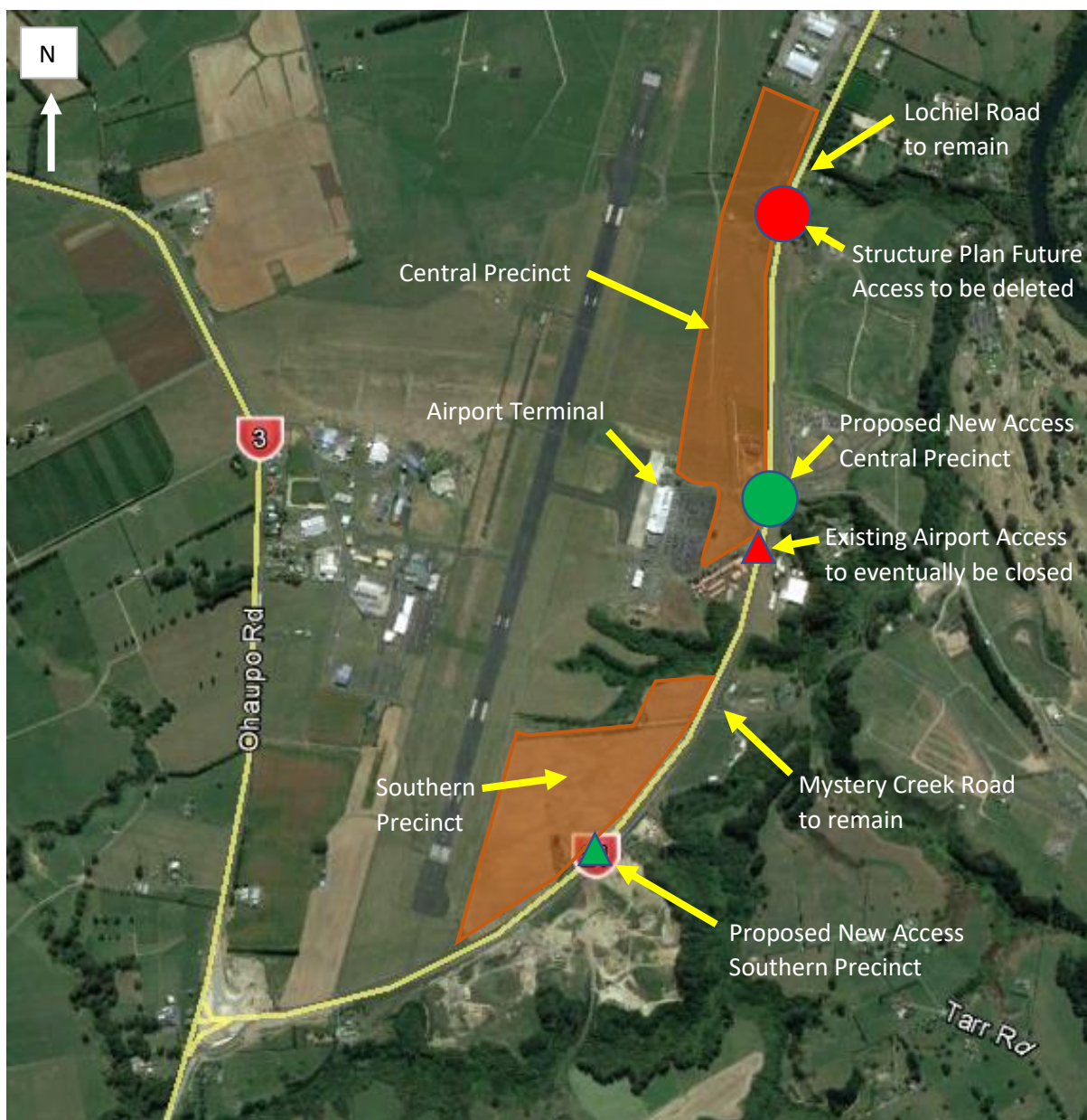
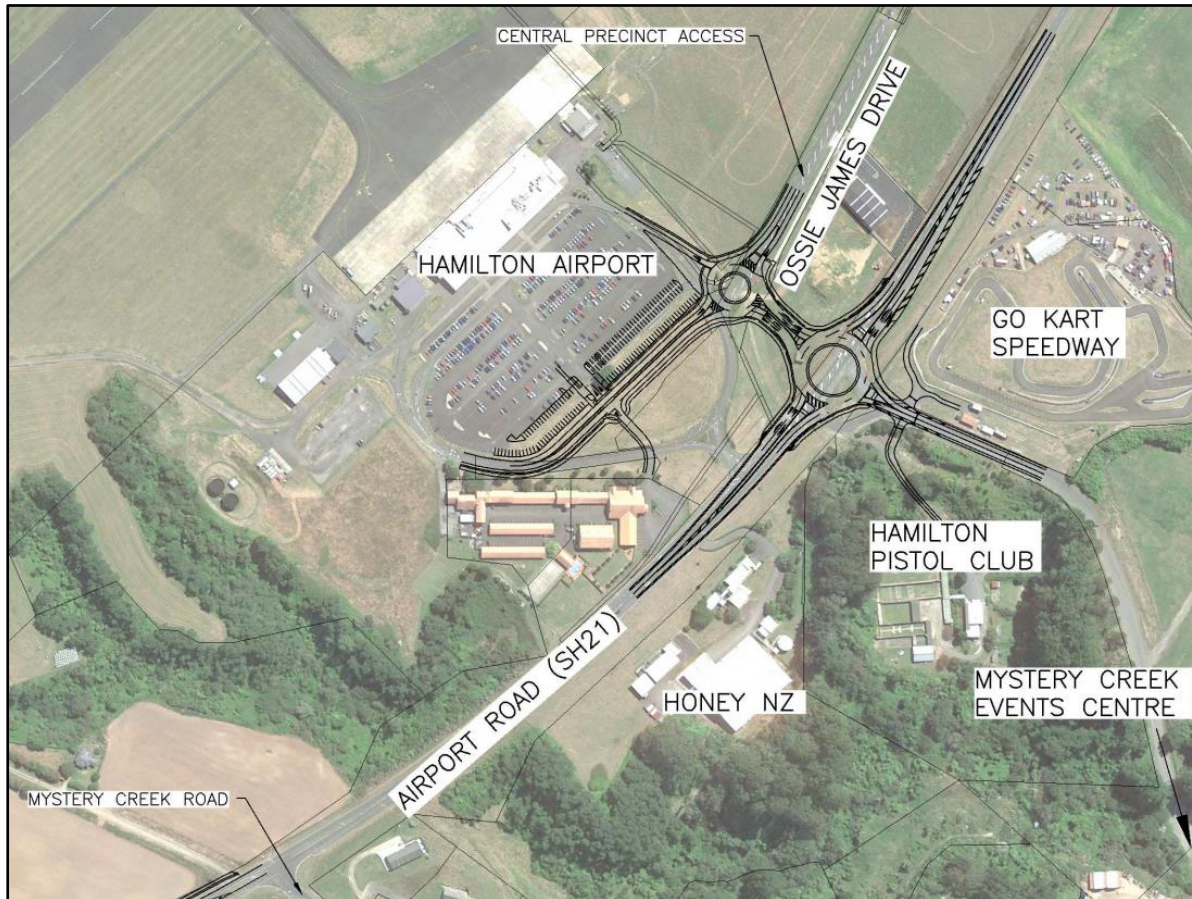


Figure 1: Site Location

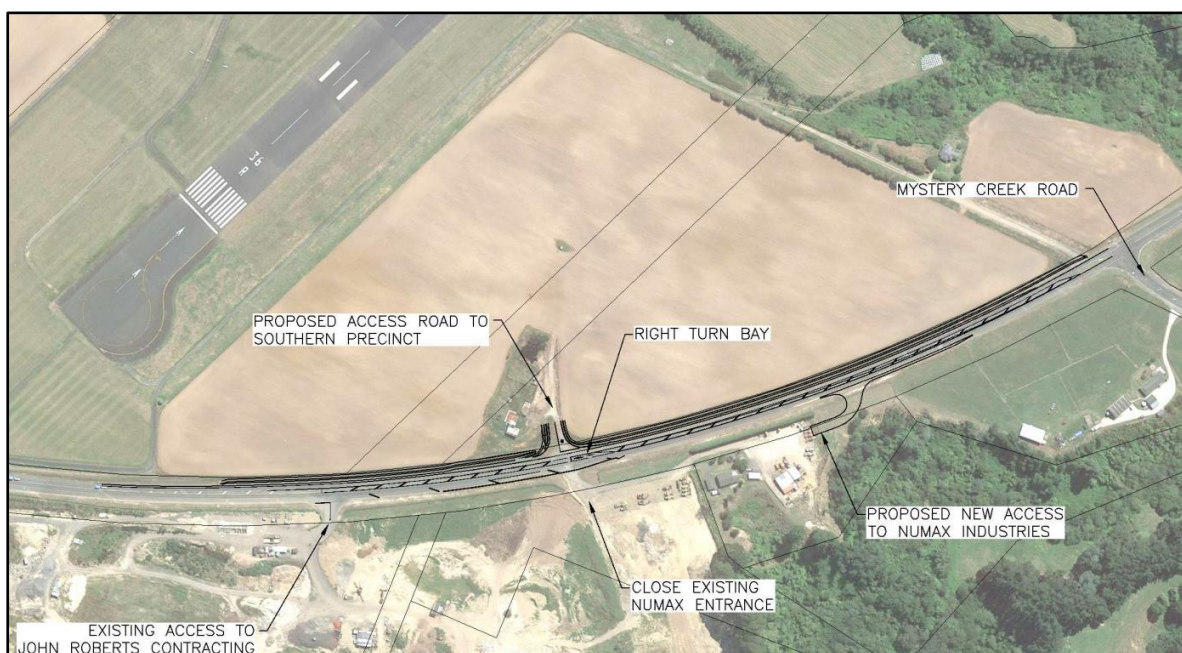


### ***Proposed Access Configuration***

- 3.2 The general arrangement of the revised access strategy to SH21 for the Airport and Central Precinct is illustrated in Figure 2, with the separate Southern Precinct access shown in Figure 3.



**Figure 2: Proposed Airport and Central Precinct Access to SH21**



**Figure 3: Southern Precinct Access to SH21**



- 3.3 The new Tee intersection giving access to the Southern Precinct has been consented separately in advance of this proposed Plan Change and is now under construction as part of the subdivision of the Southern Precinct. This work includes relocation of the Numax Industries Ltd site access approximately 245m north of its current location on SH21. The intersection design and Numax entrance location has been agreed in consultation with Numax Industries and the NZ Transport Agency.
- 3.4 The location of the proposed roundabout for the Central Precinct is approximately 100m north of the existing Airport access intersection. This location, as shown in Figure 4, finely balances the access needs and development aspirations of the Airport and Titanium Park Central Precinct along with the access requirements of neighbouring stakeholders. Key design considerations for the location of this intersection have included:
- Maximising the land available for the airport terminal car park area to accommodate future growth.
  - Maximising developable land area in front of the airport terminal fronting SH21,
  - Forming the basis of an intuitive and safe internal road network connecting the Airport on one side and the Central Precinct on the other side and connecting up with existing alignment of Ossie James Drive.
  - Significantly improving the safety for all road users including through traffic on SH21 and users accessing the Airport, the Hamilton Pistol Club, Hamilton Kart Sport club and the Mystery Creek Events Centre when Gate 0 (Tooman Lane) is in use.
  - Accommodating the National Fieldays Traffic Management Plan (TMP) implemented on SH21 for a week annually in June, which involves the use of Gate 0 of Mystery Creek Events Centre for the large inbound traffic flows in the AM and outbound flows in the PM periods.



Figure 4: Proposed SH21 roundabout

- 3.5 Figure 4 also illustrates the proposed connection of the SH21 roundabout to a new internal road layout within the Central Precinct and Airport, connecting to Ossie James Drive via another smaller roundabout. This future road network provides greater access safety and more intuitive circulation for Airport users and future users of the Central Precinct compared to the present SH21 Tee intersection and internal one and two-way road network configuration shown below in Figure 5.

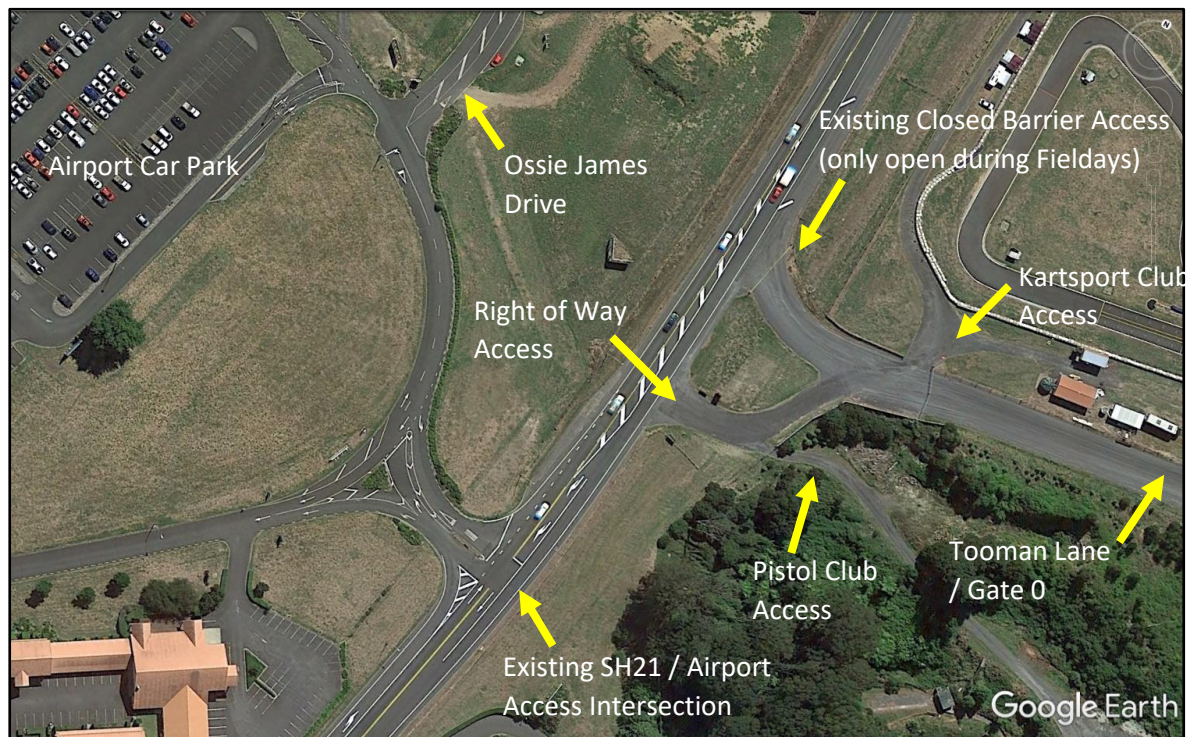


Figure 5: Existing SH21 Airport Access, Pistol Club, KartSport Club and Mystery Creek Gate 0 Accesses

- 3.6 The existing access to the Hamilton Pistol Club will be relocated and regraded as part of the roundabout construction work, to connect directly off the Tooman Lane/Gate0 Right of Way opposite the Kart Sport club as shown in Figure 6.



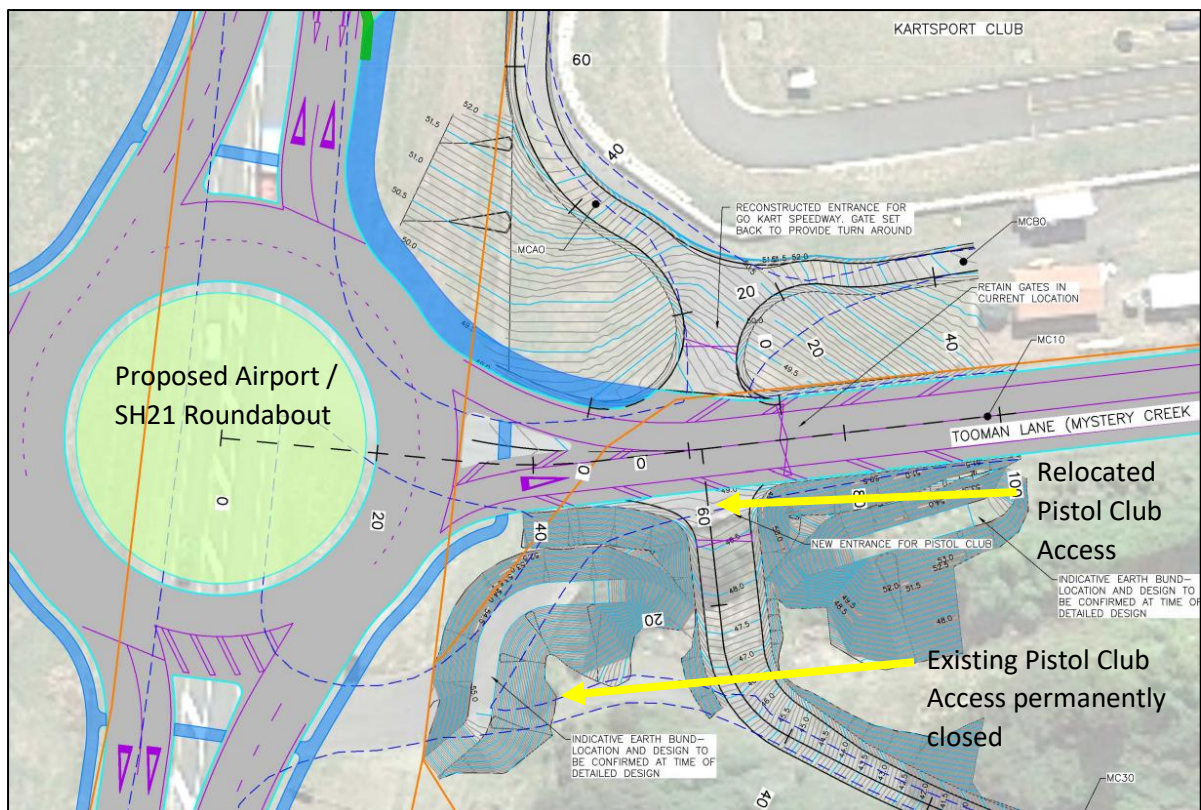


Figure 6: Proposed Relocated Hamilton Pistol Club Access and Regraded Kartsport Access

- 3.7 The Right of Way (Tooman Lane) will effectively become the fourth leg of the new roundabout. Due to the existing height differences of Tooman Lane and SH21, and the geometric design requirements of the roundabout, the Right of Way will be cut down over a distance of 80m by between 3m and 3.5m at the deepest point before transitioning back and tying into existing levels. The access to both the Pistol Club and Kartsport club will be re-graded as a result to match the new lower level of Tooman Lane. The design grades of these accesses has been addressed in the concept design to the satisfaction of both parties.
- 3.8 A key design feature of the proposed roundabout is the inclusion of off road cycle paths on the SH21 and Airport access approaches and exits. The provision of off road paths around roundabouts, particularly in rural high speed areas is in line with current good practice for cyclist safety. This design is also consistent with the off road cycling paths at the existing roundabout at the SH3/SH21 intersection. The paths around the perimeter of the SH21 roundabout are purposely not intended to be for pedestrian use as there are no other pedestrian facilities on SH21 to connect with. Also, the existing Fieldays TMP does not allow for pedestrians to cross SH21. If footpaths are provided with the roundabout then the Fieldays TMP would need to accommodate pedestrians crossing the road. I understand this is not possible while providing the traffic flow capacity needed in the AM period to the site.
- 3.9 Pedestrian paths are proposed as part of the internal road network and around the internal roundabout in the Central Precinct as illustrated in Figure 4. The paths are proposed for safety and amenity reasons given the potential for pedestrian traffic within this area.

#### **4. PLAN CHANGE 57 PROPOSED SH21 ROUNDABOUT**

- 4.1 Acceptance of the revised access strategy will mean that the roundabout proposed on SH21 near Lochiel Road, for access to the Airport Business Zone under Plan Change 57 (PC57) will not proceed.
- 4.2 The new proposed position for the roundabout also means that Lochiel Road would remain in its present location and the intersection with SH21 in its present form as a 'Tee' intersection with compulsory STOP control on Lochiel Road. While a roundabout with Lochiel Road would help to improve the safety for Lochiel Road users, the NZ Transport Agency CAS database does not identify that there is any prominent safety issue there at the present (one non-injury crash in the last 5 years). Furthermore, no submissions have been received seeking the retention of the roundabout in this location or requiring modifications to Lochiel Road.

#### **5. PLAN CHANGE 10 TRANSPORT GENERATING CHARACTERISTICS**

- 5.1 The ITA report provides the full details of the transport generating characteristics of PC10. The following provides a summary of those characteristics.
- 5.2 Plan Change 57 for the Airport Business Zone envisaged a mixed land use development scenario within the Central and Southern Precincts of Titanium Park. This included a mixture of Industrial activities, airside logistics and support, offices, research and development activities, and 5300m<sup>2</sup> GFA of retail. This resulted in predicted AM and PM peak hour traffic generation for the combined Southern and Central Precincts of 1225 vph and 1345 vph respectively. All of this traffic was to be accommodated through the one access to SH21 via the proposed roundabout with Lochiel Road.
- 5.3 The Applicants now intends to develop the Southern and Central Precinct land primarily for light industrial land use in the place of offices and research and development due to the lack of demand for these activities in the 10 years since PC57 was approved. The retail component will be retained for the Central Precinct.
- 5.4 Tables 1 and 2 in the ITA show this change effectively reduces the overall peak period trip generation predictions for the Southern and Central Precincts, by 64% in the AM peak to a total of approximately 440 vph, and by 57% in the PM peak (to approximately 580 vph). The PM peak remains the worst-case traffic flow period for capacity and safety assessment purposes.
- 5.5 In addition, the 14.9 ha of land in the Southern Precinct will be developed with restrictions concerning the types of land uses that can establish there. This is intended to limit peak traffic generation such that the capacity of the new access intersection on SH21 is not compromised in the sensitive growth years following the opening of the Hamilton Section

of the Expressway (HamWex) in 2021 and before Southern Links arterials are constructed. According to the project model developed to justify the Southern Links designation, the Southern Links arterials once constructed are predicted to reduce the daily traffic volume on SH21 between SH3 and Mystery Creek Road by 45-50%. This will significantly reduce the potential for capacity and safety issues developing at the Southern Precinct access intersection. Although the timeframe for construction of the Southern Links Arterials remains presently unknown, it is still expected to have commenced if not be partially (or fully) complete in 20 years' time. On this basis the restrictions on land use types is appropriate for the short to medium term before Southern Links construction, to manage the traffic generation of the site.

## **6. SUMMARY OF EFFECTS ASSESSED IN THE ITA REPORT**

### ***Existing Airport Access Intersection***

- 6.1 Section 9.1 of the ITA report identifies that the performance of the existing right turn bay intersection to the Airport, based on the revised PM peak hour trip generation volumes and the anticipated traffic growth on SH21 due to the HamWex project, will continue to operate acceptably at no worse than LOS D on the critical right turn out movement, until approximately 95% of the Central and Southern Precincts are developed, forecast to be around year 2027 or thereabouts.
- 6.2 This compares with the construction trigger (LOS E) in the Memorandum of Agreement between the Applicant and the NZ Transport Agency, for construction of the new roundabout) being reached by 2023 with 60% of the total Southern and Central Precinct developed as determined for the previous mixed land use scenario.

### ***Proposed SH21 / Airport Access Roundabout Intersection***

- 6.3 The performance assessments of the proposed Airport Access / SH21 roundabout intersection in Section 9.2 of the ITA show that the roundabout will function very efficiently with low delays and queues lengths (LOS A on SH 21 and LOS B on the Airport Access) for the foreseeable future. This is on the basis of full development of Titanium Park (Western, Southern, Raynes and Central Precincts) together with the anticipated traffic growth on SH21 with and without Southern Links arterials.
- 6.4 A key point to note is that the performance assessment and results above are on the basis of a roundabout with single lane approach on the Airport Access, and on the northbound and southbound SH21 approaches. Although the concept plans shown for the roundabout allows for future-proofing with two entry and exit lanes on these approaches and two circulating lanes, the dual lane roundabout is not essential for future efficiency other than managing the Fieldays event traffic TMP. This matter is discussed further in Section 7 of this evidence.



- 6.5 No traffic volumes were assessed for Gate O/Tooman Lane on the basis that I expect this lane typically has very low daily and peak hour flows, being primarily an access to the Pistol Club and Kartsport club. In my opinion the roundabout will provide a much safer and better functioning access for these activities than the current Right of Way arrangement offers, even during large event days that each club may hold.

***Proposed Internal Airport/Central Precinct Roundabout***

- 6.6 Although not specifically addressed in the ITA, the close proximity of the Central Precinct internal roundabout to the proposed SH21 roundabout is a matter that requires careful design consideration to avoid any queuing of Airport traffic back on to the state highway. This is the purpose of providing sufficient width for two westbound entry lanes, which enables the splitting of Central Precinct and Airport bound traffic. Modelling of the two intersections for the critical AM Peak hour arrival period with full development of the Central Precinct using VISSIM micro-simulation shows that there are no expected queueing or weaving issues to be concerned about. The primary reason being that there is very little traffic flow expected to travel southbound from Ossie James Drive through the roundabout to the Airport, for which traffic entering from SH21 must give way to. There is also no foreseeable reason that this southbound through movement flow would become a volume high enough to cause tangible delays to traffic entering from SH21.
- 6.7 Similarly, there is also no foreseeable reason that a more than minor flow of traffic would exit from the Airport terminal and turn right back towards the Airport, causing traffic entering from SH21 to stop and potentially queue back towards the highway. By far, the predominant traffic flow movements at the roundabout will be a left turn exit from Ossie James Drive, a straight through exit from the Airport terminal, and a left Turn and right turn from westbound traffic entering the site. This means traffic entering from SH21 will do so almost unopposed at the internal roundabout. However, to enable sufficient space for sign placement and traffic to negotiate into the correct lanes, the separation distance between the two roundabouts should ideally be no less than 60m. The designation conditions (Condition 4) recognise this issue and include a requirement that the detailed engineering design for both roundabouts provides a 60m separation, or as close practicable to 60m, subject to external constraints and geometric design requirements.

***Proposed SH21 / Southern Precinct Access Intersection***

- 6.8 With 100% of traffic generation from the Southern Precinct the right turn bay intersection access performs at an acceptable level (around 35 s/veh average delay for the sensitive right turn out movement) for approximately the next 15 years. After 20 years (2038) the average delay for the right turn out is predicted to have increased to approximately 45 seconds per vehicle. This is LOS E and at a point generally where improvements should be carried out to improve the capacity for safety purposes. However, it is also a conservative assessment as it is based on a worst-case assumption where 90% of the peak hour traffic is outbound trips. That is more related to office and urban working environments, and not usual for industrial precincts where shift work or early starts and late finishes are common.

- 6.9 While it is acknowledged that these are significant delays with potentially serious safety implications given the high speed environment, the effects are in 20 years' time when construction of Southern Links arterials is expected to have commenced if not already be partially (or fully) complete. If that is not the case then it is possible that other safety improvements to the intersection may be needed. In my opinion, such an issue would already have been identified and implemented if needed for the Mystery Creek Road / SH21 intersection by this point given the higher flows at that intersection.

***Walking and Cycling, and Public Transport***

- 6.10 Part of the revised access strategy proposal is to delete the original planned road connection across the gully between the Southern and Central Precincts, which exists in the current Structure Plan. This road connection was not viable for the Applicant and led to undesirable transportation effects within the site. It is no longer needed for developing the Southern Precinct now the access to SH21 is consented and under construction.
- 6.11 However, it is important that a walking and cycling path is provided to retain connectivity between the two precincts. This path will be provided either around or partially through the gully system. Options are being investigated from an engineering and cost perspective at the present time. The proposed revision to the Structure Plan shows the path location indicatively around the head of the gully system to ensure that the connectivity intent of the path between the precincts is retained in this Plan Change. The current subdivision consent for the Southern Precinct requires that the walking and cycling path location be confirmed and constructed with the development of the balance lot (i.e. as the next stage of the Southern Precinct).
- 6.12 Although there are no public bus services to the Airport at the present time the proposed access strategy involving the new roundabout access, together with the proposed new internal road network will provide a high level of access efficiency for any future public transport service accessed by road. Such a service to and from the Airport and employment areas of the Central Precinct is foreseeable subject to Hamilton, Waipa and the Regional Councils making it happen. The Applicant is already actively allowing for this in the master planning of the future internal road network and improvements to the Airport terminal frontage and passenger drop-off zone. Figure 13 of the ITA shows the most likely PT access route to the terminal.
- 6.13 It is unlikely that future public bus services would access the Southern Precinct since it is a cul-de-sac road. Bus users from this precinct will be able to connect to the future service that stops at the Airport terminal via the proposed walking and cycling track between the two precincts, discussed above.

## **7. MATTERS RAISED IN SUBMISSIONS**

- 7.1 Two submissions in respect of transportation matters were received in opposition or part opposition to PC10 and the NoR. These are from the NZ National Fieldays Society Inc. (NZFDS)/Kaipaki Promotions Ltd and the Hamilton Pistol Club.

### ***The NZ National Fieldays Society/Kaipaki Promotions Ltd***

- 7.2 The NZFDS submission considered that the effects of the proposed roundabout had not been adequately assessed. In particular, that the concept roundabout design as submitted with the AEE would not satisfactorily accommodate the annual National Fieldays event temporary traffic management requirements for the AM inbound traffic flow and PM outbound traffic flow periods.
- 7.3 Following this submission, various meetings have been held with the NZFDS and their traffic engineering consultant, Ms Judith Makinson of CKL to discuss the submission concerns and existing event TMP requirements. Part of those discussions involved understanding what their TMP's provided for now and ensuring that the roundabout design could provide for a similar arrangement.
- 7.4 A key feature of their existing TMPs is the provision of three southbound lanes for the predominant traffic flow on SH21 prior to Gate 0 in the AM period. Two of the southbound lanes continue directly into Gate 0 for Fieldays while the third lane continues southbound for non-Fieldays traffic accessing the Airport or travelling onwards on SH21. A single northbound lane is also provided on SH21 during this period.
- 7.5 The existing PM period TMP provides two exiting lanes and one entry lane on Tooman Lane. The two exit lanes join to one southbound lane on SH21 and two temporary northbound lanes on SH21 that continue up to Raynes Road / SH21 intersection.
- 7.6 Amendments were then made to the concept roundabout design to demonstrate that the number of temporary lanes in the existing AM and PM TMPs can be replicated at the new intersection, and that traffic flow under temporary traffic management conditions would be controlled in much the same manner as the existing TMPs. On that basis I consider that very little, if any difference in traffic capacity will result by having the roundabout. The amendments included adding a widened and reinforced concrete path on the northeast corner of the roundabout and additional seal widening on the northern entry approach. These together enable the formation of a temporary third southbound traffic lane through the roundabout. This temporary lane and the existing nearside lane of the roundabout approach are coned to create two continuous lanes taking traffic directly into Tooman Lane in the AM period.
- 7.7 Similarly, by reducing the size of the splitter island on Tooman Lane the temporary two lane exit and one lane entry during the PM period TMP can be accommodated on Tooman Lane



with the roundabout. Two temporary northbound lanes can be accommodated with cones continuing northbound on SH21 to tie in with the existing TMP two-lane northbound configuration.

- 7.8 On this basis and with both parties agreeing wording in the NoR conditions including enabling NZFDS involvement in the detailed engineering design, I understand that the NZFDS concerns relating to transportation aspects of the proposal and roundabout design are satisfactorily addressed.

***The Hamilton Pistol Club***

- 7.9 Consultation meetings have been held with the Hamilton Pistol Club (the Club) on a number of occasions to discuss the roundabout design and the changes to their site access. I understand from the Club that they are in support of the improved safety for their access that a roundabout would provide them. However, their primary concerns remain that their access would be more difficult to use for heavy transporters hauling excavators or bull dozers, and that the roundabout would not accommodate Fieldays traffic and therefore cause difficulties entering the club, during such events.
- 7.10 In relation to the Fieldays temporary traffic management concerns I refer to my evidence above that already covers this point. Overall, the Club will be no worse off during such events.
- 7.11 In relation to the access concerns, the Club's buildings and gun ranges are located in a deep valley accessed by a single lane driveway where the maximum gradient is 18.5% based on the topographical survey data we have obtained. The proposal involves realigning the top 40m of their access and connect into a new location on Tooman Lane. The new section of access would be formed and sealed to match and tie into the existing access and a new gate provided. Based on design data the maximum gradient of the realigned access will be no greater than 17.5%, so this is a small improvement relative to the existing gradient but remains still very steep for a heavy haulage transporter trucks.
- 7.12 The swept path of heavy transporter trucks entering and leaving the clubs access has been considered and allowed for in the concept design. Figure 7 illustrates both swept paths.



Figure 7: Proposed Relocated Hamilton Pistol Club Access. Design Heavy Vehicle Swept Paths

7.13 The key point from this information is that the proposal provides a safety improvement for the Club access and is no worse for heavy haulage trucks exiting than the existing situation. In fact, the gradient will be slightly improved.

## 8. S42A REPORT

8.1 I have reviewed the Council officer's s42A report in relation to transportation effects and the supporting technical assessment undertaken by Mr Bryan Hudson – Council's Road Corridor Manager. I have no issues or concerns with any of the content in either of these documents. Some suggested changes to the NoR conditions will however be made prior to the hearing, that reflect ongoing discussions with the NZFDS.

## 9. CONCLUSION

9.1 I continue to support the conclusions and recommendations of the ITA report for PC10 and the NoR. In my opinion, the outcomes proposed through the revised access strategy will not give rise to unacceptable transportation effects.

9.2 I also support the proposed changes to the Structure Plan and rule framework set out in PC10 in relation to transportation engineering matters and I support the proposed conditions of the NoR, subject to changes that will be tabled prior to the hearing.

Cameron Inder

**Transportation Engineering Manager**

**Bloxam, Burnett & Olliver Limited**

1 May 2019