BEFORE THE EXPERT PANEL

	FTAA-2504-1054
Under	the Fast-track Approvals Act 2024
In the matter of	an application for approvals in relation to the Ryans Road Industrial Development
By	**Carter Group Limited** Applicant

STATEMENT OF EVIDENCE OF FORD SCOTT ROBERTSON ON BEHALF OF CHRISTCHURCH INTERNATIONAL AIRPORT LIMITED

Dated 12 March 2026

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STATEMENT OF EVIDENCE OF FORD SCOTT ROBERTSON

Introduction

1 My name is Ford Scott Robertson.

2 Since 2007 I have been employed by Christchurch International Airport Limited (**CIAL**). My current role is Manager – Aviation Safety & Security. I am responsible for aviation safety oversight and regulatory compliance at Christchurch International Airport, which holds an aerodrome operator certificate under Civil Aviation Rule (**CAR**) Part 139.

3 I am a Civil Aviation Authority (**CAA**) approved 'Senior Person' and am responsible for ensuring CIAL complies with its obligations under Subparts A to D of CAR Part 139 and responsible for the system for safety management required under CAR Part 139.75.

4 I am the primary contact for the CAA on CAR Part 77 matters relating to obstacles and developments that may affect navigable airspace at Christchurch Airport.

5 I have a Bachelor of Science from the University of Canterbury. Prior to joining Christchurch Airport, I worked in quality assurance roles at Air New Zealand for approximately 10 years.

6 I give this evidence in my capacity as Manager – Aviation Safety & Compliance for CIAL. I am not an independent expert witness. My evidence reflects my statutory responsibilities and professional experience in aerodrome safety management and regulatory compliance. This also includes being responsible for providing advice and leading aeronautical assessments in relation to the development of buildings within Christchurch Airport's investment property portfolio. That portfolio includes the Dakota Park freight and logistics precinct, which is adjacent to the site of the Ryans Road Proposal and the Garden City Helicopter (GCH) heliport site.

7 I am familiar with aeronautical studies and processes for assessing the existence of aeronautical safety and operational risks.

8 I was closely involved in the project to relocate Garden City Helicopters from its Memorial Avenue site and most recently involved in considering the aviation safety and regulatory risk arising from the Kowhai Park solar farm project.

Scope of Evidence

9 I understand Airways will address aviation safety matters generally and the risks arising from interaction between the Proposal and Airways' navigation aids and landing systems. I seek to address the following matters in this evidence:

(a) The regulatory framework under CAR Part 139 relevant to the Proposal;

(b) The concept of "significant change" and aeronautical studies;

(c) The operational context and history of the Garden City Helicopters (GCH) heliport;

(d) The treatment of emergency landing areas and forced landing capability;

(e) The relevance and application of Advisory Circular AC139-8 and Australian NASF Guideline H: Protecting Strategically Important Helicopter Landing Sites (Guideline H);

(f) Regulatory framework, and in particular CAR Part 139; and

(g) The issue of consultation and established airport safeguarding practice.

10 I note I have had very limited time to prepare my evidence. I can provide further, targeted evidence for the Panel upon request if it eventuates there is something in particular the Panel wants addressed but is not (partially or fully) answered in this evidence.

11 The timeframe has also impacted on what I have been able to read before providing this evidence. To prepare my evidence I have reviewed the aeronautical assessment by L+R Airport Consulting[1] which accompanied the FTAA application made by Carter Group Limited. I have also reviewed the evidence filed in November 2025 [2] and February 2026 [3] regarding aviation safety. Having considered the material collectively, I remain of the view that the proposal is not supported by the kind of detailed, quantitative aeronautical risk analysis that would ordinarily be undertaken for development of this scale and proximity to an operational international airport. The absence of that analysis does not, in itself,

[1] L+R Airport Consulting, *Christchurch International Airport Safeguarding Assessment for Carter Group*, dated 14 August 2025.
[2] L+R Airport Consulting, *Christchurch International Airport Safeguarding Assessment for Carter Group*, dated 28 November 2025; Navigatus Consulting, *Ryans Road Industrial Development Aviation Safeguarding Assessment*, dated 28 November 2025.
[3] Statement of Evidence of Andew Victor Shelley dated 23 February 2026; Supplementary statement of evidence of Benjamin John Hargreaves (L+R Airport Consulting) dated 20 February 2026; Supplementary statement of evidence of Geraint Rhys Price Bermingham dated 23 February 2026.

establish that the proposal gives rise to a high aviation safety risk. However, it does mean that the extent, characteristics and probability of any such risk cannot presently be assessed with confidence.

12 In my experience, where a proposal has the potential to affect aviation operations in the vicinity of an aerodrome or heliport, it would ordinarily be supported by a structured aviation risk assessment before any decision is made. This is particularly important where the change may alter the operational environment relied upon by pilots of both fixed wing aircraft and helicopters. For example, if CIAL were considering a change to the built environment around airport operations that could affect aviation safety margins, it would typically require a structured assessment of potential aviation risks before proceeding. Such an assessment would ordinarily be undertaken to inform the decision-making process and ensure that any residual risks are understood and appropriately managed.

13 I would expect an aviation assessment undertaken to inform a decision of this nature would typically include:

(a) identification of all fixed-wing and helicopter operations potentially affected, including their interaction;

(b) a structured hazard identification process involving affected aviation system participants;

(c) an assessment of the likelihood and consequence of identified hazards, including low-probability/high-consequence risks;

(d) identification of residual risks following any proposed mitigation measures;

(e) an assessment of whether those residual risks are acceptable having regard to established aviation safety principles; and

(f) identification of any operational, procedural, or infrastructure changes required to manage those risks, including where responsibility for those changes would lie.

14 Christchurch Airport is recognised as nationally significant infrastructure and is also a lifeline utility under the Civil Defence Emergency Management Act 2002 (**CDEM**). In my experience even risks assessed as low likelihood may carry high-consequence outcomes, including safety implications and material economic disruption. Given Christchurch Airport's role as New Zealand's second largest international airport and a key national and international gateway, even relatively

minor operational constraints have the potential to generate significant regional or national economic effects. .

15 I understand Airways will be addressing the aeronautical issues relating to the navigation aids relied on for safety at Christchurch Airport. If Airways is concerned, it follows CIAL must also be concerned given the high reliance it places on Airways' infrastructure to ensure safety and ongoing unconstrained operations. CIAL also has independent safety concerns, including the absence of a comprehensive aviation safety assessment addressing helicopter operations, emergency landing capability, and broader aviation system risks.

History and operational context of GCH

16 GCH is a long standing tenant at Christchurch Airport. It currently leases a heliport and supporting infrastructure, including a purpose built facility at 73 Grays Road, Christchurch. GCH is also a CAR Part 135 operator carrying out those regulated services at Christchurch Airport.

17 From 1986 GCH leased premises from CIAL at 515 Memorial Avenue. From around 2005, after the expiry of the initial term of that lease, master planning work undertaken by CIAL identified the Memorial Avenue location was no longer appropriate in light of CIAL's long term strategy for helicopter operations and nearby property development. CIAL began a decade long process of identifying, and assessing the risk of, alternative locations for GCH's operations.

18 This included the commissioning of multiple extensive aeronautical studies for potential alternative sites, engagement with affected safety participants. For the heliport, this included GCH, Airways, CIAL, Transit NZ (now NZTA), Canterbury District Health Board, NZ Police, St John's Ambulance Service and BP Oil.

19 GCH relocated to its current premises at 73 Grays Road and entered into a new lease in October 2017. Two key factors in the selection of this new location were:

(a) The operational needs of GCH's rescue and emergency services, including the need for rapid access by emergency air crew and medical teams. At that time CIAL's very strong preference was for GCH helicopter operations to be located on the western side of the main 02/20 runway. The criticality of that emergency rescue function was ultimately a determinative factor locating at their current Grays Road site; and

(b) The availability of open surroundings that provided unobstructed and unconflicted approach and departure paths, together with suitable areas for emergency landing operations. In short, the GCH heliport was deliberately located to avoid precisely the type of incremental encroachment now proposed.

Significance of the GCH heliport

20 GCH is a major provider and operator of critical lifeline 24/7 air rescue and helicopter ambulance operations, and ground-to-hospital and inter-hospital medical transport services. These operations form part of GCH's aviation service portfolio alongside scenic flights, charter flights, and other commercial helicopter services.

21 The panel has asked about the significance of the heliport from where GCH operate. I understand that question may come from discussion around NASF. I have made some further comments on that below, however I note Christchurch Airport is recognised as nationally significant infrastructure and is also a lifeline utility under the CDEM. The heliport is not a standalone facility in regulatory terms and its importance is part of the overall importance of Christchurch Airport.

22 Each lifeline utility has defined responsibilities under the CDEM Act for continuity and emergency management planning. Helicopter rescue services are often recognised as critical emergency response capability under CDEM planning.

23 GCH is not just a tourism charter operator. From its base at Christchurch Airport it delivers air rescue and helicopter emergency services in association with key emergency and health agencies across the Region. It operates from a $20million purpose-built facility equipped and staffed for 24/7 response and integrates with the national emergency call system, particularly for tasks activated from the 111 emergency network. Helicopter emergency services are, by their nature, responsive and time-critical. They cannot be scheduled or restructured in the same way as routine commercial movements.

24 I understand that, in 2025, GCH mobilised 1081 helicopter rescue flights in the West Coast and Canterbury Region.

25 Rescue flights typically involve trained medical practitioners, some of whom are based at the site full-time and ready to respond to rapid dispatch scenarios. I understand rapid dispatch correlates strongly with successful medical outcomes. GCH's medical teams consist of intensive care paramedics and other crew

employed by it. These personnel are integral to rescue missions and are trained to provide advanced medical care in flight.

26 Mr Bermingham states at para 8 (f) of his Supplementary Statement: "*Should development result in existing emergency landing areas not being available to helicopters operating to and from the GCH heliport, alternative flight procedures may need to be developed. This may result in some limited operational efficiency or utility costs on GC*H."

27 Changes to helicopter flight paths are not straightforward and would require careful consideration of a range of operational factors. These include prevailing wind conditions, the interaction between helicopter operations and the Runway 02 approach path, and the separation required between helicopter and fixed-wing operations. Those constraints limit the extent to which approach or departure paths can be altered. In my experience, any proposal to change established helicopter flight procedures would require detailed assessment and the involvement of Garden City Helicopters pilots and Airways before it could be considered a viable option.

28 In the absence of quantified analysis of the operational and safety consequences of any reduction in forced landing area, and without a description of the alternative flight procedures contemplated, I am unable to reach a conclusion on the extent of adverse impact this proposes. But it seems a clear signal there will be an adverse impact.

29 The relocation process embarked on between 2005 to 2017 illustrates the GCH heliport location is operationally sensitive. Alternative locations were the subject of deliberate and structured aviation safety assessments. The incremental encroachment proposed here is exactly what the relocation (and extensive development) of the heliport to its Grays Road location, sought to avoid.

30 For helicopter operations, the availability of suitable emergency landing areas in the vicinity of a heliport is an important safety consideration. In the event of an engine or mechanical failure, pilots must initiate an immediate descent and identify a suitable area where a controlled landing can be made. Changes to the surrounding environment that reduce the availability of such areas may reduce the operational safety margins available to helicopter pilots.

31 In these situations pilots will typically establish an autorotation and manoeuvre towards a suitable landing area, often continuing broadly in the direction of travel

while managing the descent. The availability of suitable landing areas within reach of the helicopter can therefore be an important factor in improving the survivability of an emergency landing.

32 I understand from discussions with the operator of the GCH heliport that an emergency landing event occurred when the heliport was previously located on Memorial Avenue, prior to more built up development occurring in that area. While I was not directly involved in that event, it illustrates the importance of maintaining suitable emergency landing options in the vicinity of heliport operations.

33 Mr Bermingham does identify a potential reduction in forced landing area availability and acknowledges an aeronautical study would need to be undertaken to assess and underpin the development of alternative flight procedures. Because the applicant has not done and does not propose to do the necessary study, Mr Bermingham notes the necessary assessment would become the responsibility of CIAL and GCH in accordance with AC139-15.[4] As I address further below, I consider these matters should be understood before consent is granted. If an aeronautical study later identified the need for operational restrictions or changes to procedures, the effects of those changes would fall on the aerodrome operator and affected aviation users. The Civil Aviation regulatory framework does not provide a mechanism for those impacts to be borne by adjacent landowners whose development gives rise to them.

Civil Aviation Regulatory Framework – CAR Part 139

34 Christchurch Airport is a certificated aerodrome under CAR Part 139.

35 Under CAR 139.125, the holder of an aerodrome operator certificate must establish procedures to ensure aircraft operations are restricted or prohibited where unsafe conditions may exist.

36 Under CAR 139.131, as a certificate holder, CIAL must monitor operations and conduct an aeronautical study for any "significant change" that may affect the safety of aerodrome operations. Where a "significant change" occurs, the aerodrome operator must:

(a) Conduct an aeronautical study;

(b) Review the operation of the aerodrome;

[4] Aeronautical Studies for Aerodrome Operators.

(c) Amend its exposition if necessary in the interests of aviation safety; and

(d) Provide the results of the study to the Director of Civil Aviation.

37 An aeronautical study is undertaken prior to the significant change occurring, or if that is not practicable, as soon as practicable after the change.

38 If a significant change arises, the statutory obligation to undertake the aeronautical study rests with CIAL as aerodrome operator. This arises under CAR Part 139.131, not Advisory Circular 139-15 as suggested by Mr Bermingham.[5] Equally, the regulatory responsibility only falls on CIAL and not GCH.

39 Any operational restrictions resulting from that study would fall upon the aerodrome operator and affected aviation users. The CAA regulatory framework does not contain a mechanism for those costs or effects to be borne by adjacent landowners not regulated by the Civil Aviation Act.

40 I also note references to CAR Part 77. Part 77 is directed at objects or activities that may affect navigable airspace and primarily establishes notification requirements where structures or lighting installations may pose a hazard to aircraft. In my experience it is commonly engaged where temporary structures such as cranes, or lighting installations, are proposed in proximity to an aerodrome and notice must be given to the CAA so the aviation implications can be assessed. However, similar to the position under CAR Part 139, the regulatory framework does not provide a mechanism for operational consequences to be imposed on adjacent landowners whose development gives rise to those effects. Any operational restrictions or adjustments required to maintain aviation safety would instead fall on the aerodrome operator and affected aviation users.

41 Beyond the temporary intrusions, it is not yet clear to me how CAR Part 77 will be engaged by the proposal, and I do not consider the references to CAR Part 77 materially assist the assessment of the aviation effects of the proposal.

Significant change and the Proposal

42 If development were to alter approach or departure paths, remove or materially constrain emergency landing areas, or otherwise affect helicopter operations associated with the aerodrome, that would likely constitute a “significant change” under CAR 139.131.

[5] ; Supplementary statement of evidence of Geraint Rhys Price Bermingham dated 23 February 2026 at [89].

43 In his 23 February 2026 Supplementary Statement Mr Hargreaves says, having reviewed the memoranda filed by CIAL and Airways, as well as the additional technical material prepared by Mr McPherson, Mr Bermingham and Dr Shelley "*nothing has been raised that causes me to modify or reconsider the conclusions reached in the L&+R Airport Safeguarding Assessment submitted with the Applicant's section 55 response*.**"**

44 I take this to mean that he still considers that the risk that he identified at page 11 of his initial Assessment - of "*some reduction in forced landing area availability from the status quo*" remains an unquantified risk.

45 I note at page 8 of Mr Hargreaves' initial August Assessment, he says the assessment is a "*a desktop assessment only based only on information provided by Carter Group to L+R Airport Consulting*".[6] As I have indicated above and based on my experience, a desktop assessment of this nature is not an adequate substitute for a detailed aeronautical study.

46 Having noted the existence of a risk, more detailed analysis is required to fully understand that risk and identify possible mitigants. In aviation safety management, even low-likelihood risks require careful evaluation where consequences may be high. A forced landing event is statistically infrequent, but within aviation safety management systems it is treated as a high-consequence scenario. The preservation of suitable emergency landing areas, as contemplated by Advisory Circular 139-8, is a primary mechanism for managing that consequence risk.

47 At page 13 of Mr Hargreaves' initial Assessment, it is concluded "*… L+R Airport Consulting believes the proposal appropriately safeguards the safety, efficiency and regularity of CIA operations, in the context of development proposals of a similar nature adjacent to airports such as CIA*." It is not clear to me what is meant by the reference to development proposals "of a similar nature adjacent to airports", or how those examples inform the assessment in this case. Aviation operating environments are highly site-specific and depend on a range of local operational, procedural and environmental factors. As a result, the fact that development may have been considered acceptable in other airport environments does not necessarily indicate that a similar outcome would be appropriate here. By way of example, the development of a large-scale solar farm adjacent to the airfield involved a proposal of comparable scale adjacent to the airport and was supported

[6] L+R Airport Consulting, Christchurch International Airport Safeguarding Assessment for Carter Group, dated 14 August 2025 at page 8.

by a structured aviation assessment process (refer Attachment 2 of CIAL's 18 December evidence).

48 I have not had any conversations with L+R Consulting, or any of the experts engaged by Carter Group Limited about the safety, efficiency and regularity of operations at Christchurch Airport and I could find no mention of the medical and air rescue function undertaken by GCH in the desktop assessments provided.

49 On the material presently available, there is insufficient quantified aeronautical assessment to determine with certainty whether a significant change would arise. That absence means the scale, nature and likelihood of aeronautical safety risk or operational constraint cannot presently be determined with confidence and, as a result, neither can anyone be sure about how and at what cost CIAL and/or GCH will have to modify operations to reduce safety risk.

Limitations of Desktop Assessments

50 In my view it does not matter that the applicant may not be statutorily obliged to undertake a full aeronautical safety assessment. Based on experience I would still expect an adjoining landowner or developer, and their aeronautical experts, to undertake a detailed assessment and work closely with the aerodrome operator to ensure all risks are properly identified, understood and able to be responded to. This would then provide an understanding of what changes existing operators need to make. To date, that has not occurred.

51 A desktop assessment based on a brief provided by the applicant without any involvement of CIAL, GCH, Airways or other aviation system participants is not an acceptable means of identifying then assessing aeronautical risk and the degree of operational constraint the development might cause.

What is missing

52 In an aviation context where consequences can be significant, even low likelihood risks warrant extensive upfront evaluation and verification. This means the following information must be available, to ensure potential safety risks are exhaustively identified – discovering safety risks after they have materialised is, for obvious reasons, too late and deeply regrettable.

(a) I understand the response from Airways will also be addressing the issue of what vital information is missing from the package currently before the Panel. I add to that based on my experience. To properly identify and assess the

aeronautical safety implications of development adjacent to an operational heliport and aerodrome, I would expect to see detailed obstacle and clearance modelling for helicopter approach and departure paths;

(b) identification and mapping of existing forced landing areas available to helicopters;

(c) assessment of how those areas would be altered or constrained by the proposed development;

(d) assessment of helicopter performance envelopes and autorotation landing capability in the vicinity of the heliport. This type of assessment would ordinarily require engagement with experienced helicopter pilots familiar with operations at the heliport;

(e) scenario-based analysis of potential emergency situations (such as engine failure on approach or departure);

(f) simulation or modelling of any revised helicopter approach or departure procedures;

(g) assessment of interaction with existing fixed-wing airport operations and procedures;

(h) quantified safety risk assessment using recognised aviation risk assessment methodologies;

(i) engagement with affected aviation system participants, including GCH, CIAL and Airways; and

(j) identification of feasible mitigation measures and their operational consequences.

53 I have read CIAL's memorandum dated 18 December 2025 and consider that the matters outlined in Attachments 1 and 2 reflect the type of structured assessment process I would ordinarily expect to be undertaken for development of the nature proposed at this site.

Consultation

54 The Civil Aviation framework promotes collaborative and proactive aviation safety risk management. Early engagement is not simply a planning formality; it is integral to aviation safety risk identification under a safety management system framework.

55 Where development may affect operational airspace or emergency flight paths, established practice is early engagement with the aerodrome operator and affected aviation stakeholders to ensure these facilities aren't impacted by development nearby.

56 CIAL's concern about lack of engagement for this proposal was signalled in Christchurch Airport's initial comments on 15 September 2025. We noted our "concern that the timing of the Application has not allowed for genuine engagement with CIAL and other key aviation stakeholders on the potential impacts of the application on aviation safety". Despite that concern being expressed, we still have not been consulted. The material before the Panel does not demonstrate that a structured, quantified aviation safety effects assessment has been undertaken in consultation with CIAL and GCH sufficient to evaluate safety risks and the potential operational impacts of any mitigants.

Relevance of and assessment against Advisory Circular 139-8

57 The Panel has asked if Advisory Circular 139-8 is relevant. This circular relates to the design phase of a heliport. Advisory Circulars describe "acceptable means of compliance" with Civil Aviation Rules. They are not rules themselves but provide recognised safety frameworks. The Circular sets out a minimum standard for heliport design and operation; however, other approaches may also be used where they achieve an equivalent or higher level of aviation safety.

58 Advisory Circular 139-8 provides guidance as to what would be an "acceptable means of compliance" with CAR Part 139-8 in the period leading up the establishment of a heliport. It does not provide the primary framework for assessing the operational consequences of adjacent development affecting an established heliport. Once a heliport has been established, an aerodrome operator would look to the overriding CAR Part 139 obligations when considering a change that may affect the safety of aerodrome operations.

59 AC-139-8 emphasises the importance of maintaining suitable forced landing areas and unobstructed approach and departure paths. The potential reduction in forced landing area availability identified in the Applicant's assessment indicates those considerations may be affected.

Relevance of Australian National Airports Safeguarding Framework (NASF) Guideline H: Protecting Strategically Important Helicopter Landing Sites

60 NASF Guideline H (Protecting Strategically Important Helicopter Landing Sites) is an Australian framework. Whether or not Guideline H formally applies in a New Zealand planning context, the principles it reflects are consistent with recognised aviation safeguarding practice including the protection of approach and departure paths and the importance of consultation in relation to strategically important helicopter landing sites.

61 I have commented above on the importance of the GCH heliport. It is unclear to me whether CGL has taken those principles into account, with some apparent conflicts in how the Guideline is taken into account:

(a) Mr Hargreaves' Assessment report[7] notes at page 7 "*This assessment utilises the NASF guidelines as a framework to assess the safeguarding of Christchurch International Airport with respect to the industrial development proposal at 104 Ryans Road, by supplementing with the Australian guidance where there is an absence of New Zealand regulations, Operational Christchurch District Plan provisions or other relevant New Zealand aviation guidelines*."

(b) The Assessment then notes it "*… considers key matters relating to the potential impacts associated with the proposed development on aviation operations associated with CIA. Where there is an absence of relevant planning provisions within the CDP as referenced in the AEE, consideration has been given to the Australian National Airports Safeguarding Framework (NASF), in line with the guidance in the New Zealand Airports Association (NZAA) Airport Master Planning Best Practice Guide*.

(c) However, there is only one further mention of Guideline H in the Assessment, in the conclusions section on pages 14 and 15. From that lack of reference to the specific rules within Guideline H (which I have attached) it is difficult to determine how Mr Hargreaves utilised it when he assessed the safeguarding of the Airport. Guideline H is clear that development in the vicinity of a strategic heliport could jeopardise safety and efficiency and that the individual guidelines don't override the need to refer any development to an

[7] L+R Airport Consulting, Christchurch International Airport Safeguarding Assessment for Carter Group, dated 14 August 2025.

airport operator, where it potentially intrudes into the operational airspace of that airport.

(d) Mr Hargreaves then subsequently says at paragraphs 8 to 11 of his Supplementary Statement,[8] that he does not consider Guideline H to be either *applicable nor necessary in the context of GCH*. To me this is contradictory and an unexplained shift in position.

62 In contrast with Mr Hargreaves' initial August assessment, Dr Shelley (paragraph 7.5) says he does not consider the GCH heliport meets the NASF Guideline H definition of a strategic helicopter landing site. He notes this is "*in part because it is not associated with a hospital*". It is not clear what other factors are relevant to his conclusion. He also does not explain why he has a different view on this from Mr Hargreaves. This might also because he only became involved in January 2026 and does not appear to have familiarised himself with the L+R Airport Consulting Assessment of August 2025.

63 In my view Guideline H ought to be considered here because:

(a) Having regard to its operational role described above, the GCH heliport exhibits the characteristics of a strategically important helicopter landing site as described in Guideline H; and

(b) The proposal involves development within the operational environment of that heliport, including beneath established helicopter approach and departure paths.

(c) I understand that GCH is investigating the potential introduction of instrument flight procedures, which would further increase the importance of safeguarding the heliport's operational airspace in a manner consistent with the principles set out in Guideline H.

64 Guideline H emphasises the protection of helicopter approach and departure paths, preservation of suitable emergency and forced landing areas, and early engagement with heliport operators where development may affect operational airspace. Based on the information presently available, it is unclear whether those matters have been comprehensively evaluated in the Applicant's assessment. In my experience, these issues would ordinarily be addressed through an

[8] Supplementary statement of evidence of Benjamin John Hargreaves (L+R Airport Consulting) dated 20 February 2026.

aeronautical study when considering development adjacent to an operational heliport of this nature.

65 The Applicant's own assessments acknowledge that the proposal would result in the loss of existing straight-ahead emergency landing areas to the south of the GCH heliport, and that helicopter approach and departure procedures may need to be altered or redesigned.[9] In my view, the loss of those emergency landing options represents a reduction in existing safety margins and a change to the operational safety envelope within which the heliport currently operates. Guideline H treats the retention of emergency landing capability as a fundamental aviation safety consideration.

66 Guideline H also discourages incompatible development beneath helicopter flight paths, particularly where those paths support time-critical or emergency operations. The proposal introduces industrial development, occupied areas, and construction activity beneath an established helicopter approach and departure path. While the Applicant's experts consider this manageable, the effects are addressed primarily through reliance on pilot adaptation and potential procedural change.[10] From an aviation safety perspective these represent lower-order mitigations compared with avoiding or materially reducing the risk.

67 Guideline H also recognises the risks of incremental encroachment that progressively erodes aviation safety margins. The assessments before the Panel are largely static and do not address the potential cumulative effects of successive development, temporary works, construction cranes, and repeated CAR Part 77 notifications beneath the helicopter flight path.

68 Finally, Guideline H emphasises the importance of early engagement with heliport and airport operators so that safeguarding considerations can be incorporated at the design stage. In this case, very limited engagement has occurred, and the engagement that has taken place has been within the constraints of an advanced proposal and without any aviation safety experts present, limiting the opportunity to avoid or materially reduce the identified aviation safety effects.

[9] Navigatus Aviation Safeguarding Assessment, 28 November 2025, Sections 7.2–7.4; Bermingham, 23 February 2026, paras 8(f), 78–81
[10] (Bermingham, 23 February 2026, paras 8(f), 89–90; Shelley, 23 February 2026, paras 7.1–7.4).

69 For these reasons, the proposal is not well aligned with the safeguarding principles Guideline H articulates.

Dated 12 March 2026

Ford Robertson

Attachment 1: Part 139

Civil Aviation Rules

CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

Part 139

Aerodromes – Certification, Operation and Use

5 April 2025

CAA Consolidation

Published by the Civil Aviation Authority of New Zealand

Rule Objective

The objective of Part 139 is to set standards, specifications, restrictions, and requirements for the issue and exercise of an Aerodrome certificate under the Civil Aviation Act 2023, and to ensure New Zealand meets and maintains applicable ICAO safety and security requirements for the certification, operation and use of aerodromes.

Part 139 prescribes the requirements for—

- the certification and operation of aerodromes;
- the security measures applicable to aerodromes;
- the use of aerodromes by aircraft operators;
- the provision of UNICOM and AWIB services.

Part 139 prescribes specific requirements for the certification (entry standards), operation (continued operations), and safety audit (surveillance) of aerodromes. Part 139 also details required security measures for aerodrome certificate holders.

Bulletin

This Part first came into force on 5 April 2025 and now incorporates the following amendments:

Amendment	Effective Date
Amendment 1	5 April 2025

Summary of amendments:

Amendment 1: (24/CAR/02)	In accordance with rule 99.23, rules 139.77(a)(1B), 139.127 (d)(4), 139.417(a)(1B) and 139.455 (d)(4) are inserted.

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139.73 Notification of aerodrome data and information

An applicant for the grant of an aerodrome operator certificate must establish a procedure for notifying the aeronautical information service provider—

(1) of aerodrome data and information; and

(2) of any limitation established under rule 139.53 on the use of the aerodrome; and

(3) as soon as practicable, of any change that affects the use of the aerodrome.

139.75 Safety management

An applicant for the grant of an aerodrome operator certificate must establish, implement, and maintain a system for safety management in accordance with rule 100.3.

139.76 Movement data reporting

An applicant for the grant of an aerodrome operator certificate must establish procedures for collecting traffic movement data at the aerodrome on a monthly basis and for reporting that movement data once every 3 months to the Director.

139.76A Works on aerodrome

An applicant for the grant of an aerodrome operator certificate must establish procedures, including precautions to be taken, for ensuring that any works carried out on the aerodrome do not endanger aircraft operations.

139.76B Documentation

An applicant for the grant of an aerodrome operator certificate must—

(1) hold copies of relevant documents necessary for the provision and operation of the aerodrome and the associated services and facilities; and

(2) establish a procedure for controlling the documents required under subparagraph (1) to ensure that—

(2) prevent, as far as it is within the certificate holder's authority, any interruption of electronic or visual navigation aid or air traffic service facility for the aerodrome.

139.123 Aerodrome condition notification

A holder of an aerodrome operator certificate must, in accordance with the procedure required by rule 139.73, notify the aeronautical information service provider, as soon as practicable (for the issue of a NOTAM), of any aerodrome operational condition at the aerodrome that may affect the safe operation of aircraft.

139.125 Unsafe conditions

A holder of an aerodrome operator certificate must establish procedures for ensuring that aircraft operations are restricted, or if necessary prohibited, on any part of the aerodrome where an unsafe condition may exist.

139.127 Changes to certificate holder's organisation

(a) A holder of an aerodrome operator certificate must ensure that the exposition is amended so that it remains a current description of the aerodrome and its associated plans, programmes, services, systems, procedures, and facilities.

(b) The certificate holder must ensure that any amendment made to its exposition meets the applicable requirements of this Part and complies with the amendment procedures contained in its exposition.

(c) The certificate holder must forward to the Director for retention a copy of each amendment to its exposition as soon as practicable after the amendment is incorporated into its exposition.

(d) A certificate holder must obtain the approval of the Director before changing any of the following:

(1) the chief executive:

(2) the listed senior persons:

(3) the system for safety management, if the change is a material change:

(4) any DAMP, if the change is a material change.

(e) The Director may impose conditions under which a certificate holder must operate during or following any of the changes specified in paragraph (d).

(f) The certificate holder must comply with any conditions imposed by the Director under paragraph (e).

(g) If any change referred to in this rule requires an amendment to the aerodrome operator certificate, the certificate holder must forward the certificate to the Director for endorsement of the change as soon as practicable.

(h) The certificate holder must make such amendments to the holder's exposition as the Director may consider necessary in the interests of safety.

139.129 *Reserved*

139.131 Aeronautical Study

(a) A holder of an aerodrome operator certificate must monitor operations and conduct an aeronautical study for any significant change or significant changes that may affect the safety of aerodrome operations.

(b) For the purpose of paragraph (a), a significant change includes:

(1) a significant increase in aerodrome aircraft traffic volumes; or

(2) a significant change in type of aircraft operations; or

(3) a significant change in the aerodrome physical characteristics; or

(4) an increase in accidents or incidents at or in the vicinity of the aerodrome; or

(5) when annual aircraft movements at the aerodrome are forecast to exceed, for 3 consecutive years,—

(i) 40,000 or more combined VFR and IFR movements; or

(ii) 7,500 or more IFR movements; or

(iii) 60,000 or more combined VFR and IFR movements of which 9,000 or more are IFR movements; or

(iv) 15,000 or more IFR movements; or

(v) 100,000 or more combined VFR and IFR movements.

(c) The holder of an aerodrome operator certificate must, immediately after completing an aeronautical study—

(1) review the operation of the aerodrome and, if necessary, make any changes that are required in the interests of aviation safety, to the operator's exposition, in accordance with the procedure for amending the exposition; and

(2) provide the results of the aeronautical study to the Director.

(d) If practicable, the holder of an aerodrome operator certificate must conduct the aeronautical study prior to the significant change.

(e) If it is not practicable for the holder of an aerodrome operator certificate to conduct an aeronautical study prior to the significant change, then the certificate holder must conduct the aeronautical study as soon as practicable after the change.

Subpart D — Aerodrome and Navigation Installation Security

139.201 *Reserved*

139.203 Requirements for Tier 1 security designated aerodromes

Barrier requirements

(a) A holder of an aerodrome operator certificate issued for a Tier 1 security designated aerodrome must, in addition to complying with the requirements in rule 139.69 (Public Protection), provide safeguards to prevent inadvertent unauthorised access and to deter intentional unauthorised access, to any airside security area or security enhanced area within the aerodrome.

(b) The safeguards required by paragraph (a) must—

Attachment 2: NASF Guideline H

GUIDELINE H

NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK

PROTECTING STRATEGICALLY IMPORTANT HELICOPTER LANDING SITES

REVISION DATE	VERSION NUMBER	CHANGES MADE	APPROVED BY
May 2018	8.1.1	Document Creation	TIC

For the purposes of this document, a Helicopter Landing Site (HLS) is an area (not located on an aerodrome) wholly or partly used for the arrival or departure of helicopters.

Purpose of guideline

1. This document provides guidance to State/Territory and local government decision makers as well as the owners/operators of identified strategically important HLS (SHLS) to ensure:
    a) the ongoing operation of those SHLS;
    b) the use of those SHLS are not compromised by any proposed development encroaching into flight paths;
    c) new development (and associated activities) do not present a hazard to helicopters arriving or departing from those SHLS; and
    d) any new SHLS are appropriately located.
2. This guideline is also designed to address the following matters:
    a) lighting that either distracts or causes interference with night operations;
    b) mitigating noise relating to helicopter operations;
    c) wildlife/bird strikes;
    d) Remotely Piloted Aircraft Systems (RPAS) "drones" operation/strikes; and
    e) building induced windshear or air turbulence, where this could affect the normal flight of helicopters operating from these SHLS.

What is a Strategically Important HLS

3. A SHLS is a site declared by a state or territory to be of critical need to the provision of identified services (see para 6).

4. Not all HLS will require protection from land use or development activity due to the nature or frequency of use of those sites. However, where a HLS is identified as being of strategic

importance these sites must be protected from surrounding incompatible uses and encroachment into their flight paths.

Key Considerations

5. It will be the responsibility of each jurisdiction to consult with the asset owner to identify those HLS that are considered to be of strategic importance or those that are to be protected in the interest of public safety.

6. SHLS to protect should include:

    a) a HLS associated with a hospital; or

    b) an elevated HLS[1], located within a populated area; or

    c) a HLS subject to instrument flight procedures; or

    d) any other facility identified as strategic by State/Territory or Commonwealth government/authorities.

7. Where otherwise not required under state/territory provisions, a responsible planning authority or proponent is encouraged to consult with the relevant SHLS asset owner to establish protocols for the referral process within their jurisdiction including:

    a) material to be provided as part of the referral;

    b) the timeframes in which advice is required to be provided; and

    c) the format of any advice provided and the wording of appropriate conditions that can be applied to mitigate any impacts. This should include standard conditions that can be applied in the event that the asset owner is unable to respond within the required assessment timeframes.

Why it is important

8. The helicopter industry is one of the fastest growing and diverse segments of the aviation industry.

9. The safety, viability and efficient operation of aircraft at a HLS can be compromised by development including permanent buildings and temporary structures (including cranes), gaseous plumes, telecommunication towers, overhead wires and power lines as well as landscape features (such as trees).

10. In recent times, there have been incidents where hospital emergency helipads have been decommissioned due to safety concerns arising from the nearby operation of construction cranes. Elsewhere a fatal accident occurred when a helicopter experienced building induced windshear just after take-off and crashed into a nearby river. Noise generated by helicopters in flight is also a significant issue.

11. Despite the importance of maintaining unimpeded flight paths to strategically important HLS, protective legislation varies across jurisdictions. Many HLS do not require formal land use

[1] An elevated HLS is one that is located on a raised structure or building, for example – on top of a car park.

planning approval and/or are considered ancillary to existing uses. For example, in some jurisdictions where they are provided as part of a hospital, separate approval is not required. Accordingly, there are many HLS with no regulatory oversight.

12. In Australia, HLS are not licensed, certified or regulated in the way that aerodromes are under Part 139 of the Civil Aviation Safety Regulations 1998 (CASR). The *Airports Act 1996* makes no specific reference to the use of HLS. For facilities not located on Commonwealth land there are varying levels of regulation and guidance around safeguarding non-airport HLS across the jurisdictions.

13. Population growth, residential densification, and increasing high-rise development in built up areas will continue to increase pressures on airspace protection for SHLS. Equally, continued growth in aviation industry activity will add to the challenges of effective planning for the interaction of aviation operations with development.

14. If intrusions into the flight paths for a SHLS, and risks associated with the use of those SHLS are not regulated the ongoing helicopter operations at strategically important sites may be compromised. Without protection, development in the vicinity of a SHLS could jeopardise safety and efficiency and potentially result in the decommissioning of the HLS.

Roles and responsibilities

15. State/Territory and Local Governments are primarily responsible for land use planning on non-Commonwealth land.

16. The International Civil Aviation Organization (ICAO) sets out Standards and Recommended Practices (SARPs) for the safe conduct of civil aviation activities. Australia has undertaken to apply the ICAO SARPs, except where specific differences have been notified to ICAO. The following annexes are applicable to helicopter operations:

    Annex 6: Operation of Aircraft – Part III: International Operations – Helicopters
    Annex 14 – Aerodromes – Volume II: Heliports

    Guidance on the design of heliports is contained in ICAO's Heliport Manual (Doc No. 9261)[2]

17. Australia has notified ICAO of a difference in applying the ICAO heliport standard as CASR Part 139 and the Part 139 Manual of Standards currently only applies to HLS located on aerodromes. The proposed incorporation of Annex 14 SARPs into the Australian civil aviation legislation forms part of CASA's current Regulatory Reform Program.

18. The Civil Aviation Safety Authority (CASA) is responsible for the safety regulation of civil air operations and the safety of air navigation in Australia. This includes helicopters in flight and potential sources of distraction from lighting, which may cause confusion, distraction or glare to pilots in the air.

[2] December 2017 – This manual has been withdrawn by ICAO. A new version is expected to be released in late 2018.

19. Airservices Australia is Australia's air navigation service provider responsible for airspace management, aeronautical information, aviation communications, radio navigation aids, and aviation rescue fire fighting services.

How it should be used

20. The responsible authorities[3] within each jurisdiction should commence consultation with relevant asset owners/operators, aircraft operators (if identified) to identify HLS that should be safeguarded through land use planning controls.

21. When undertaking any strategic review of height limits within land use planning controls, the maximum height limit specified should not extend into any flight path for a SHLS.

22. Once a SHLS is identified, a process is to commence to incorporate its operationally essential flight path/s within the land use planning controls. If a particular flightpath extends over more than one local government boundary, then the requirements will need to be reflected in all relevant land use planning controls. This protection is also to be afforded to the approval of any new SHLS.

23. When a planning permit/approval is required for either a new SHLS (especially where associated with a hospital); a development or a planning scheme amendment that is within the facility's essential flight paths or zone of influence of an existing SHLS, planning and responsible authorities should consider the application/proposal against this Guideline.

24. If required by the planning scheme, the application/proposal (within the flight path or zone of influence of an existing SHLS) should be referred to the SHLS asset owner/operator and CASA for assessment and advice. Where not required, the advice of the SHLS asset owner/operator should be sought. Figure 1 (page 7) provides guidance on referral requirements for those HLS where a flight path has not been surveyed.

25. In assessing applications/proposals land-use planners should be informed by the advice received from the SHLS asset owner/operator and CASA, including recommendations to specify conditions to mitigate risk or impacts.

26. Some jurisdictions, for example Victoria, already have planning guidelines or polices in place and this document provides guidance for any review of those documents. For those jurisdictions without policies in place, this Guideline (in addition to the associated National Airports Safeguarding Framework) will provide assistance in the development of those policies.

27. Nothing in this guideline overrides the need to refer any development to an airport operator, where it potentially intrudes into the operational airspace of that airport.

[3] State/Territory or local governments.

GUIDELINES FOR MANAGING INTRUSIONS AND ACTIVITIES IN THE FLIGHT PATHS OF STRATEGICALLY IMPORTANT HLS

SHLS Design Considerations

28. Until such time as new standards are provided by CASA to safeguard HLS, any new SHLS should be constructed in accordance with the CAAP 92-2 (2) *Guidelines for the Establishment and Operation of Onshore Helicopter Landing Sites*.

    Exceptions to this are where a suitably qualified and experienced aviation professional has designed and certified the suitability of the SHLS, including a survey of the arrival and departure flight paths and transitional surface, which are to be safeguarded from intrusions.

Obstacle Limitation Surfaces (OLS)

29. An effective and safe helicopter service to support emergency services relies heavily on both the optimal location of the HLS and a clear flight path free from obstruction.

30. There is currently no formal requirement for a HLS to have a declared Obstacle Limitation Surface (OLS[4]), however a recommended OLS is defined in CAAP 92-2(2). When considering the OLS, it is important to remember that there are three design categories based on the class of performance capability for the helicopter.

31. In the event that a development also encroaches into the OLS for an airport, then the relevant referral and approval processes in association with that airspace is also still required to be undertaken (in addition to the processes identified within this guideline). When considering the need of the OLS protection, the most limiting of these categories relevant to the use of the HLS needs to be used. Further, any object extending above 110m above existing ground level must be assessed by CASA under CASR Part 139 to determine whether it is an obstacle to aircraft operations, including helicopters.

HLS Flight Path

32. CASA is currently reviewing its standards for HLS to enhance safety and is expected to include the certification of SHLS into the CASRs. This will require flight paths of certified HLS to be protected to secure their ongoing operations, for example, where associated with emergency medical services. It is also anticipated that new elevated HLS located within populated areas and HLS subject to instrument flight procedures will require certification by CASA. This Guideline will be updated accordingly when CASA completes this work.

33. Land-use planning authorities and state/territory governments should be aware that all intrusions into the flight path for a SHLS have the potential to create aviation safety risks and to limit the scope of operations possible from the SHLS.

34. The flight paths to a SHLS need to be protected from intrusions (permanent and temporary) and land use planning activities that could interfere with safe operations of the HLS (see paragraph 9).

[4] 'Obstacle Limitation Surfaces (OLS) are a series of surfaces that set the height limits of objects around an aerodrome. Objects that project through the OLS become obstacles.' (CASA 1999)

35. The activity that is proposed to be carried out will generally require approval by state or local government authorities, unless exemptions apply or a planning permit/approval is not required.

    All development/activity applications in the vicinity of an identified SHLS should be reviewed to determine if there is any conflict in respect to:

    a) intrusions into the flight path (buildings, cranes, gaseous plumes);

    b) operational hazards (reflective glare, dust, smoke, electromagnetic interference);

    c) lighting that may cause distraction;

    d) lighting installed to illuminate obstructions that is not visible when using night vision goggles;

    e) wildlife/bird strikes;

    f) drone operations/strikes; and

    g) building induced windshear/turbulence.

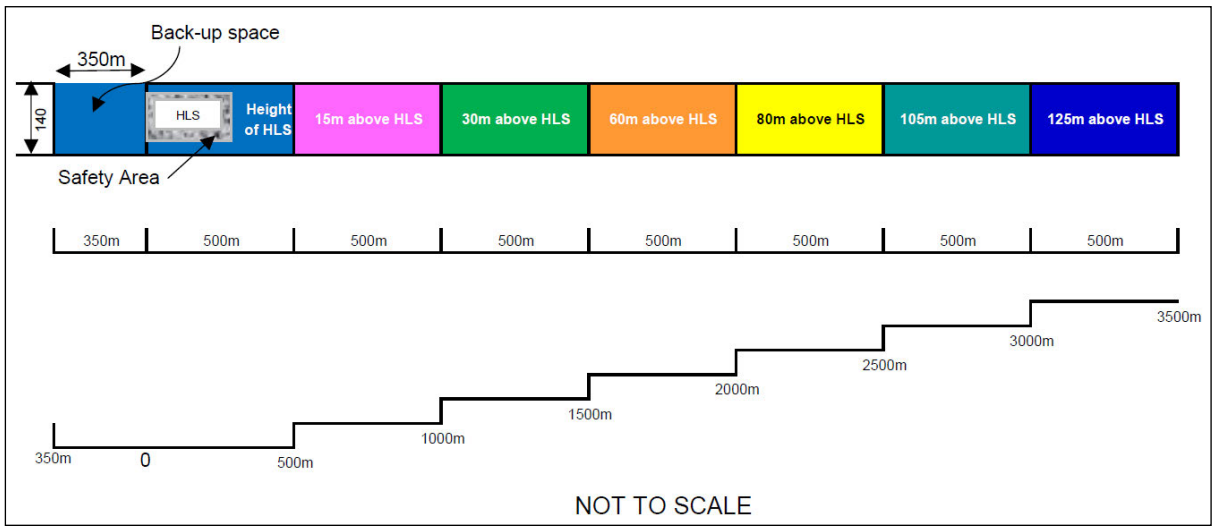
36. Where development, including temporary structures ancillary to that development (for example, cranes) has the potential to impact upon the safe operation of SHLS, it is important that the relevant helipad owner is notified and has an opportunity to make a meaningful contribution to the outcome of the development proposal.

37. Where possible the SHLS asset owner should commission a survey of the helicopter flight path by a suitably qualified aviation professional and submit that survey to the relevant planning authority. The relevant planning authority should then safeguard that helicopter flight path through land use planning scheme provisions and assessment considerations.

38. Where the SHLS has not been surveyed to identify the flight path (including transitional surfaces) and/or that survey has not been provided to the relevant planning authority, the area to be identified for determining the trigger for land use planning referrals to the SHLS asset owner should be in accordance with Figure 1 below. No development should be permitted to exceed the height limits within Figure 1 without the prior approval of the SHLS asset owner.

    Note: A transitional surface for a HLS is a sloping surface off the side of the flight approach and take off area and the take-off splay. Its purpose is to provide sideways protection for a helicopter when using the flight path and within the flight approach and take off area.

Figure 1 – Referral Trigger for SHLS, where HLS has not been surveyed/survey has not been provided



Note: Any development that exceeds the heights shown in Figure 1, which is consistent with the highest level of HLS classification (Performance Class 1), must be referred to the asset owner and CASA.

Figure 1 is to be applied to each flight path (approach and departure) to the SHLS. Accordingly, there may be multiple flight paths. The relevant planning authority will have to consult with the SHLS asset owner to obtain confirmation of the location of the flight path(s) associated with the SHLS and the height of the SHLS.

The methodology incorporates:

a) The 3386m length as measured from the safety area boundary for a Performance 1 classification for a HLS and has applied the required 4.5% slope as prescribed in CAAP 92-2(2).

b) A 350m length as measured from the safety area boundary for the back-up surface of a helicopter. (Note: the actual distance required for a back-up surface varies depending upon the helicopter type and is prescribed in the relevant flight manual for each helicopter).

c) The maximum width incorporates the approach and take-off climb surface and the transitional surface for the AW139 helicopter. The width, has been determined using the formula for night time operations within CAAP 92-2(2) which is 10 x the rotor diameter (13.8m for the AW139 helicopter), which equates to 138 metres, and then rounded to the nearest number.

Further background material supporting this methodology is provided at **Appendix A**.

39. Planning authorities should also include the use of the land in considering potential encroachments into the flight path. For example, while a public park might be appropriate within the flight path, uses or activities in that public park may result in encroachments into the flight path. For a public park, this could include circus tents, ferris wheels and the flying of drones.

Trees

40. Natural features, including trees, can cause obstructions into the flight path of a SHLS. For developments proposed within the flight path to a SHLS, the approved landscape plan should not include tall species that may extend into the flight path on maturity.

41. The relevant planning authority for each jurisdiction may wish to prepare a list of recommended landscape species that are suitable within flight path areas and could condition any approvals (either in the flight path or on the site containing the SHLS) to ensure compliance with that species list (see section on wildlife/bird strike and NASF Guideline C).

Gaseous Plumes

42. An exhaust plume of significant vertical velocity (i.e. a plume rise) may affect aircraft in various stages of flight. In particular, helicopters can be severely affected by a high temperature plume or the altered air mixture above an exhaust plume.

43. Exhaust plumes can originate from any number of sources. For example: industrial facilities release process emissions through stacks or vents; industrial flares create an instantaneous release of hot gases during the depressurisation of gas systems; cooling towers produce large volumes of buoyant gases that can rise a significant distance into the atmosphere and exhaust gases from power generation facilities can produce plumes of varying velocities.

44. Any development proposal, located within/beneath the flight path/OLS of a SHLS, that has the potential to generate a plume rise should be referred to the asset operator/owner and CASA for advice, and if necessary a plume rise assessment[5].

Cranes

45. Any development proposal located within/beneath the flight path to a HLS must be required to indicate:

    a) whether a crane is to be erected during the construction of that development;

    b) the maximum height of the crane;

    c) the height and swing radius of the crane with the jib stowed when not in operation; and

    d) the period in which the crane is anticipated to remain on site.

46. Regardless of whether the proposed development extends into the flight path, if the crane to be used during construction is anticipated to extend into the flight path, CASA and the SHLS asset owner should be contacted for advice. Advice received during that referral must be taken into consideration in the assessment of the application.

47. Due to the number of incidents with cranes encroaching into flight paths, planning authorities are encouraged, unless an encroachment is approved in association with the application, to place a condition or provide an advisory note (or other applicable mechanism) on relevant approvals within flight paths to a SHLS, prescribing that no crane is permitted to extend into the flight path.

[5] See CASA Advisory Circular 139-5(1) – Plume Rise Assessments

Lighting

48. Where a SHLS is to be used in association with night time operations, all lighting is to comply with CAAP 92-2 (2) *Guidelines for the Establishment and Operation of Onshore Helicopter Landing Sites,* except where certified by a suitably qualified and experienced aviation professional.

49. Lighting erected onto any obstruction (building, crane, or telecommunication tower for example) within the flight path or above 110 metres in height (whether it is located within a flight path or not), must be able to be detected by Night Vision Goggles (or equivalent). It is understood that lighting that is red in colour and low intensity steady light is preferable. Additionally, any buildings, cranes, etc above 110 metres in height (regardless of their location) should be referred to CASA as part of the assessment process.

50. At night, and in periods of poor visibility during the day pilots rely on the particular pattern of the aeronautical ground lighting to assist in aligning themselves with the correct touchdown point. It is therefore important that lighting in the vicinity of the HLS is not configured or is of such a pattern that pilots could either be distracted or mistake such lighting as being ground lighting from the HLS.

51. Where planning applications involve significant lighting in proximity to a HLS, planning authorities should seek detailed advice on potential impacts from CASA. For developments not requiring planning approval, the proponent should contact CASA for advice on potential impacts on aircraft operations.

52. Coloured lights are likely to cause conflict irrespective of their intensity as coloured lights are used to identify different HLS facilities. Development proposals involving coloured lights (in the vicinity of a SHLS or its flight paths) should be referred to CASA for detailed guidance.

53. CASA has advised that glare from buildings tends to be momentary and, therefore, unlikely to be a source of risk. Further, it is anticipated that when operating helicopters in bright sunlight, pilots would either wear helmets with integrated visors that provide glare protection or sunglasses.

54. Glare from buildings should be assessed in the planning stage of a SHLS as its impact will vary from site to site and can change significantly in transient conditions associated with time of day, sun angle, and time of year and weather conditions.

Noise

55. Nationally, all helicopters are required to be certified to international noise standards which are implemented through the Air Navigation (Aircraft Noise) Regulations 1984 (the Noise Regulations). These international standards apply to the design of aircraft (including helicopters), and specify the amount of noise that may be emitted by a particular aircraft type/model. The Noise Regulations do not prescribe how an aircraft is to be operated in relation to height or frequency of flights.

56. Australian Standard 2363:1999 *Acoustics – Measurement of noise from helicopter operations*[6] provides methods for the measurement of noise from existing and proposed HLS and helicopter

[6] Note – this standard is flagged for review by Standards Australia (*November 2017*)

overflights. This standard provides technical guidance for local planners, government agencies and operators in calculating the acoustic environment near existing and proposed HLS or flight paths.

57. The frequency of flight movements and hours of operations are key factors that contribute to the noise impact that a HLS will have on nearby sensitive uses. Where possible, the siting and design of a new SHLS should give consideration to the minimisation or mitigation of noise impacts on neighbouring areas from the operation of aircraft at the SHLS.

58. Noise abatement procedures offer potential reductions in noise impacts on the ground. The implementation of noise optimised procedures has been facilitated via guidance material published by Helicopter Association International (HAI).

59. A Fly Neighbourly Advice (FNA) is a voluntary code of practice that can be established between some aircraft operators and communities or authorities that have an interest in reducing the disturbance caused by aircraft within a particular area. An FNA may recommend limitations on operating heights, the frequency of operations and the areas of operations.

60. A FNA is not enforceable under aviation law and mandatory operating and safety procedures will take precedent. A decision to establish a FNA, is normally taken by a government authority, a business operator or a community group that is materially affected by the operation of aircraft. A FNA should acknowledge the necessity for police, fire, search and rescue and other emergency services and infrastructure monitoring organisations to have access to low level airspace as the need arises.

61. Any noise complaints in association with helicopter operations should be directed to Airservices Australia or the SHLS operator.

Windshear and Turbulence

62. Air flow disturbances around and over buildings, stands of trees, thermal building effects and other environmental factors can create hazardous turbulence and wind shear in the vicinity of a SHLS thus affecting the safe operation of aircraft into and out of the facility.

63. Any proposed SHLS should take into consideration the impact of building induced windshear and turbulence in determining its suitability.

64. Any new SHLS should be provided with a wind indicator measuring 2.4m in length and visible to the pilot during take-off approach and landing. For complex SHLS sites, more than one indicator should be provided to ensure pilots receive sufficient information on the wind flow over the site.

65. For any SHLS capable for night operations, the wind indicator(s) should be lit. The wind sock should be located outside of the Safety Area and should not penetrate the flight path or the transitional surface.

66. The Bureau of Meteorology is available to provide advice on the appropriate siting of aviation meteorological equipment to support the safe operation of SHLS.

67. For development proposals involving tall structures in immediate proximity to a SHLS (or its flight paths) developers/planning authorities should consult with the asset owner/operator to seek advice on any potential safety impacts.

68. Where turbulence issues are anticipated for a SHLS, these could be communicated by asset owners to pilots through an En Route Supplement Australia (ERSA) notification. This is a document updated by Airservices Australia every 12 weeks to notify pilots of vital information for planning a flight and when in flight.

Wildlife/Bird Strikes

69. Wildlife/bird strikes are a significant safety risk for pilots as well as an economic risk for operators. Species, numbers, time of day, migratory patterns, flocking patterns, habitat types and breeding activities occurring in the vicinity of HLS contribute to the level of risk.

70. Data supplied by the Australian Transport Safety Bureau indicates that there were 43 recorded wildlife strike incidents for helicopters between 2007 and 2015 (inclusive). 14 of those were in proximity to a hospital HLS.

71. 74% of all strikes and 66% of strikes causing substantial damage occur at (or below) 500 feet.

72. ICAO has developed specific advice on land uses with the potential to become high risk wildlife attractants. These include:

    a) Food garbage disposal;
    b) Sewage treatment and disposal;
    c) Artificial and natural lakes;
    d) Abattoirs and freezing works;
    e) Fish processing plants;
    f) Bird sanctuaries, and
    g) Outdoor theatres.

73. SHLS asset owners should work with the relevant planning authority to establish mechanisms that will identify and restrict land uses that would cause hazardous wildlife attraction or activity at or across the HLS and/or its flight paths. HLS asset owners should refer to Guideline C – *Managing the Risk of Wildlife Strikes in the Vicinity of Airports* (Guideline C). Whilst it is acknowledged that Guideline C has been specifically written for airports, its application also has relevance to HLS.

74. Where located within 5.5 kilometres of a SHLS, any proposed uses identified within Attachment 1 of Guideline C should be referred to the asset owner as part of the assessment process. Any comments provided by the asset owner should be taken into consideration in the assessment of that application.

75. When siting and/or assessing a new SHLS consideration should be given to land uses within 5.5 kilometres, to determine the suitability of that site in relation to wildlife/bird strikes.

76. CASA Advisory Circular 139-26(0) provides guidance on wildlife hazard management at aerodromes. At present there is no specific information in this guideline that relates to wildlife strike risk management for HLS.

Remotely Piloted Aircraft Systems Operation/Strikes

77. RPAS must not be flown over or above people; including beaches, parks, events, or sport ovals where there is a game in progress.

78. The operation of a RPAS in the vicinity of a SHLS is to be in accordance with CASA Advisory Circular AC 101-10 Remotely Piloted Aircraft Systems – Operation of Excluded RPA (other than model aircraft).

Background Material

Victoria

79. Victoria is the only State at present to have hospital based HLS flight paths protected through land use planning instruments[7].

80. An inner and outer Design and Development Overlay are applied to cater for a graduated plane that reflects the flight path of a helicopter and certain types of development are exempt. This minimises the number of development that may otherwise trigger the overlay and require a planning permit.

81. The 'Inner Design and Development Overlay' ensures that any structures, works, or plumes that are of the same height or higher than the HLS and within 240 metres of the HLS or 460 metres along the flight path are referred to the Department of Health and Human Services for assessment of potential impacts on the helicopter flight path.

82. The 'Outer Design and Development Overlay' ensures that any structures, or plumes that are more than 10 metres above the HLS and between 460 metres and 1,130 metres from the HLS along the flight path are referred to the Department of Health and Human Services (DHHS) for an assessment of potential impacts on the helicopter flight path.

83. A flight path 'corridor' of 150 metres is protected to allow for crosswinds and where appropriate a buffer area of 70 metres either side, which represents the reach of a construction crane. In regional Victoria, the 70 metre buffer is only applied in rural cities, such as Bendigo, where there is a higher future likelihood that developments may use construction cranes that may impact helicopter flight paths.

84. DHHS is a determining referral authority and local councils are required to include its recommendation(s) as conditions on a planning permit. It is working with Albury City Council to protect the Albury Hospital HLS flight paths.

85. Guidance notes and FAQs on HLS flight path protection are available on the DHHS website at: http://www.capital.health.vic.gov.au/Asset_property_management_and_operations/Hospital_heliport_flight_path_protection/ .

UK

86. Advice from the UK Civil Aviation Authority (CAA) indicates that it has regulatory oversight of licenced/certified aerodromes and heliports and protected safeguarding zones, where a UK license or EASA certificate is held.

87. The one aerodrome dedicated to helicopter operations, over which the CAA do have oversight, has informal safeguarding arrangements in place where there is notification of tall structures in close proximity to the heliport.

[7] Victoria Planning Provision - http://planningschemes.dpcd.vic.gov.au/schemes/vpps/52_15.pdf

88. Due to an accident when a helicopter collided with a crane positioned close to the heliport, the UK Government has agreed to formalise safeguarding arrangements to ensure a more robust notification system is in place. The final shape and design of that zone and protection of the recognised Take off Climb/Approach funnel surfaces (Annex 14 Vol II), within 4.5km radius of the heliport, is currently under review (late 2017).

89. Another licenced heliport (Penzance Heliport) is safeguarded by directing planning authorities to consult with the heliport. This was enacted by lodging a safeguarding map with each planning authority. Whenever a development (triggered by height) was proposed within close proximity to Penzance Heliport, they had an obligation to consult with the heliport owners. The map also included a radius of approximately 3km from the heliport where all applications likely to attract birds required consultation.

APPENDIX A - HLS FLIGHT PATH METHODOLOGY BACKGROUND

Recommended Dimensions and Slopes of Obstacle Limitation Surfaces for Secondary HLS Visual Final Approach and Take-Offs (FATOs)

SURFACE and DIMENSIONS	SLOPE DESIGN CATEGORIES		
	A	B	C
APPROACH and TAKE-OFF CLIMB SURFACE:			
Length of inner edge	Width of safety area	Width of safety area	Width of safety area
Location of inner edge	Safety area boundary (Clearway boundary if provided)	Safety area boundary	Safety area boundary
Divergence: (1st and 2nd section)			
Day use only	10%	10%	10%
Night use	15%	15%	15%
First Section:			
Length	3 386 m	245 m	1 220 m
Slope	4.5% (1:22.2)	8% (1:12.5)	12.5% (1:8)
Outer Width	(b)	N/A	(b)
Second Section:			
Length	N/A	830 m	N/A
Slope	N/A	16% (1:6.25)	N/A
Outer Width	N/A	(b)	N/A
Total Length from inner edge (a)	3 386 m	1 075 m	1 220 m
Transitional Surface: (FATOs with a PinS approach procedure with a VSS)			
Slope	50% (1:2)	50% (1:2)	50% (1:2)
Height	45 m	45 m	45 m

Figure 3 – Recommended dimensions and slopes of obstacle limitation surfaces for secondary HLS visual FATOs

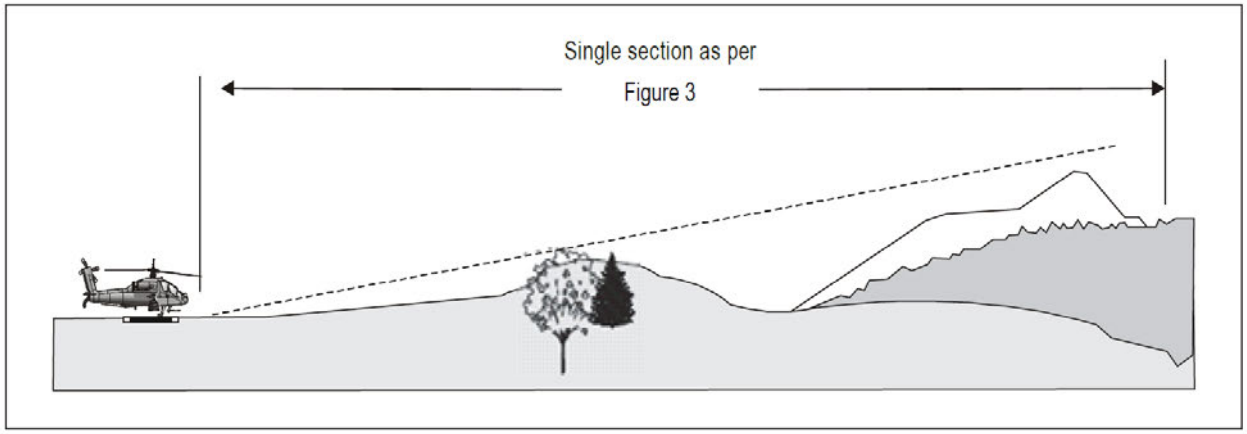
Note:

(a) The approach and take-off climb surface lengths of 3 386 m, 1 075 m and 1 220 m associated with the respective slopes, brings the helicopter to 152 m (500 ft) above FATO elevation.

(b) Seven rotor diameters overall width for day operations or 10 rotor diameters overall width for night operations.

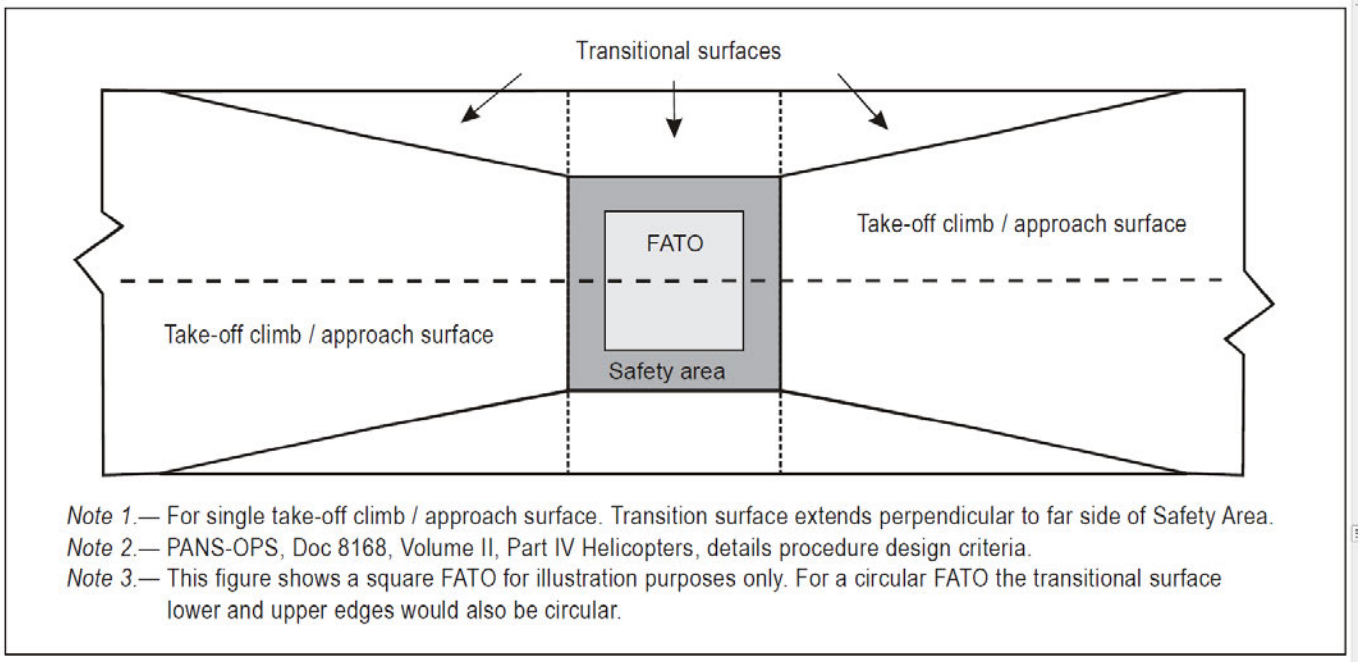
(Source: Civil Aviation Safety Authority (2014), *CAAP 92-2(2) Guidelines for the establishment and operation of onshore Helicopter Landing Sites, page 12.)*

Approach and Take-off Surfaces – "A" slope profile – 4.5% design



(Source: Civil Aviation Safety Authority (2014), *CAAP 92-2(2) Guidelines for the establishment and operation of onshore Helicopter Landing Sites, page 13.)*

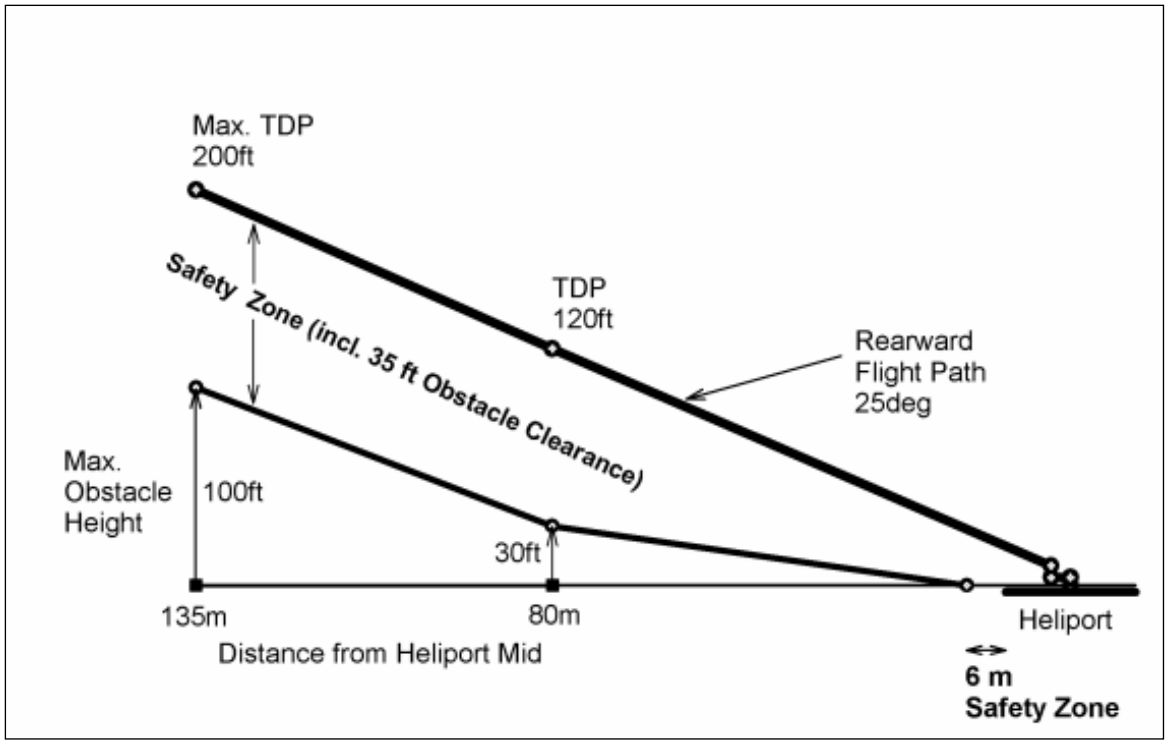
Transitional Surface for a FATO with a Point-in-Space (PinS) approach procedure with a visual segment surface (VSS)



(Source: Civil Aviation Safety Authority (2014), *CAAP 92-2(2) Guidelines for the establishment and operation of onshore Helicopter Landing Sites, page 15.)*

Back up Profile for the Airbus H135 Helicopter

Cat. A Vertical Take-Off and Landing (VTOL) Rearward Flight Path Surface Level Heliport Obstacle Clearance for H135.



(Source: Eurocopter (now Airbus Helicopters) 'Figure C23 Rearward Flight Path (VTOL)', *Flight Manual EC 135 P2+* Rev.10)

*Take-off Departure Profile (TDP)

Back Up Profile for Augusta Westland AW 139 Helicopter

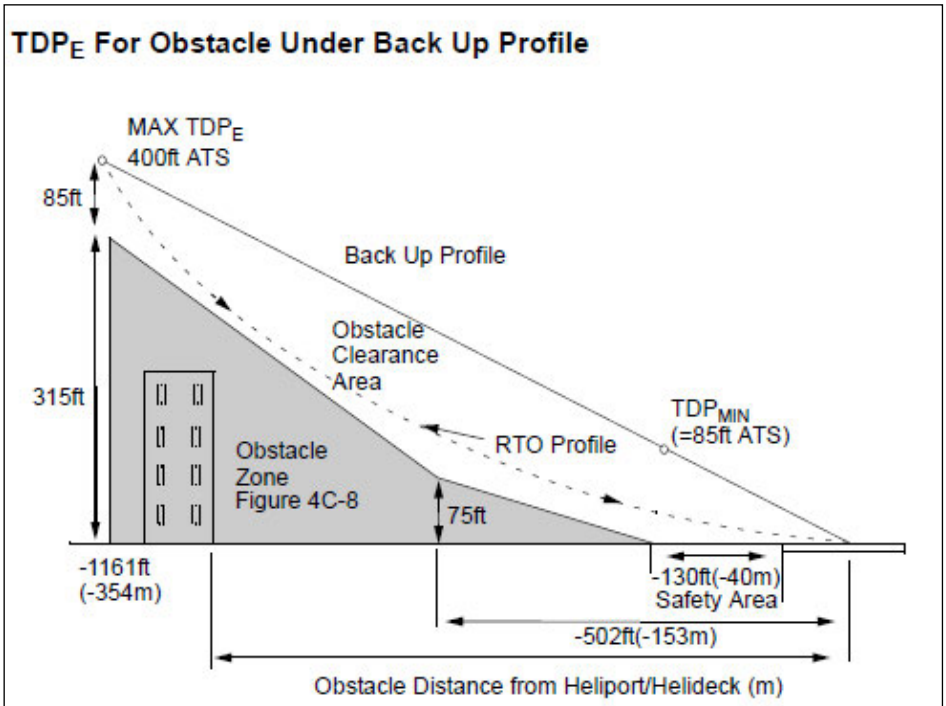


Figure 4C-2 Obstacle in the Back Up Profile

If there are obstacles under the Take-Off Back-Up profile then the obstacle height and position, with respect to the Heliport/Helideck, must be within the Obstacle Zone as defined by the table in Figure 4C-8 which gives a minimum obstacle clearance height of 15 ft. If Operating Rules define specific obstacle clearance this must be taken into consideration when defining the TDP$_E$.

(Source: Augusta Westland 'TDP$_E$ For Obstacle Under Back Up Profile', *AW139 Rotorcraft Flight Manual*)

*Rejected Take-off (RTO)