

NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK

MANAGING THE RISK OF WILDLIFE STRIKES IN THE VICINITY OF AIRPORTS

Revision Date	Version	Changes Made	Approved By
Feb 2012	3.1.1	Initial approved guideline	NASAG
Apr 2012	3.1.2	Drafting changes post consultation process	SCOTI
Jul 2012	3.1.3	Version control table and page numbers added	S. Stone, GM Aviation Environment, DOIT
Oct 2014	3.1.4	Clarification re Aerodrome Reference Point added	S Stone, GM, Aviation Environment, DIRD
Nov 2023	4.0	General review and update	NASAG

Purpose of the guideline

1. To provide guidance to Commonwealth, state/territory and local government decision makers and airports to reduce the risk of strikes between wildlife and aircraft by managing wildlife-attracting land uses near airports.

Why it is important

2. The *Principles for a National Airports Safeguarding Framework* acknowledge the importance of airports to national, state, territory and local economics, transport networks and social capital.
3. Wildlife strikes occur when wildlife collides with an operational aircraft. Wildlife strikes and wildlife avoidance manoeuvres can cause injuries, fatalities, aircraft damage and operational delays. It is important to take action to minimise the risks posed by wildlife strikes to protect aviation operations and the community.
4. Hazardous wildlife is wildlife that is attracted to land uses near airports and can migrate onto the airport or across flight paths, increasing the risk of wildlife strikes. The most common forms of hazardous wildlife are birds and flying mammals, such as bats and flying foxes, that can cause wildlife strikes on or near airports when aircraft fly at lower elevations.
5. Aviation safety regulations generally do not address wildlife hazards outside the boundary of airports (off-airport) in the same way they address on-airport risks. There is an ongoing need to manage off-airport wildlife hazards to ensure Australia is in step with its national and international obligations.

6. The risk of wildlife strikes can be significantly reduced through land use planning and development decisions that minimise or mitigate development that can attract hazardous wildlife. For example, prohibiting land-fill sites or requiring non-attractant vegetation for landscaping near airports can reduce the amount of hazardous wildlife attracted to the area.
7. Many airports are already surrounded by existing land uses that can attract hazardous wildlife. Monitoring and mitigating existing wildlife attractants can reduce the amount of hazardous wildlife attracted to the area.

How this guideline should be used

8. This guideline should be used primarily to help state and territory governments implement measures through their respective planning systems to reduce the risk of wildlife strikes near airports.
9. It guides state and territory governments to:
 - a. prepare new and revised land use policies that minimise and mitigate wildlife-attracting land uses near airports
 - b. set requirements for development that minimise wildlife attractants near airports
 - c. collaborate and share information with airport operators, landowners, local governments, and site operators to help mitigate wildlife attractants for existing developments near airports.
10. This guideline helps airport operators manage their responsibilities to monitor, assess and mitigate existing wildlife hazards near airports and collaborate with relevant stakeholders.
11. This guideline focuses on achieving outcomes without prescribing how state, territory and local governments should implement the specific means to achieve those outcomes in their planning systems. That is a matter for individual jurisdictions, and it is appropriate that jurisdictions have some flexibility implementing this guideline, given the variability in planning approaches.

International and national obligations

12. As a contracting state to the *Convention on International Civil Aviation* (the convention) Australia has an international obligation to manage the risk from wildlife hazards. Under annex 14 to the convention, Australia is obliged to take action to decrease the risk to aircraft operations by adopting measures to minimise the likelihood of collisions between wildlife and aircraft.¹
13. Annex 14 to the convention states that action should be taken to eliminate or prevent land uses, including garbage dumps or any other source, that may attract wildlife to the aerodrome or its vicinity. Such action may be informed by a wildlife assessment and in circumstances where the elimination of existing uses is not possible, risks to aircraft posed by such sites should be reduced to as low as reasonably practicable.² It recommends

¹ Annex 14 to the Convention on International Civil Aviation, Volume 1, Ninth Edition, ICAO, 2022, s9.4.3.

² Ibid., s9.4.4.

contracting states should give due consideration to aviation safety concerns related to land developments in the vicinity of the aerodrome that may attract wildlife.³

14. The ICAO *Airport Services Manual* states that a 13 km circle centred on the aerodrome reference point is recognised as where land use should be assessed with regard to wildlife hazard management. It advises that contracting states should consider all aviation safety concerns related to land development in the vicinity of the aerodrome to minimise the attraction of wildlife.⁴ The *Airport Services Manual* also recommends that a monitoring process of sites where hazardous wildlife is to be found should be instigated, at least seasonally.⁵
15. Australia's Civil Aviation Safety Regulations 1998 include provisions to meet Australia's international obligations under the convention. The Part 139 Manual of Standards, established under these regulations, requires airport operators to:
 - a. include in their aerodrome manual, procedures to deal with the hazards to aircraft operations caused by the presence of wildlife on or in the vicinity of the aerodrome, including procedures for monitoring, assessing and mitigating wildlife hazards.⁶
 - b. in consultation with the local planning authority, attempt to monitor sites within 13 kilometres (km) of the aerodrome reference point that attract wildlife and assess any detected wildlife hazard for its potential risk to aircraft operations.⁷
 - c. where a wildlife hazard management plan is required, specify in the plan the liaison arrangements for local planning authorities within a radius of at least 13 km from the aerodrome reference point.⁸
16. This guideline supports actions in line with existing national and international obligations.

Roles and Responsibilities

State, territory and local governments

17. State and territory governments are responsible for managing their respective planning systems and implementing this guideline through their planning systems.
18. State, territory and local governments are responsible for strategic planning, land use planning and assessing development on land near airports.
19. State, territory and local governments should consider and mitigate wildlife hazards in line with this guideline when undertaking land use planning or development assessment within 13 km of airports. This may include seeking wildlife hazard expert advice.
20. State, territory and local governments should engage collaboratively with relevant stakeholders to support the implementation of this guideline, including through

³ Ibid., s9.4.5.

⁴ ICAO Doc 9137, *Airport Services Manual*, Part 3 – Wildlife Hazard Management, Fifth Edition, ICAO, 2020, s4.4.2

⁵ Ibid., s4.4.4

⁶ Part 139 (Aerodromes) Manual of Standards 2019 (Cth), s11.08

⁷ Ibid., ss17.01-17.02

⁸ Ibid., s17.04(2)(d)

collaboration and information sharing with relevant airport operators and supporting wildlife monitoring activity undertaken by an airport operator.

Airport operators

21. Airport operators should maintain and implement measures to periodically monitor and assess sites within 13 km of the airport that can attract hazardous wildlife. Airport operators should, in collaboration with state and territory governments and other stakeholders, work to mitigate wildlife hazards within 13 km of the airport.
22. Airport operators should engage collaboratively with relevant stakeholders, including state, territory and local governments, to support the implementation of this guideline.

Civil Aviation Safety Authority (CASA)

23. CASA is Australia's safety regulator for civil air operations and the operation of Australian aircraft overseas. CASA is responsible for the implementation of ICAO standards and recommended practices, setting and enforcing Australian civil aviation safety requirements, including the Part 139 (Aerodromes) Manual of Standards.
24. CASA regulates and conducts surveillance of all regulated airports to ensure that airport operators are adequately managing the risk of wildlife strikes.

Land use types, wildlife attractants and wildlife management areas

25. Wildlife is attracted to sources of food, water and shelter.
26. Land uses can include elements that attract wildlife. These primarily include:
 - a. natural elements such as trees, grass, landscaping, green walls, open water (food, water and shelter).
 - b. structural elements such as buildings, walls and sheltered spaces (shelter).
 - c. exposed waste and food (food and water).
27. Where mitigation is required, land use elements should be eliminated, adjusted or managed to ensure they do not act as food, water or shelter attractants for wildlife. Additional measures to repel wildlife may also be effective to mitigate risk.
28. Further detail on wildlife attractants and measures to mitigate them can be found in the *ICAO Airport Services Manual*.⁹
29. Airport operators should identify and make public 3 wildlife management areas for the airport:
 - a. off-airport land within 3 km of the aerodrome reference point (Area A)
 - b. land between 3 km and 8 km from the aerodrome reference point (Area B)
 - c. land between 8 km and 13 km from the aerodrome reference point (Area C).

⁹ ICAO Doc 9137, Airport Services Manual, Part 3 – Wildlife Hazard Management, Fifth Edition, ICAO, 2020, s4.2

30. Airport operators may, based on a wildlife hazard expert recommendation and with the agreement of the relevant state or territory government, adjust the perimeters of areas A and B.
31. The Wildlife Hazard Management Action Table at Attachment 1 to this guideline identifies:
 - a. land use types that may attract wildlife
 - b. the wildlife attractant risk of each land use type
 - c. the most likely elements of each land use type that can attract wildlife
 - d. actions to be undertaken for land use types within wildlife management areas.
32. Attachment 2 to this guideline is an example map identifying wildlife management areas.

Actions for new and changed development and land uses in wildlife management areas

33. State, territory and local governments should ensure the relevant action, as indicated in attachment 1, is carried out when undertaking land use planning and development assessment for each land use type within each wildlife management area.
34. Where '**incompatible**' is indicated, development of this land use type should generally not be permitted within the wildlife management area. Flexibility should be given to allow for development that demonstrates exceptional mitigation measures, such as the application of new technologies, that have been assessed as suitable by a wildlife hazard expert. Where approved, information regarding this development should be provided to the relevant airport operator and it should be included in future monitoring activity undertaken by the relevant airport operator.
35. Where '**mitigate**' is indicated, proposed development of this land use type should be assessed by a wildlife hazard expert and potential wildlife attractants be suitably mitigated either before the development is approved or as a condition of the approval. Where approved, information regarding the development should be provided to the relevant airport operator and it should be included in future monitoring activity undertaken by the relevant airport operator.
36. Where '**monitor**' is indicated, information regarding approved development should be provided to the relevant airport operator and it should be included in future monitoring activity undertaken by the relevant airport operator.
37. Where '**no action**' is indicated, land use planning and development assessment do not need to consider wildlife hazards and no information needs to be provided to an airport operator.
38. State, territory and local governments should support and facilitate monitoring activity undertaken by airport operators where possible, including engaging with landowners and site operators where appropriate.

Actions for existing land uses in wildlife hazard areas

39. Airport operators should monitor, assess and make efforts to mitigate existing hazardous wildlife and wildlife attractants within the relevant airport's wildlife management areas in accordance with actions set out in attachment 1.
40. Monitoring, assessment and mitigation should be undertaken in collaboration with state, territory and local governments, landowners, site operators and relevant land management agencies. While it may be difficult to mitigate existing wildlife attractants, every effort should be made to seek support and cooperation from relevant stakeholders to achieve a suitable outcome.
41. Where '**mitigate**' is indicated, the site should be included in wildlife monitoring activity and elements that could potentially attract hazardous wildlife should be identified, assessed and mitigated. This may include seeking wildlife hazard expert advice.
42. Where '**monitor**' is indicated, the site should be included in wildlife monitoring activity and elements that are found to be attracting hazardous wildlife should be assessed and mitigated. This may include seeking wildlife hazard expert advice.
43. Where '**no action**' is indicated, no monitoring or mitigating activity is required.

Collaboration, consultation and education

44. State, territory, local governments and airport operators should establish arrangements to collaborate and support proponents and other stakeholders to achieve the outcomes of this guideline.
45. Arrangements may include:
 - a. involving relevant state and local government bodies and stakeholders on airport wildlife management committees or equivalent to share information, coordinate and manage wildlife management actions
 - b. coordinating with relevant state and territory land management agencies such as state/national park management authorities to mitigate wildlife attractants
 - c. establishing procedures, protocols and standards for engagement, monitoring and mitigation actions
 - d. ensuring airport operators have an opportunity to comment on proposed development and land use plans within wildlife management areas
 - e. sharing or providing opportunities for wildlife hazard and management training
 - f. conducting or supporting outreach and education for relevant stakeholders in wildlife management areas regarding wildlife attractant mitigation measures.

Records and information sharing

46. Airport operators should record and share information with relevant state, territory and local government bodies relating to:
 - a. wildlife management and monitoring plans, technologies and actions

- b. relevant wildlife management records including minutes of wildlife management committee meetings
 - c. wildlife monitoring and survey results, including wildlife population locations, numbers and hazardous wildlife movement paths
 - d. results of expert wildlife assessments
 - e. wildlife hazard management training and guidance material
 - f. relevant details of engagement or correspondence with landowners, site operators or other stakeholders regarding wildlife hazard management.
47. State, territory and local governments should, where relevant, record and share information with relevant airport operators relating to:
- a. site details for new land uses or approved development in wildlife management areas that require future monitoring
 - b. results of expert wildlife assessments
 - c. contact details for landowners or site operators of land uses that require monitoring, assessment or mitigation
 - d. relevant details of actions and engagement with landowners, site operators or other stakeholders relating to wildlife hazard management.

New airports and airport expansion

48. When considering the development of a new airport or an airport expansion, federal, state and territory governments should consider this guideline and take into account existing incompatible land uses and land uses that attract hazardous wildlife within the wildlife management areas of the proposed or expanded site.
49. When undertaking land use planning, state and territory governments should consider wildlife hazards relating to plans (including draft plans) for future airport development and expansion.