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

Work together
Stay apart

Seminar for aerodrome users: Matamata

28 February 2024

Work Together, Stay Apart Safety Campaign

Civil Aviation Authority

What we are going to cover:

1. Work Together, Stay Apart Safety Campaign
2. The statistics
3. How do we enhance safety
4. Knowing the 4 rules that underpin flying at unattended aerodromes
5. Reporting
6. Questions and Answers

Why is CAA interested in airborne conflict…

- Increasing critical near miss events
- Outcomes from the Masterton midair and associated TAIC report recommendations
- Increased concern and feedback regards pilot behaviors at unattended aerodromes
- Needing a joined-up approach to improve safety

Resulting in a focus area for Authority for 23/24

What the numbers are telling us…

Since 1st Quarter 2016, within the vicinity of an uncontrolled aerodrome:

- 500 **reported** airborne conflict events
- 137 near collisions / avoidance action taken
- Critical near collision events increasing year on year

"Critical" means one "slice of cheese" left preventing the midair collision

Work Together, Stay Apart Safety Campaign

- Proactive action to reduce airborne conflict events
- Multiple stakeholders
- Airborne conflict is a shared risk across multiple parties
- Number of educational products/engagements

  - SOHJ video, Plane Talking Seminar and Video
  - Dedicated Vector
  - Social Media Campaign
  - Did you know animations
  - Statement of Commitment
  - Know your neighbour's audio story
  - Aerodrome Users Series
  - Complex Circuit Video and Dedicated Seminar late 2024
  - GAP booklet– How to be an aerodrome manager at a noncertified aerodrome

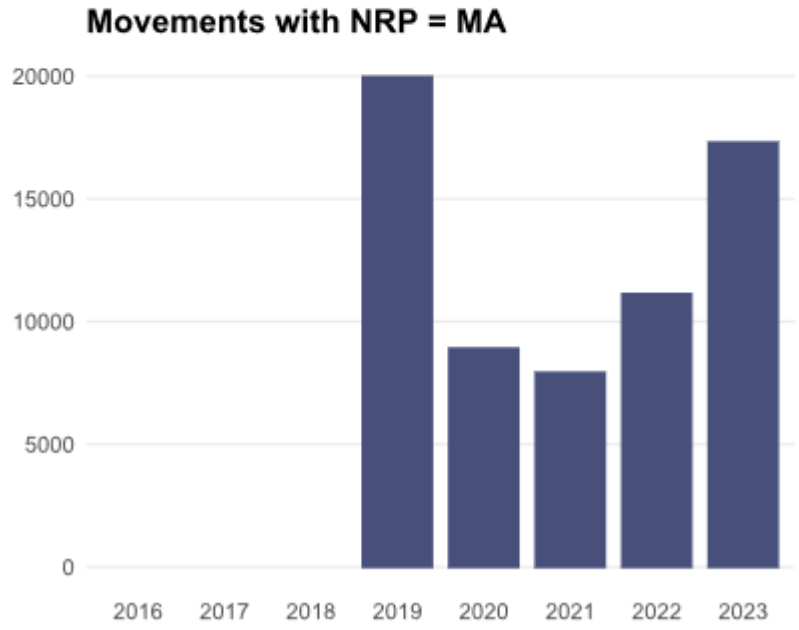
THE STATISTICS

- Matamata is busy and getting busier
- Large increase in movements since 2021 – looking to return to pre covid levels

The following is the movement data that has been reported to the CAA:

Movements with NRP = MA by year

Year	Movements in MA
2019	19978
2020	8905
2021	7920
2022	11128
2023	17299



Work together
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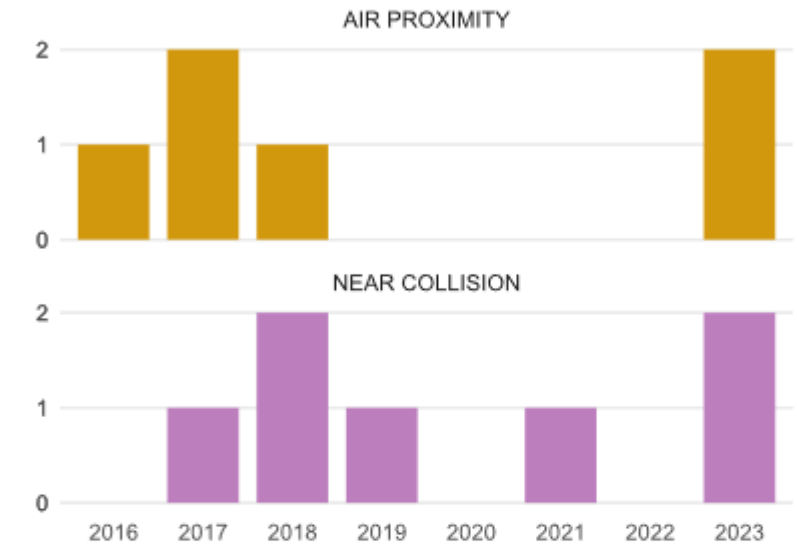
THE STATISTICS

- Number of reported Aviation Related Concerns are increasing as are Airspace Events

THE STATISTICS – Airborne Conflict Events

- Total airspace events are increasing at Matamata
- 5 airborne conflict events since 2021
- 3 of these have been near collisions



Airborne conflict events (Air proximity, loss of separation, near collisions) with NRP = MA, by severity

Severity	Total airborne conflicts since 2016
Critical occurrences	3
Major occurrences	8
Minor occurrences	2

THE STATISTICS – Aviation Related Concerns

- 28 ARCs since 2016
- ARCs increasing
  - Aircraft operating deficiency
    - Non-standard circuit procedures
    - Pilot behaviours
    - Radio communications

Aviation Related Concerns (ARCs) with NRP = MA, by ARC category and year

ARC category	2016	2017	2018	2019	2020	2022	2023
Aircraft operations deficiency	2	4	1	3	2	0	4
Noise complaint	0	0	1	0	0	0	0
Other deficiency	0	0	1	1	0	0	0
License, certificate and fpp concerns	0	0	0	1	2	0	0
Other hazardous operation concern	0	0	0	1	0	0	0
Light/laser strikes	0	0	0	0	1	0	0
Low flying	0	0	0	0	0	1	0
Aerodrome operations deficiency	0	0	0	0	0	0	2
Aircraft maintenance deficiency	0	0	0	0	0	0	1

THE STATISTICS - Overall

- Reported occurrences increasing overall particularly airspace events and aviation related concerns
- Indicators point to growing operational risk

Occurrences with NRP = MA, by type and year

Occurrence type	2016	2017	2018	2019	2020	2021	2022	2023	2024
ACC	2	0	1	1	0	0	0	1	0
ARC	2	4	3	6	5	0	1	7	0
ASP	7	7	6	3	4	4	2	7	2
ADI	0	1	1	2	3	1	0	1	0
INC	0	2	4	2	2	0	1	1	1
PAA	0	0	1	0	0	0	0	0	0

Aeronautical Study – CAR 139.21

- *Matamata Piako District Council have engaged a consultant to conduct an aeronautical study. The scope of the study is not currently known to CAA.*
- *The study should provide a clear understanding of:*

  1) current & future type of aircraft operations at Matamata aerodrome, and

  2) the short and long-term infrastructure plans for Matamata aerodrome, and

  3) the current provision and future need of resource assigned for the management of the aerodrome.
- *CAA has requested and received completed Aeronautical Studies from the operators of Glacier Country Heliport , Milford, Masterton, Rangiora, and Wanaka aerodromes.*

Common factors in airborne conflict events across NZ

- Not following part 91 rules – i.e. 91.127 Use of aerodromes, 91.223 – Operating on and in the vicinity of an aerodrome, 91.227 - Operating near other aircraft, 91.229 ROW rules
- Attitudes and behaviours – not displaying good airmanship or circuit practices
- Non-standard procedures
- Ineffective look out
- Poor radio communications
- Failure to establish and maintain adequate situational awareness

How do we enhance safety?

Human behaviour

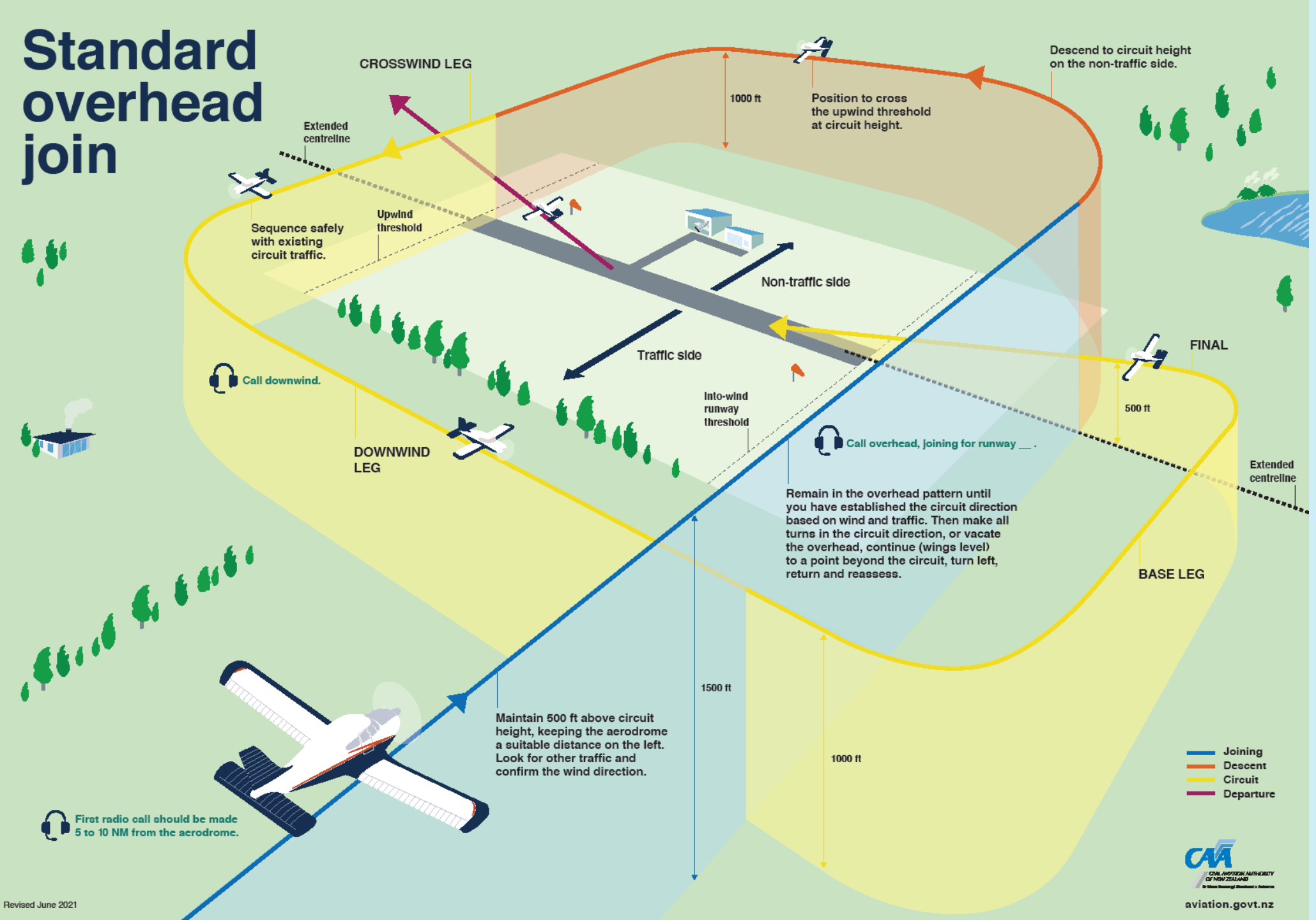
Attitude – standards/knowledge

Consistency

Predictability

Consideration

Standard overhead join



Revised June 2021

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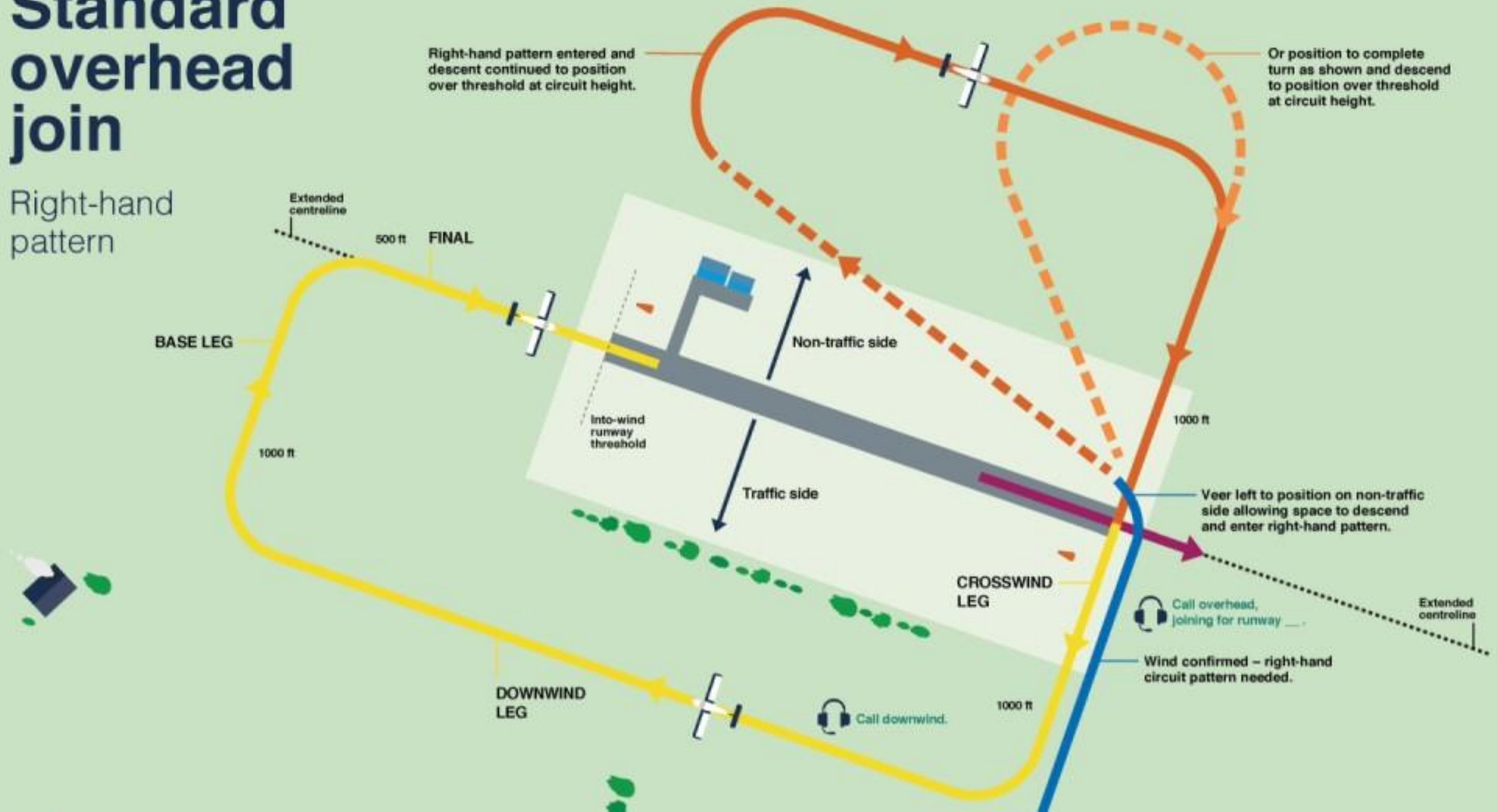
Standard overhead join

Right-hand pattern



91.127 Use of aerodromes

Suitable for landing/take-off

Complies with limitations and operational conditions

Clear of unsafe areas

Runway/heliport is clear

Manoeuvre clear of obstructions

Without conflict

91.127 – helicopter specific

Physical characteristics

Obstacle limitation surfaces

Visual aids

Clear of obstructions

Autorotative landing potential without causing hazard

91.223 operating on & in the vicinity of an aerodrome

Avoiding collision

Conform with or avoid other traffic

Left/right circuit

91.223 exceptions

- ATC
- IFR procedures
- Aviation event
- Agricultural operation/ground signal/no conflict
- Helicopter – conform or avoid

91.227 operating near other aircraft

Avoid collision hazard

Formation – prior briefing

91.229 right of way rules

- Lookout
- Take action to avoid collision
- Avoid passing over, under, in front of – unless well clear & considerate of wake turbulence
- Alter heading to right
- Hierarchy of give way

91.229 ROW continued

You must give way to aircraft:

Landing

Lower

On final

If risk of collision

91.229 taxiing

Give way to landing, taking off, or about to take off

Head on or nearly so, stop, or alter course to right…well clear

Converging, give way to right

Overtaking, give way…well clear

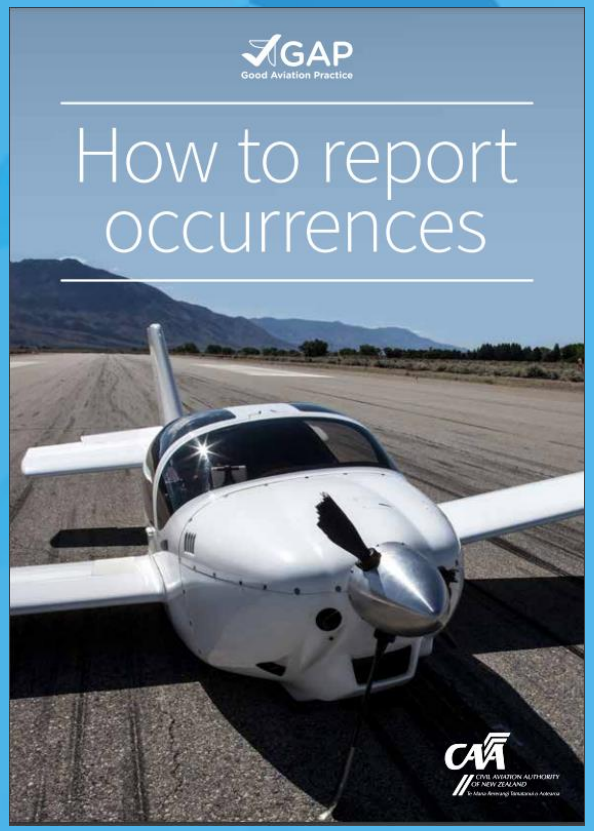
Distress

AIP AD 1.6

- Identify traffic/non-traffic side – avoid descending onto circuit traffic
- Descent only done on non-traffic side
- Join direct into downwind, base, final
  - without causing conflict
  - depicted tracks
- Runway-in-use/traffic properly ascertained
- Entering/within – turns appropriate
- Circuit traffic has ROW unless wx dictates IFR
- See & avoid – safe separation – visual lookout

Reporting incidents and accidents

- Requirement under S26of the CA ACT (becomes Section 49 of the CA ACT 2023)
- Vital tool to proactively improve safety
- All accidents reported regardless of Part 91/103
- Reporting is seen as a ‘Positive” – open/honest, willing to learn and reflect
- Be comprehensive – Get advice
- Reporting non-compliant activity – 005/ARC
- Failure to report (IS an offence, with prescribed penalties)



Summary

- Indicators point to growing operational risk
- Proactive opportunity for all to influence behaviours and improve safety
- At the recreational level, controls largely sit with individual pilot attitudes
- CAA Intervention to educate and inform but other tools available if needed

Questions & Answers