



NSW NATIONAL PARKS & WILDLIFE SERVICE

Guidelines for undertaking wild dog and fox aerial baiting on National Parks and Wildlife Service estate

Version 2

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1. Introduction

This document provides guidance for National Parks and Wildlife Service (NPWS) staff to plan, approve and undertake aerial baiting for wild dogs and foxes, and is referred to in Section 9 of Schedules 1 and 2 of the Pesticide Control (1080 Bait Products) Order 2020 (PDF 568KB), which deals with the conditions for aerial baiting.

This document is guided by the Pesticide Control (1080 Baits Products) Order 2019, NPWS wild dog policy, and the Conservation Risk Assessment: Aerial baiting programs with sodium fluoroacetate (1080) for wild dog and fox control – 2020–2022, and must be used in conjunction with these documents. The guidelines allow NPWS to plan programs to address local priorities in line with current policy. This document may be updated every five years or as required.

2. Criteria for undertaking aerial baiting of wild dogs and foxes

Aerial baiting can only be undertaken on NSW NPWS estate when at least one criterion from Group A and one criterion from Group B below are met. These criteria incorporate both strategic and reactive control considerations.

2.1 Group A criteria

- 2.1.1 NPWS estate is adjacent to where stock is being lost or likely to be lost due to wild dog and/or fox predation.
- 2.1.2 Native wildlife is being impacted or is likely to be impacted due to wild dog and/or fox predation.

2.2 Group B criteria

- 2.2.1 It is impractical to undertake ground-based control.
- 2.2.2 It is economically beneficial (fiscally and/or temporally) or more effective to undertake aerial control rather than ground-based control.
- 2.2.3 The aerial baiting is part of a coordinated baiting program involving other stakeholders.

3. Determining the aerial baiting application rate

3.1 Aerial baiting at the chosen location should be undertaken as follows:

3.1.1 Application rates should be 40 baits per linear kilometre where the aim is to control wild dogs.

3.1.2 Application rates should be 10 baits per linear kilometre where the aim is to control foxes.

3.1.3 Where grid style baiting (dog or fox) is to be used, the linear bait rate should be 10 baits per kilometre approximately 1 kilometre apart.

3.2 In relation to wild dogs, the condition above should be modified to a lower bait rate where one or more of the following applies:

3.2.1 The NPWS Authorised Control Officer (ACO) risk assessment determines there is an unacceptable level of risk and does not allow for the maximum rate of 40 baits per kilometre. In such cases, the NPWS ACO's risk assessment must identify the acceptable bait rate.

3.2.2 A lower bait rate, per linear kilometre, for wild dogs has been used for many years previously in the target area and wild dogs are not impacting stock; for example, an efficient, integrated control program is already providing effective results.

3.2.3 Economic considerations have determined a more efficient aerial bait rate that will provide greater spatial coverage within the control area. For example, for the same cost, a program may be able to provide a more adequate spatial coverage of the control area by aerial baiting 100 kilometres at 30 baits per kilometre as opposed to 75 kilometres at 40 baits per kilometre.

Note: Where possible, the NPWS ACO's risk assessment of the on-park baiting rate must consider the aerial bait rates being applied cooperatively on other tenure/s adjacent to the NPWS estate and where appropriate be consistent. Where the bait rates are not consistent between on-park and off-park tenure, the reasons must be stated in the application to be considered by the NPWS Park Operations Director.

4. Requirements for aerial baiting on NSW National Parks and Wildlife Service estate

4.1 Planning and approval requirements

- 4.1.1 Aerial baiting must be undertaken in accordance with the current Pesticide Control (1080 Baits Products) Order and NPWS Pesticide Use Notification Plan (PDF 327KB).
- 4.1.2 Aerial bait lines must be developed in consultation with the Branch pest officer/s (BPO), appropriate Area manager/s and appropriate ranger/s, and must be mapped on a geographic information system (GIS).
- 4.1.3 The locations of aerial bait lines must be considered before each baiting event is undertaken. Bait line locations should consider new incursions of wild dogs or foxes, changes in populations (spatial location and size), areas historically habituated by wild dogs or foxes, and other control techniques on adjacent off-park tenure.
- 4.1.4 The locations of bait lines should be targeted to areas where they will have the maximum impact on reducing livestock attacks and/or reducing impacts on wildlife from wild dogs or foxes.
- 4.1.5 When planning aerial bait lines, distance restrictions and notification requirements according to the current Pesticide Control (1080 Baits Products) Order must be complied with.
- 4.1.6 Each baiting program must have its own, individual application approved; a program may cover multiple Areas or Branches if they are within the same vicinity.
- 4.1.7 The application to undertake the aerial baiting must be presented to the Branch NPWS Park Operations Director/s for approval, or in the case of co-managed areas (Part 4A National Parks and Wildlife Act 1974) the approval can be given by the Branch NPWS Park Operations Director/s or the board of management, though the board of management must be consulted and approve the activity.
- 4.1.8 Attachment 1 must be used for all applications for aerial baiting on NSW NPWS estate. The application must include: the map of the proposed bait lines, the justification for aerial baiting including the bait rate, the completed NPWS ACO risk assessment and the job safety analysis (JSA) for the aerial baiting. No hand-written applications will be accepted.
- 4.1.9 A copy of all approved aerial baiting applications and associated documents must be stored in HPE Content Manager Folder **EF17/8333**. Each Branch has been allocated a sub-folder in **EF17/8333**. Please save applications and associated documents to the relevant sub-folder for your Branch.
- 4.1.10 In relation to wild dogs, if the area to be aerially baited is within a wild dog management plan area, members of the associated committee should also be consulted.

- 4.1.11 In relation to foxes, if the area to be aerially baited is within a *Saving our Species* site the site coordinator(s) should be consulted.
- 4.1.12 The appropriate Branch Pest Management Plan Strategy program/s must exist or must be created in the NPWS Assets Maintenance System prior to the baiting being undertaken.
- 4.1.13 The proposed aerial bait lines must be entered into PWIS (Pest and Weed Information System).

4.2 Notification requirements

- 4.2.1 Public notification, as per the current Pesticide Control (1080 bait products) Order.
- 4.2.2 If aerial baits are being applied to property where a current ongoing baiting program exists for the same species (wild dog or foxes), additional notification is not required.
- 4.2.3 Unless the individual aerial baiting program is exempt under Clause 3.5 of the NSW NPWS Pesticide Use Notification Plan, notification for each aerial baiting program should be listed on the relevant Area/s Pesticide Usage Register at least three days prior to commencement of the program.

4.3 Bait requirements

- 4.3.1 Only fresh meat baits can be used for aerial wild dog control. For baits allowed for aerial baiting, please see Table 1. Manufactured wild dog baits are significantly smaller than 250 grams and there is a lack of published data in relation to their efficacy and effects on quoll populations. As a result, they cannot presently be used to target wild dogs via aerial baiting, until such time as experimental studies confirm their efficacy and lack of non-target species impacts.
- 4.3.2 Fresh meat baits will decrease in weight during the drying process, with greater weight loss resulting from longer drying. For aerial baiting each wild dog bait must have a minimum post-drying weight of **200 grams** and each fox bait must have a minimum post-drying weight of **80 grams**. Baits under these weights cannot be used for aerial baiting. As a guide, the weight of fresh meat baits, before drying, should be between 250 and 300 grams for each wild dog bait and 100 and 120 grams for each fox bait, with higher starting bait weights used if longer drying is intended.
- 4.3.3 Fresh baits are preferred for foxes; however, other baits allowed by the current Pesticide Control (1080 Baits Products) Order or Department of Primary Industries vertebrate pesticide manual may be used for aerial baiting.
- 4.3.4 When using meat baits, the baits must be fresh meat that has been dried enough to form a dry skin or crust on the outside of the bait, or at least not be leaching any blood.
- 4.3.5 All containers used for storing and/or transporting 1080 baits, including those used in the aircraft, must be clearly labelled '1080 POISON' in red lettering.

4.4 Flight operation requirements for helicopters and planes

- 4.4.1 Aerial baiting must only be carried out by an approved operator. If using a company other than ParkAir, the company must be an approved operator on the NPWS NSW Contract for Specialist Aviation Services and be approved for aerial baiting operations within this contract. The company carrying out the aerial baiting must adhere to the company operations manual.
- 4.4.2 If using a contracted pilot and/or aircraft, ensure they meet all licensing requirements from the Civil Aviation Safety Authority and under the *Pesticides Act 1999* and its associated Regulations (for further advice ask the ParkAir Senior Ag Pilot).
- 4.4.3 The use of fixed wing aircraft in the Eastern Division must meet all additional conditions of Clause 4 of the current Pesticide Control (1080 Bait Products) Order.
- 4.4.4 Aerial Baiting must be carried out in daylight hours only.
- 4.4.5 When aerial baiting, the length of time spent on individual aerial baiting runs will be determined by the pilot and officer in charge (OIC). The time spent aerial baiting each day must not exceed a maximum daily flight time of 10 hours.
- 4.4.6 An OIC checklist must be completed and a briefing carried out before operations begin (contact the NPWS ParkAir Senior Ag Pilot for the checklist).
- 4.4.7 The OIC should ask the pilot what the rating for the aircraft's internal gross weight is so that it will not be exceeded by the amount of bait on the aircraft.
- 4.4.8 Only essential crew are to be present in the helicopter for aerial baiting operations: a pilot, navigator and bait dropper.
- 4.4.9 Essential crew for fixed wing aerial baiting will be determined by the pilot in command and will depend on the type of aircraft being used.
- 4.4.10 All NPWS crew must be current with the Work safely around aircraft (WSAA) unit of competency. If the bait thrower is a non-NPWS person, they must undertake a thorough aircraft and operation briefing prior to operations.
- 4.4.11 All aerial baiting operations must have a navigator in the aircraft. If navigation of the program is complex or aerial baiting is from a fixed wing aircraft in the Eastern Division, all navigating must be done by a trained NPWS air observer. If the navigation of the program is relatively simple, and the aerial baiting program is from a helicopter or a fixed wing aircraft in the Western Division, navigating may be done by an aerial navigator. The navigator must be identified and approved by the relevant Park Operations Director/s in the aerial baiting application.
- 4.4.12 The pilot will have a Global Positioning System (GPS) as their navigation tool with a map as a background.
- 4.4.13 Two separate systems of navigating must be used, one system for the pilot and one system for the navigator.
- 4.4.14 All navigating will be done with the aid of aerial bait lines that have been digitised onto a tablet/laptop that is GPS enabled (or an actual GPS) and has a map background (for further advice contact the NPWS ParkAir Senior Ag Pilot). Navigating must take into account any lag-time the devices being used have in relation to their position.

- 4.4.15 The predetermined and approved aerial bait lines must be uploaded onto both the pilot and navigator's navigating equipment prior to the program to enable effective and efficient navigation.
- 4.4.16 The bait dropper must have AQF3 Chemical Accreditation in chemical application.
- 4.4.17 When the aircraft is transiting to and from an operating area, it must be a minimum of 500 feet above ground level and at a safe height to remain clear of obstacles and hazards.
- 4.4.18 Baits should be dropped at a height that will ensure the aircraft remains clear of obstacles and in areas that pose no risk to people or structures. To ensure maximum accuracy baits should be dropped as low to the ground as possible whilst ensuring the safety of the operation. To ensure safety, factors such as the type of aircraft, terrain, obstacles, altitude and weather, must be considered. In addition, where the environmental conditions for aerial baiting are marginal, other factors such as the impact on complying with distance restrictions need to be considered.
- 4.4.19 The actual lines where aerial baits are dropped must be electronically recorded by the navigator during each aerial baiting run.

4.5 Requirements for after aerial baiting

- 4.5.1 All containers used for storing and/or transporting 1080 baits, including those used in the aircraft, must be cleaned and/or disposed of in accordance with the current Pesticide Control (1080 Baits Products) Order.
- 4.5.2 All aerial baiting results (i.e. the recorded actual bait lines and bait rates) must be entered into PWIS.
- 4.5.3 The Branch must receive a copy of the record made by the pilot of the pesticide application as soon as practical (within 48 hours) after the operation is completed. If the pesticide is applied by ParkAir the record may also be made by other NPWS staff. This record must include:
 - a. the name and address of the person who piloted the aircraft
 - b. a description of the pesticide that was applied (including product name and active constituents)
 - c. the date and time of the application of the pesticide (including the start and finish time)
 - d. if the aircraft has a registration mark, the registration mark of the aircraft
 - e. if the aircraft does not have a registration mark, the serial number of the aircraft
 - f. a description of the manner in which, the climatic conditions under which, and the equipment by means of which, the pesticide was applied
 - g. a description of the land over which the pesticide was applied (including the address of the land or the particular paddock or part of a paddock)
 - h. a description of the crop in respect of which the pesticide was applied or other situation in which it was used
 - i. the rate of application of the pesticide and the quantity applied
 - j. the name, address and contact details of the owner or occupier of the land on which the pesticide was applied.

Table 1 Bait types allowed for aerial baiting on National Parks and Wildlife Service estate

| Target animal | Bait base | Minimum post-drying weight |
|---------------|-------------------------------------|----------------------------|
| Fox | Chicken wingette | N/A |
| Fox | Red meat | 80 grams |
| Fox | Offal (whole lamb tongue or kidney) | 80 grams |
| Fox | Manufactured sausage | 80 grams |
| Fox | FOXOFF® | N/A |
| Fox | FOXSHIELD® | N/A |
| Fox | De-FOX™ | N/A |
| Dog | Red meat | 200 grams |
| Dog | Tongue (beef or sheep) | 200 grams |

Attachment 1: Application for aerial placement of 1080 poison baits for wild dog or fox control on NSW National Parks and Wildlife Service estate

Please type your application directly into this form, answering all questions below, replacing the phrase '[Enter text here]' as you complete your application. A copy of all approved aerial baiting applications and associated documents (see list at end of document) must be stored in your Branch sub-folder in HPE Content Manager Folder EF17/8333.

RPMS program name: [Enter text here]

SAP equipment ID number: [Enter text here]

Trim number: [Enter text here]

Officer in charge of the program: [Enter text here]

1. Target animal: Dog Fox

2. Name of Branch(s) and Area(s) undertaking the baiting

Region(s):

[Enter text here]

Area(s):

[Enter text here]

3. Previous programs in the Area(s), provide a brief description:

[Enter text here]

4. Wild Dog Management Plan Areas

a. If the proposed baiting run is within a Wild Dog Management Plan Area, what area is it? (Type 'N/A' if a fox program)

[Enter text here]

b. Have the members of the committee been consulted about the baiting run? If so, who? (Type 'N/A' if a fox program):

[Enter text here]

c. If this is a fox program, who is the site coordinator? (Type 'N/A' if a dog program):

[Enter text here]

5. To explain why aerial bait placement for wild dog or fox control is required, select at least one reason each from Group A and Group B and provide the details for their selection:

Group A

NPWS estate is adjacent to where stock is being lost or likely to be lost due to wild dog and/or fox predation.

[Enter text here]

Native wildlife is being impacted or is likely to be impacted due to wild dog and/or fox predation.

[Enter text here]

Group B

It is impractical to undertake ground-based control.

[Enter text here]

It is economically beneficial (fiscally and/or temporally) or more effective to undertake aerial control rather than ground-based control.

[Enter text here]

The aerial baiting is part of a coordinated baiting program involving other stakeholders.

[Enter text here]

6. Does the proposed aerial baiting application meet current NSW NPWS policies, including:

1080 Aerial Baiting Conservation Risk Assessment

1080 Aerial Baiting Guidelines

OEH Wild Dog Policy Guidelines?

7. Proposed bait rate(s) in baits per kilometre:

[Enter text here]

8. Provide justification for the bait rate:

[Enter text here]

9. Total length of bait runs:

[Enter text here]

10. Total quantity of poisoned meat/manufactured baits to be distributed by air (number of baits and kilograms):

[Enter text here]

11. When is it proposed to conduct aerial bait placement?

[Enter text here]

12. Name of the navigator(s):

[Enter text here]

13. Are the navigator(s) trained air observers or aerial navigators approved by the Branch NPWS Park Operations Director/s? Describe who and why each person is navigating relevant sections of the program.

[Enter text here]

14. Name of the NPWS Authorised Control Officer who has approved the risk assessment:

[Enter text here]

15. How are the baits being sourced and prepared?

[Enter text here]

16. Name of the NPWS Authorised Control Officer and/or Local Land Services Authorised Control Officer who will poison the meat:

[Enter text here]

17. Is this program part of a cooperative control program with adjoining land managers?

No Yes Provide details: [Enter text here]

18. Off-park and threatened species areas

a. Provide a description of the wild dog control being undertaken on adjoining lands off-park (if any):

[Enter text here]

b. Provide a description of the fox control being undertaken in the area of the threatened species (if any):

[Enter text here]

19. Digitised maps provided of the area and bait lines for consideration by the Park Operations Director(s) or board of management for Part 4A Aboriginal Lands (*National Parks and Wildlife Act 1974*):

No Yes Provide details:

Map 1: [Enter text here]

Map 2: [Enter text here]

Map 3: [Enter text here]

Map 4: [Enter text here]

20. Checklist (all of the following must have been completed):

Proposed aerial bait lines are in PWIS

Pest officer, Area manager and patch ranger consulted

PWIS program identification number identified

Risk assessment by NPWS ACO completed and it approves the activity

JSA/JSB signed

Approved Not Approved

Park Operations Director/s or board of management for Part 4 A Lands

Date: [Enter text here]

Attached documents:

Job safety analysis (JSA) for aerial baiting

ACO risk assessment template

OIC checklist