

**BEFORE INDEPENDENT HEARING COMMISSIONERS
APPOINTED BY THE WAIKATO DISTRICT COUNCIL**

IN THE MATTER of the Resource Management Act 1991 (**Act**)

AND

IN THE MATTER of hearing submissions and further submissions
on the Proposed Waikato District Plan.

SUBMITTER NZTE Operations Limited

Submitter [No. 823]

**SUMMARY OF EVIDENCE OF DAVID PARK ON BEHALF OF NZTE
OPERATIONS LIMITED**

(AVIATION)

Dated: 3 March 2021

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INTRODUCTION

- 1 My name is David Stewart Park. I am a Director of Astral Limited, a New Zealand based aviation consultancy servicing a range of airport, airline, and government clients within New Zealand and overseas.
- 2 I outlined my qualifications, experience and commitment to comply with the Environment Court Expert Witness Code of Conduct in my Evidence in Chief dated 15 February 2021 (**EIC**).

SUMMARY OF EVIDENCE

- 3 The Te Kowhai Airpark Zone (**Airpark Zone**) provides for the continued operation of the Te Kowhai Aerodrome. I support the notified provisions, with the rules changes and noise boundary changes sought in NZTE Operations Limited's (**NZTE**) submission to allow flexibility for the future operation of the Aerodrome.
- 4 The changes proposed in the Section 42A report will compromise the operation of the Aerodrome, and I do not support them.

Aerodrome operation

- 5 The Te Kowhai Aerodrome (**Aerodrome**) has a single grass runway 983m long by 15m wide running approximately east-west. Additional runway length of 250m is available at the east end for take-off towards the west only.
- 6 The Aerodrome has no night lighting and no published instrument approach procedures i.e. navigation procedures that allow a pilot to land (or to take-off) when operating under Instrument Flight Rules (**IFR**). On this basis the Aerodrome (or more specifically its runway) is currently deemed to be a non-instrument day "visual flight rules" (**VFR**) runway.
- 7 The runway's established "circuit" pattern is to the south of the runway. Pilots leaving and arriving at an aerodrome are required under Civil Aviation Authority (**CAA**) Rules to comply with the aerodrome's established circuit. Consequently, the circuit is an inherent and essential part of an aerodrome's

operation and cannot be carved out as a separate activity. All pilots must gain and retain proficiency in its use.

- 8 Pilots must also practice the emergency procedure in the event of an engine failure after take-off (**EFATO**). This involves a reduction in engine power to idle shortly after take-off (below 500ft) with the pilot then having to quickly reconfigure the aircraft from climbing to a gliding descent, making slight direction changes left or right to align with the most suitable emergency landing area (e.g. a paddock). This exercise is terminated at height to minimise disturbance to people and stock by restoring engine power and continuing climb out in the runway direction.

Obstacle Limitation Surface and flight paths

- 9 Aerodrome runways are required by the CAA to be protected by Obstacle Limitation Surfaces (**OLS**), which are intended to prevent obstacles affecting aircraft flight paths. The OLS consist of geometric take-off, approach and circling surfaces, specified in CAA aerodrome design standards contained in AC139-7, which extend outwards and upwards from the edges of the runway strip.
- 10 All New Zealand aerodromes that I am familiar with have their OLS protected in district plans.
- 11 The geometry of the OLS depends on the type of operations occurring at an aerodrome. Aircraft operating under IFR, where a pilot's ability to see obstacles is reduced, require more extensive and lower OLS than those operating under VFR where the pilot is flying by visual reference. Consequently, the OLS for IFR operations are more stringent i.e. provides more protection around flight paths than the OLS for VFR operations. The OLS provided for in Variation 1 is an OLS for IFR operations.
- 12 I consider it is also essential that the runway strip width – which influences the extent of the take-off / approach OLS – and the transitional OLS is increased to accommodate “Code 1A+” aircraft, as proposed by NZTE. This is discussed in paragraphs 29 to 33 of my EIC.
- 13 The Aerodrome's shift to IFR operations, which are significantly safer in poor weather conditions, is contingent upon an upgrade to New Zealand's flight

navigation system to the more precise satellite-based aviation system (**SBAS**). Consistent with overseas trends, I consider that a switch to IFR operations will be possible in the near future. I therefore consider that it is appropriate that the pWDP enables that shift.

- 14 As trees can constitute obstacles to aircraft flight paths, I support the changes proposed by NZTE to Rules 16.3.3.3P1, 17.3.1.2P1, 20.3.3P, 22.3.4.3P1, 23.3.4.2P1, 24.3.3.2P1 and 25.3.1.2P1, and their associated D1 sub-sections to enable the height of trees to be controlled along with other obstacles so that they do not penetrate the OLS.
- 15 OLS protrusions are mostly an issue where they occur in the take-off and approach OLS, especially within 3,000m of the runway ends. Terrain or vegetation penetrating through the inner horizontal surface (where established) is less of a concern and can usually be managed. Other obstacles may be “shielded” by terrain. Consequently I consider a flexible approach to addressing existing and possible future intrusions into the inner horizontal surface of the OLS is highly desirable.
- 16 Some submitters have expressed concern that aircraft flight paths will be lower as a result of the proposed OLS in Variation 1. This is not correct. Aircraft flight path heights will be largely unchanged from what they are today. All the proposed OLS is doing is providing a greater safety margin below the aircraft due to the pilots reduced ability to see obstructions.

Section 42A report

- 17 I consider the Section 42A report, which recommends reverting to the OLS in the Operative District Plan (**ODP**), is flawed in that the report’s author misunderstands the purpose of the OLS in relation to flight safety and its practical effect on property owners beneath. I consider the notified OLS:
 - (a) complies with CAA regulations for IFR operations; and
 - (b) better enables the current and future use of the Aerodrome.
- 18 Reverting to the ODP OLS will limit the Aerodrome to VFR operations, whereas IFR operations will enhance safety.

- 19 The Section 42A report recommends amendments that I do not support, including:
- (a) The Section 42A report proposed definition of “flight training school” is confusing. Depending on how it is interpreted, it has the potential to restrict essential flight training exercises required by all pilots and essential aircraft pre-flight airworthiness checks. If the definition is included it should be clarified.
 - (b) The Section 42A report proposal to make “circuit training” a non-complying activity is extremely problematic as it is an everyday occurrence at aerodromes, an essential part of all pilots training, and a CAA requirement. “Circuit training” should be provided for as a permitted activity.

CONCLUSION

- 20 I support the provision of OLS at the Aerodrome as notified, with the proviso that there is some flexibility in determining, on a case-by-case basis, whether existing or new OLS protrusions need to be removed, depending on where they are located.
- 21 I do not support the Section 42A report’s proposal to “roll back” the OLS to those currently in the ODP as I consider this will not provide adequate protection and meet CAA requirements for existing and future operations at the Aerodrome. Nor do I support the report’s proposal to make certain activities which are required for safety and under CAA Rules, non-complying.

David Park
3 March 2021