
DATE 12 March 2024

- 1. Did you provide any written advice (including notes or edited feedback) to the NSW Government or NPWS regarding the Standard Operating Procedure for shooting wild horses, including around the decision to allow shooting during foaling season? If so, please provide a copy of all documents recording this advice.**

RESPONSE

RSPCA NSW is committed to advocating for the welfare of all animals, including wildlife. We take our role in providing expert advice on animal welfare practices very seriously. We understand the importance of ensuring that any population management practices, especially those involving lethal control, are humane and scientifically justified.

In alignment with this commitment, we can confirm that RSPCA NSW has engaged with the NSW Government and NPWS on the SOP for aerial culling of wild horses. Our contributions aim to ensure that the highest possible animal welfare standards are maintained in any control operations, including those conducted during sensitive times such as the foaling season.

Please find attached copies of feedback provided by RSPCA NSW to NPWS regarding standard operating procedures (SOPs) for shooting wild horses. The two wild horse control SOPs related to shooting horses are; Aerial Shooting – preliminary program, and Ground Shooting.

Page two of the Ground Shooting SOP and Page six of the Aerial Shooting SOP includes feedback relevant to timing operations. We remain open to further discussions and are committed to working collaboratively with all stakeholders to promote the welfare of wild animals in New South Wales.

**INQUIRY INTO THE PROPOSED AERIAL SHOOTING OF
BRUMBIES IN KOSCIUSZKO NATIONAL PARK
RSPCA NSW – QUESTIONS ON NOTICE**

DATE 12 March 2024

The Hon. WES FANG: Let me rephrase. Since the 2023 election, when did the new Labor Government raise the prospect of aerial culling with you, and when did they raise it?

STEVEN COLEMAN: To the best of my recollection, it would have been representatives from the department, and we're talking months ago, Mr Fang. I couldn't give you a precise date.

The Hon. WES FANG: Can you take that on notice and let me know when the issue was first raised?

STEVEN COLEMAN: Sure.

RESPONSE

We can confirm that representatives from NPWS initiated discussions with RSPCA NSW on aerial culling. Initial engagement on this issue by NPWS with RSPCA NSW first occurred during the term of the Coalition Government, with Minister Kean and Minister Griffin both seeking advice to form a policy of humane aerial culling of wild horses in Kosciusko National Park; however, to answer the question of when the Labor Government first raised it, I can see that our advice was first sought on 8 August 2023.

Our discussions with the department have been part of a broader dialogue on wildlife management strategies, aiming to balance ecological sustainability with the animals' welfare. Throughout this process, RSPCA NSW has advocated for an evidence-based approach that is in line with our organisational principles and the community's expectations.

The CHAIR: I have some further questions, and then I will come back to Mr Fang. My follow-up question concerns the foaling season. Mr Coleman, you said that your chief veterinary officer also gave you an opinion on whether there was a foaling season anymore. Was that in writing?

STEVEN COLEMAN: I will have to take that on notice. I don't think so, Chair.

The CHAIR: If it was in writing, can you provide us a copy of that?

STEVEN COLEMAN: Sure.

The CHAIR: My last question is in regards to the foaling season itself. Obviously the former SOP documents were based on the expert opinions of welfare organisations and veterinary experts that certain periods of the year are to be avoided. I assume, in the reverse of what you said about the fact that there is no evidence to prove that there is a foaling season, that to remove a welfare measure one would need a lot of scientific evidence to show that this foaling season has disappeared. Was there any scientific evidence that you relied on to show that there is no longer a foaling season, or that the original position from the SOP shouldn't carry over to a new SOP?

TROY WILKIE: Could we just take a step back? It wasn't that the RSPCA made a suggestion to government, "Let's get rid of the foaming season provision."

The CHAIR: No, I understand that. The Government has put that position forward to the RSPCA for advice. Is that correct?

TROY WILKIE: And we've said, "There needs to be provisions that can deal with foals, and you will have foals year round, as an observation." So, as was explained, it's been observed of foals being there year round,

and so we have to have provisions in there to deal with foals. And then, separately, they've said, "This is going to be removed." And we've said, "Well, you've got the provision to deal with foals." So it's not so much that we've proposed that they eliminate that based on something—

The CHAIR: I'm not suggesting that you proposed it. What I'm trying to say is that this was put in as a provision for animal welfare originally, and the Government has suggested removing it from the SOP, and has sought feedback from the RSPCA in regards to that new position. I'm wondering why, rather than saying, "Actually, no, I think we should look at the consideration that there was previously at least considered to be a foaling season," and that where there's evidence where there's large numbers of foals, that there should still be that welfare provision left in—

STEVEN COLEMAN: Madam Chair, can we take that on notice?

The CHAIR: Yes.

STEVEN COLEMAN: I want to make sure exactly what we did and didn't say in terms of response back to National Parks.

RESPONSE

The draft SOPs provided to RSPCA NSW did not include direct consultation on a proposal to absent provisions around foaling season. However, RSPCA identifies and notes in feedback to NPWS, within the Ground Shooting SOP and the Aerial Shooting SOP as provided to the answer at supplementary question one.

The CHAIR: Thank you, I would appreciate that. I also have some questions about the questions on notice from the last hearing. The RSPCA produced 16 photos and one video. It doesn't seem to show any aerial shooting. Can I confirm that those were all of the photos and videos taken by the RSPCA during the preliminary trial that you attended?

STEVEN COLEMAN: I think, from memory, there was a series of photos that reflect the post-mortems that the veterinarian that we engaged did on the day, and some footage from a distance, I think, showing the actual shooting helicopter.

The CHAIR: What the Committee received was one video of a 30-second clip of random scenery with no horses present and no shooting occurring in that video. Do you know why we were provided with that video?

STEVEN COLEMAN: I saw the video that was provided, and when you zoom in, you can see the helicopters or the shooting helicopter. But you do have to zoom in. I'm happy to take that on notice, Madam Chair, if there's any other footage.

The CHAIR: The question is can you confirm that those are all the photos and all the videos taken by the RSPCA during that trial?

STEVEN COLEMAN: I will have to check.

The CHAIR: Can you take that on notice?

STEVEN COLEMAN: Sure.

The CHAIR: If there are additional photos or any additional footage, I ask that those also be tabled.

STEVEN COLEMAN: Sure.

The CHAIR: At the last hearing we heard the chief inspector say that he had no concerns with the way that the shooting operation ran, but in that 30-second clip you can't see anything—even if you zoom in. I couldn't even see horses being present anywhere in the park in that 30-second clip. I'm wondering how he was able to use that 30-second clip to conclude that no cruelty occurred.

TROY WILKIE: I don't think he—

STEVEN COLEMAN: He was in the air for more than 30 seconds.

TROY WILKIE: He didn't use the video to ascertain his position across the two days. He used his observations over the two days to ascertain his position.

The CHAIR: But how could he have made any observations if that was the line of sight that he saw?

STEVEN COLEMAN: Right.

TROY WILKIE: But that was only the line of sight for 30 seconds over the two days.

The CHAIR: Yes. But why would that be the line of sight that he would film for 30 seconds?

STEVEN COLEMAN: I'm happy to take it on notice and find out if there is any more footage.

The CHAIR: We were told that there was video also taken. I take what Mr Coleman has said, that it's quite normal for an inspector to film and to take various photos of different aspects of a trial. Obviously that allows other people to look at that evidence to consider if there are any other aspects that the RSPCA needs to consider. But, from that, we can possibly see some evidence from the post-mortem, but no evidence of the actual

trial of shooting from what we were being provided with.

STEVEN COLEMAN: I'm happy to check if there's additional footage.

The CHAIR: Thank you. Could you also provide on notice some information about the team's decision around how to take any footage or whether there was a need to collect evidence during the trial, and why that, if it is the only piece of evidence that was collected, would be the only piece that was collected?

STEVEN COLEMAN: Can I—

The CHAIR: And that might be a conversation with the chief inspector, on notice.

STEVEN COLEMAN: Yes, sure

RESPONSE

After a thorough review and consultation with our team involved in the trial, we can confirm that the 16 photos and the single video clip previously submitted to the Committee represent the entirety of the visual documentation captured by the RSPCA NSW during the preliminary trial in question. The photos provided were primarily focused on the post-mortem examinations conducted by our engaged veterinarian, aiming to document the immediate outcomes of the shooting operation. The video, although limited in its scope and requiring zooming in to discern details, was captured from a distance to include the operational area and the helicopter involved.

The Hon. WES FANG: Was the SOP reviewed? How long did it take? I'm happy for you to take it on notice. You might not have the details with you.

STEVEN COLEMAN: I can say it was, at minimum, weeks.

The Hon. WES FANG: In that instance, can you provide the rigour around how you looked at the SOP and how you tested some of the methodologies and the changes, i.e., the issues around the foaling season?

STEVEN COLEMAN: Sure.

RESPONSE

We rely on our answer to the Supplementary Question as a response to this, providing the Member insight into the consultation process.



NSW NATIONAL PARKS & WILDLIFE SERVICE

Aerial shooting – preliminary program

Wild horse control standard operating
procedure

Document control

Author	Feral Animal and Weeds unit, NPWS
Date of original endorsement	XX September 2023
Date last reviewed	XX September 2023

Related documents

NPWS wild horse control standard operating procedures:

- NPWS H001 Ground shooting
- NPWS H002 Passive trapping
- NPWS H003 Removal for domestication (rehoming)
- NPWS H004 Removal for knackery or abattoir
- NPWS H005 Killing in yards (in preparation as of September 2023)
- NPWS H006 Mustering (in preparation as of September 2023)
- NPWS H007 Euthanasia (in preparation as of September 2023)
- NPWS H008 Problem wild horses (in preparation as of September 2023)

Sharp T. 2011. *Aerial shooting of feral horses. Standard Operating Procedure*. PestSmart. Centre for Invasive Species Solutions, Canberra, Australia. Available at: <https://pestsmart.org.au/toolkit-resource/aerial-shooting-of-feral-horses>

NPWS Aviation Safety Policy

NPWS Aerial Shooting (Feral Animal Aerial Shooting Team (FAAST)) Aviation Standard Operating Procedure

NPWS Firearms Management Manual

The FAAST Manual: Feral Animal Aerial Shooting Team

NPWS Daily aerial shooting record – ante-mortem

NPWS Daily aerial shooting record – post-mortem

Contents

Background	2
Application	2
Animal welfare considerations	2
Impact on target animals.....	2
Impact on non-target animals.....	3
Health and safety considerations	3
Equipment that may be used	4
Firearms and ammunition.....	4
Aircraft	4
Procedures	4
Administration.....	4
Personnel.....	5
Approved cartridges/calibres and ammunition.....	5
Shooting sequence.....	5
Carcass management.....	6
References	6

Background

Wild horses in national parks negatively impact the natural environment, cultural and historic heritage, and public safety. The National Parks and Wildlife Service (NPWS) is committed to managing the negative impacts of wild horses in New South Wales (NSW) national parks through implementation of a management control program which is consistent with relevant Commonwealth and/or NSW animal welfare legislation, regulations, codes of practice and standard operating procedures.

This Standard Operating Procedure (SOP) is specific to NPWS operating on NPWS estate and does not replace or override any NSW and Commonwealth legislation. The SOP has been developed following consultation with the RSPCA NSW and relevant specialists.

Application

This SOP operationalises a preliminary aerial (helicopter) shooting program in Kosciuszko National Park to be conducted in 2023–2024 on an initial group of wild horses (not exceeding 500).

The rationale for a preliminary program is to allow monitoring to be undertaken by independent observers (Greene et al. 2013). The observational animal-based data collected during implementation of this SOP will be used to develop *SOP NPWS H009 Aerial Shooting*, which once finalised, will meet the requirements of the *Kosciuszko National Park Wild Horse Heritage Management Plan* in relation to aerial shooting (pending adoption of a draft amendment to include aerial shooting as an available control method). *SOP NPWS H009 Aerial Shooting* will also be applicable to operations intended to control wild horses in other national parks, where such control operations are approved.

Aerial shooting of wild horses is particularly useful in large, remote and/or inaccessible areas where the use of other control methods is not effective and/or practicable (Dobbie et al. 1993; Edwards et al. 2004).

The animal welfare outcomes of aerial shooting are enhanced when carried out by experienced, skilled and trained shooters, multiple shots are taken, and appropriate firearms, ammunition and shot placement are used (Hampton et al. 2017).

There are several key considerations that will guide the application of aerial shooting by NPWS:

- Shooting should be used in a strategic manner as part of a program designed to achieve sustained effective population control.
- Shooting of wild horses during this program will only be performed by approved NPWS *Feral Animal Aerial Shooting Team (FAAST)* accredited firearms users who have the necessary experience, licences and accreditation. Shooter skill has been shown in multiple studies to be the most important parameter affecting animal welfare (Hampton et al. 2014, 2017).
- The safe and effective management and use of firearms must comply with the *NPWS Firearms Management Manual*.

Commented [LA1]: Suggest replace "enhanced" with "improved". The term 'enhancing' animal welfare is usually synonymous with providing an animal with positive emotional states, not minimising negative which is clearly what we are talking about when destroying an animal.

Animal welfare considerations

Impact on target animals

NPWS will use skilled and competent shooters, and appropriate firearms and ammunition, in a manner that results in the most rapid death possible.

NPWS will also ensure:

- That shooters only target the head (brain) or chest (heart/lung).
- That shooters will not take a primary shot at an animal unless the anatomical target zone listed above are clearly visible.
- That, where practical, all horses in a social group will be killed before targeting other social groups.
- Since it is difficult to assess from the air whether an animal is dead, it is essential that a deliberate policy of 'overkill' be followed, where a minimum of two shots are used per animal. That is, after an initial chest or head shot, another shot must be fired into the chest to ensure death.
- A 'fly-back' procedure must be followed, in which the shooter is flown back over the shot animals to visually ensure death and apply follow-up shots to the chest (Hampton et al. 2021a). The fly-back procedure must be followed.
- That, in the event of a wounded horse, it must be located and killed as quickly as possible before targeting additional animals.
- In areas of closed vegetation canopies or on steep slopes, thermal detection equipment (Cox et al. 2023) must be available to permit quick detection and follow-up of non-fatally wounded horses.
 - Alternatively, or in addition, horses can be helicopter-mustered to adjacent areas with reduced canopy cover or slope, in situations where the total time required to achieve this is not excessive.
- That, where a lactating female horse is killed but no foal is present, all reasonable efforts will be made to find any dependent young and kill them as quickly as possible.

Commented [LA2]: There are two anatomical zones 'listed above'. Would it be more correct to edit to 'unless one of the anatomical target zones...?'

Impact on non-target animals

Shooting will only occur once a wild horse has been positively identified.

- Shooting is target-specific, i.e. a targeted wild horse will be positively identified before a shot is taken, thus avoiding direct harm to non-target animals.
- Non-target impacts of shooting may include noise disturbance.
- The use of lead (Pb)-free projectiles approved for use in this SOP avoids impacts of toxic lead residues in carcasses to wildlife scavengers. The potential impact of lead projectiles also approved for use in this SOP on wildlife scavengers is acknowledged.

Commented [LA3]: How does this accord with Pest Smart HOR002(Sharpe, 2011) that states "Aerial shooting should not be done if the nature of the terrain reduces accuracy resulting in too many wounding shots and prevents the humane and prompt despatch of wounded animals." It seems like your provision allows this to be attempted, accepts there will be more injuries and suggests a mitigation strategy for finding those wounded. I note in your first point of "shooting sequence" it suggests that you will always muster away from dense canopies but uses the word 'should'. To me there remains ambiguity about what this SOP requires/allows/prohibits in respect of dealing with areas of unsuitable terrain/vegetation.

Health and safety considerations

- A first aid kit must be available.
- Care must be taken when handling wild horse carcasses as they can transmit zoonoses such as Q-fever. Appropriate personal protective equipment, e.g. gloves, must be worn to protect skin. Routinely wash hands and other skin surfaces after handling carcasses and working in and around yards, and before eating, drinking and smoking. Horse carcasses are heavy, so care must be taken when lifting or dragging them.
- Visitor and staff safety is of great concern when undertaking aerial shooting operations. All participants in the program must review the Operational Shoot Plan and Job Safety Analysis (JSA). Notifications and park closures will be undertaken in accordance with NPWS aerial shooting checklists and procedures.
- Storage, use and transportation of firearms and ammunition must comply with relevant legislative requirements and the NPWS *Firearms Management Manual* and the NSW *FAAST Manual*.

- Aviation operations must comply with relevant legislative requirements, the *NPWS Aviation Safety Policy* and the *NPWS Aerial Shooting (FAAST) Aviation Standard Operating Procedure*.
- If on-ground post-mortem observations are being conducted, shot animals must always be approached from the dorsal (or spinal) side.

Equipment that may be used

Firearms and ammunition

- Firearms:
 - FN SCAR®-H semi-automatic rifle.
 - Aimpoint® red dot scope with zero magnification.
- Ammunition:
 - .308 Winchester®: 150 grain minimum (see approved ammunition table).
- Silencer/suppressor: B&T AG® (formally Brügger & Thomet AG®).
- FLIR ThermoSight® T75-clip on thermal scope.
- Thermal scope/monocular: minimum 640×480 sensor.
- Spotting scopes, monoculars and binoculars.

Commented [DS4]: Model TBC and added

Two functioning firearms of the specified make and model must be on-hand at all times in the aircraft.

The accuracy and precision of firearms should be tested before any shooting operation.

Aircraft

- Refer to the *NPWS Aerial Shooting (FAAST) Aviation Standard Operating Procedure* for aircraft requirements.
- Operations may involve the simultaneous use of multiple aircraft. Standard aviation practices will be followed to ensure wide spatial separation between simultaneously flying aircraft.

Procedures

Administration

- The following documents must be developed and approved for the operation:
 - Shooting operations plan.
 - Notification risk assessment.
 - Aerial shooting checklist.
 - Job safety analysis and job safety brief.
 - Review of environmental factors.
- The outcomes of operations must be recorded daily (refer to the *NPWS daily wild horse aerial shooting record forms* (ante-mortem and post-mortem)).

Personnel

- Each team must comprise three members as a minimum (there must be a pilot in command, primary shooter and air observer).
 - An independent observer (e.g. veterinarian, thermal operator) may be included in the team as required and if conditions permit.
- The shooter must hold current accreditation in accordance with the *FAAST Manual*.
- Refer to the *NPWS Aerial Shooting (FAAST) Aviation Standard Operating Procedure* for operator, aerial observer/navigator and pilot-in-command requirements.

Approved cartridges/calibres and ammunition

Projectile energy is an important determinant of welfare outcomes in wildlife shooting programs (Hampton et al. 2016). The maximum shooting distance of approved ammunition is the distance at which at least 2,711 Joules (2,000 foot pounds) of kinetic energy is delivered.

Before ammunition can be used, ballistic testing using tissue stimulant gel blocks must be undertaken to quantify shot precision, kinetic energy levels, and bullet penetration and deformation (Hampton et al. 2021b). Outcomes of the testing must be approved by an independent veterinarian prior to use on live animals.

.308 Winchester® ammunition: Sako 150 grain Powerhead Blade® (lead-free)

	Muzzle	50 m	100 m	150 m
Velocity (m/s)	840	804	769	734
Energy (J)	3,442	3,134	2,865	2,613

.308 Winchester® ammunition: Winchester 150gn PowerMax® Bonded protected hollow point (lead-based)

	Muzzle	50 m	100 m	150 m
Velocity (m/s)	860	817	775	734
Energy (J)	3,587	3,238	2,915	2,618

Above ammunition is manufactured and factory-loaded by Sako® and Winchester®, respectively.

Data above is from the manufacturers via their websites.

Both ammunition types above are approved for use.

Shooting sequence

- Targeted wild horses should be mustered away from watercourses and areas of dense vegetation before being shot, as wounded animals may be more difficult to locate in these terrain types.
- Chase time must be kept to a minimum.
- Once a wild horse (or group) is sighted and has been positively identified, the pilot should position the helicopter as close as is safe to the target animal in order to ensure an accurate shot.

Commented [LA5]: Consider removing the subjectivity of this. Would a pilot/shooter and observer have an informed and consistent view on how long is too long? The Hampton et al (2017) paper would, I thought, provide some guidance on what is acceptable.

- The pilot should aim to provide a shooting platform that is as stable as possible.
- A horse should only be shot at when:
 - It can be clearly seen and recognised.
 - It is within the effective range of the firearm and ammunition being used.
 - It is likely that the horse can be rapidly rendered insensible, with subsequent death without the animal regaining consciousness. If in doubt, do not shoot.
- All animals must receive multiple shots (also known as 'repeat shooting', 'insurance shots' or 'over-kill') to the target areas to minimise time to insensibility and the risk of non-fatal wounding (Hampton et al. 2021a).
- The initial shot to the chest is preferred since it is easier to achieve with a moving animal and moving shooting platform. However, the judgement of the shooter is paramount in determining the optimum initial shot placement for each target animal.
 - Immediately after delivering the initial shot, the shooter must deliver a minimum of one additional shot in the specified anatomical target areas.
- In a line of running animals, the animals at the tail end should be shot first and then move forward until all animals in the line have been shot.
- **Dependant foals should be shot first.**
- In the event of a suspected wounded animal, no further animals can be targeted. Every practical effort should be made to locate a suspected wounded animal. The animal must then be killed via additional shots delivered to the target area(s).

Commented [LA6]: Are there any other strategies to reduce the risk of orphaning/starvation of young at foot? Such as the timing, during the year, of using this strategy?

Aim points

Horses may be targeted in the head (brain) or the chest (heart-lung area). Refer to the *FAAST Manual* for head and chest shot aiming points.

Commented [LA7]: Should this be a "must". I think it is worth making very clear that any other alternatives are not allowable.

Carcass management

Carcasses will be left *in situ* unless there are site specific circumstances/requirements in which case they will be dealt with in an appropriate and reasonable manner.

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DRAFT



NSW NATIONAL PARKS & WILDLIFE SERVICE

Ground shooting

Wild horse control standard operating procedure

Document control

Author	Feral Animal and Weeds unit, NPWS
Date of original endorsement	XX
Date last reviewed	XX

Related documents

NPWS wild horse control standard operating procedures:

- NPWS H002 Passive trapping
- NPWS H003 Removal for domestication (rehomeing)
- NPWS H004 Removal for knackery or abattoir
- NPWS H005 Killing in yards (in preparation as of 19 April 2022)
- NPWS H006 Mustering (in preparation as of 19 April 2022)
- NPWS H007 Euthanasia (in preparation as of 19 April 2022)
- NPWS H008 Problem wild horses (in preparation as of 19 April 2022)

Sharp T, 2011. *Ground shooting of feral horses. Standard Operating Procedure*. PestSmart. Centre for Invasive Species Solutions, Canberra, Australia. Available at: <https://pestsmart.org.au/toolkit-resource/ground-shooting-of-feral-horses>

Background

Wild horses in national parks negatively impact the natural environment, cultural and historic heritage, and public safety. The control of wild horse populations must balance management of the park's natural and cultural values with animal welfare impacts.

The National Parks and Wildlife Service (NPWS) manages wild horses in New South Wales national parks to protect natural, Aboriginal cultural heritage, historic heritage and recreational values, safety of visitors, scheduled water catchments and to limit negative agricultural impacts on neighbouring properties. We recognise that there is a wide variety of views within the community regarding the management of wild horses.

NPWS, like other land managers, has a general biosecurity duty under the NSW *Biosecurity Act 2015*. With this in mind, the need for management may be identified in Regional Strategic Pest Animal Management Plans, NPWS branch pest management strategies, Saving our Species related-plans, joint management agreements, Assets of Intergenerational Significance conservation action plans and specific wild horse management plans that have been developed in accordance with a park's plan of management. Control will occur when approved under an operational plan or wild horse management plan specific to the reserve.

Control methods that NPWS use to control horses include *in situ* killing (ground shooting) and capture (passive trapping or mustering), followed by killing in yards or removal for rehoming or slaughter (knackery or **abattoir**).

This standard operating procedure (SOP) is specific to NPWS operating on NPWS estate and does not replace or override any NSW and Commonwealth legislation. The SOP has been developed following consultation with the **RSPCA NSW**, relevant specialists and documented field assessment.

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Application

While ground shooting is best suited to relatively open, accessible and flat areas, it can be used in most types of environments. It is also used for euthanasia of sick or injured wild horses (SOP NPWS H007). It generally involves the shooter approaching the horse/s on foot with the intention of **fatally** shooting as many animals in a social group as possible.

Shooting is a method of killing wild horses that can **successfully avoid animal welfare compromise** when it is carried out by experienced, skilled shooters, the target animal can be clearly seen and is within range, and appropriate firearms, ammunition and shot placement are used.

- Shooting should be used in a strategic manner as part of a program designed to achieve sustained effective population control.
- Ground shooting can be time-consuming and labour-intensive.
- Shooting of wild horses during this program will only be performed by **competent** and approved NPWS firearms users who have the necessary experience with firearms and hold the appropriate licences and accreditation.
- Shooting may be undertaken in the daytime using standard optics (ie. not thermal or night vision).
- Shooting may be undertaken at night using thermal or night vision devices.

Deleted: produce good animal welfare outcomes

Commented [LA1]: Good animal welfare means positive welfare/welfare enhancement. Obviously shooting does not result in enhanced welfare.

Commented [DS2R1]: Happy to accept change

Deleted: skilled

Animal welfare considerations

Impact on target animals

NPWS will use appropriate firearms and ammunition in a manner that results in the most rapid death possible.

NPWS will also ensure:

- That shooters will not shoot at an animal unless the target area is clearly visible.
- That shooters only target the head (brain) or chest (heart/lung).
- That, where practical, all horses in a social group will be targeted before targeting additional social groups.
- That post-shooting, all horse carcasses will be inspected and confirmed dead.
- That, in the event of a wounded horse, it must be located and killed as quickly as possible before targeting additional animals.
- That where a lactating female is killed but no foal is present, all reasonable efforts will be made to find any dependent young and kill them as quickly as possible.
- That no dogs will be involved in any phase of horse ground shooting programs.

Impact on non-target animals

Shooting will only occur once the target has been positively identified and there is a suitable backstop.

- At the time control is being undertaken, shooting is target specific and does not usually impact other species.
- However, non-target impacts of shooting may include noise disturbance, and scavengers consuming carcasses that may contain lead (if lead-based projectiles are used).

Health and safety considerations

- All participants in the program must be positioned beside or behind the shooter when an animal is being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Class 5 hearing protection should be worn by the shooter and others in the immediate vicinity of the shooter where appropriate. Repeated exposure to firearm noise can cause irreversible hearing damage.
- When shooting, safety glasses are recommended to protect the eyes from gases, metal fragments and other particles.
- A first aid kit must be available on-site.
- Care must be taken when handling horse carcasses, as they can carry zoonotic diseases such as Q-fever. Appropriate personal protective equipment e.g. gloves, should be worn to protect skin. Routinely wash hands and other skin surfaces after handling carcasses and before eating, drinking and smoking. Carcasses can be heavy, so care must be taken when lifting or dragging them.

Equipment that may be used

- Firearms

Commented [LA5]: I note the removal of this clause that appears in the PestSmart version
Culling programs should be timed to minimise the risk of orphaning dependent foals

Commented [DS6R5]: Correct. As discussed during the consultation for the draft NPWS passive trapping SOP, wild horses have the capacity to foal at any time of the year (eg. we had to release a mare close to foaling from the traps when you visited in May). Hence, avoiding foaling periods and times of the year when foals are present is not realistic.
The SOP includes provisions for ensuring foals are not orphaned.

Commented [LA7]: Why are chest shots acceptable considering a higher chance of wounding and slower time to loss of consciousness?

Commented [DS8R7]: Head shots are not usually achievable due to the size of the target area, capacity for a clear and accurate shot (ie. the horse must be facing the shooter and immobile) and the need for a suitable back stop (for safety reasons). If these needs aren't met, there is still a significant risk of non-fatal wounding using a head shot.
The Pest Smart SOPs for all other vertebrate species allows for a chest or head shot.
Additionally, the outcomes of our preliminary program suggests that the welfare outcomes are not significantly compromised by using a chest shot v's a head shot. This data will be published via a peer-reviewed scientific paper by the consultant vet and support the use of chest shots.
Without the use of chest shots, ground shooting of horses becomes impractical.
Chest shots reduce the chance of wounding, they do not increase it.

- .308 Winchester®; bolt action.
- .300 Winchester Magnum®; bolt action.
- Ammunition
 - .308 Winchester®: 150 gn minimum (see approved ammunition table).
 - .300 Winchester Magnum®: 150 gn minimum (see approved ammunition table).
- Silencer: Advanced Armament Corporation (AAC) or B&T AG (formally Brugger & Thomet AG).
- Laser range finders.
- Thermal scopes/ thermal monocular: minimum 640x480 sensor.
- Spotting scopes, monoculars and binoculars.

Procedures

Administration

There must be an approved shooting operations plan, Job Safety Analysis (JSA) and Job Safety Brief (JSB) for the operation.

Personnel

- There must be a spotter for the shooter.
- The spotter must also be able to fulfill the role of shooter as required.
- The spotter will assist with target identification, range, confirming hits and animals down.
- The spotter will be using an optic or thermal device at the time of shooting
- There must be a laser range finder available to the shooting team.
- The shoot team must always have two functioning firearms, of the appropriate calibre, on hand at all times.
- Although horses are comparatively large animals, the vital areas targeted for clean killing are small compared to the size of the animal. Shooters should be adequately skilled, i.e. be able to consistently shoot a group of not less than 4/5 shots within a 7.5 cm diameter target (an industry standard) at 100 metres. Shooters should also be able to accurately judge distance, wind direction and speed and have thorough knowledge of the firearm and ammunition being used.

Shooting may occur day or night

All shooting operations must consist of a team of two as a minimum. There must be a primary shooter and a spotter. Each person must ensure they know their role before engaging animals. The spotter must have a thermal binocular, monocular, binocular, spotting scope or rifle scope at all times.

Distance/range

- A .308 Winchester® rifle must not be used at distances beyond 100 metres to engage animals.
- A .300 Winchester Magnum® must not be used at distances beyond 300 metres to engage animals.
- Shooters must ensure a stable platform is established prior to each shot being taken. Bipods, shooting sticks, quad sticks, monopods, natural features such as rocks or trees

or a combination of supporting options must be used to ensure a steady rest for the firearm.

- If an animal is hit but still standing (i.e. there is a risk of non-fatal wounding) and there is a clear safe shot beyond the above maximum distances, additional shots can be taken.

Shooting sequence

- Ensure there are no other horses (or non-target species) behind the target animal that may be wounded by the shot passing through the target.
- Where the lead animal can be identified it should be shot first where practicable. This will depend on the group size and composition.
- The objective is to fire at the closest range practicable in order to ensure an accurate shot as it is important to achieve immediate insensibility in the highest proportion of animals possible. However, multiple shots should be delivered if the animal is still standing or recumbent but conscious or there is any doubt about the shot placement.
- Shot animals in a social group will always be checked to ensure they are dead before moving on to the next group of animals. Always approach a shot animal from the dorsal (or spinal) side to prevent injury from kicking legs. Death of shot animals can be confirmed by observing the following: absence of rhythmic, respiratory movements, absence of eye protection reflex (corneal reflex) or 'blink', and absence of heartbeat or pulse.
- Shooting of individuals should stop when the flight response of the social group limits further accurate shooting.

Aiming points

Horses may be targeted in the head (brain) or the chest (heart-lung area). Where horses present a suitable target area, a head shot should be undertaken. In all other circumstances, a chest shot should be delivered.

Head shot

- **Frontal position (front view)**

The firearm should be directed at the point of intersection of diagonal lines taken from the base of each ear to the opposite eye.



- **Temporal (side view)**

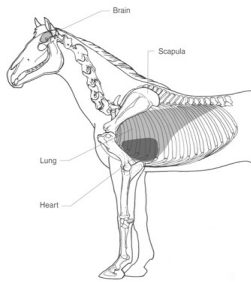
The horse is shot from the side so that the bullet enters the skull midway between the eye and the base of the ear.

- **Rear of the head**

The firearm should be aimed at the back of the head at a point just behind the base of the ears and directed towards the animals' muzzle.

Chest shot

The horse is shot from the side so that the bullet enters the chest and passes through the heart-lung area. The heart is located immediately posterior to the upper foreleg, slightly above and immediately behind the elbow joint.



Wounded animals

- In the event of a suspected wounded animal, no further animals can be targeted.
- Every practical effort should be made to locate a suspected wounded animal.
- A minimum of 30 minutes active searching must be undertaken. If no sign of injury (blood) is found, then the search can cease, and normal operation continue.
- If there is sign of blood, the search must be undertaken for an additional hour or until the animal is found (whichever is sooner).
- The animal must then be killed: shot again and, only if required, followed-up by delivery of a captive bolt shot to the brain.

Commented [LA9]: Which one – an hour or until it is found?

Commented [LA10R9]:

Commented [DS11R9]: Clarified

Carcass management

In most cases carcasses will be left *in situ*.

Approved cartridges/calibres and ammunition

The aim is to restrict the maximum shooting distance to that at which at least approximately 2,711 Joules (2,000 foot pounds) of kinetic energy will be delivered.

Before ammunition can be used, gel block trials must be undertaken and an independent veterinarian report must provide prior approval.

.308 Winchester® ammunition: Winchester 150 gn Protected Hollow Point (Pb-based)

	Muzzle	100 yds 91.44m	200 yds 182.88m	300 yds 274.32m	400 yds 365.76m	500 yds 457.2m
Velocity	2,820 fps 859.53m/s	2,542 fps 774.80m/s	2,280 fps 694.94m/s	2,034 fps 619.96m/s	1,808 fps 551.07	1,594 fps 485.85
Energy	3,590 J	2,917 J	2,346 J	1,868 J	1,476 J	1,147 J

Ground Shooting - Wild Horse Control Standard Operating Procedure

.308 Winchester[®] ammunition: Sako 162 gn Powerhead Blade[®] (Pb-free)

	Muzzle	50 m	100 m	150 m	200 m	300 m
Velocity	815 m/s	778 m/s	743 m/s	708 m/s	674 m/s	608 m/s
Energy	3,487 J	3,182 J	2,897 J	2631 J	2,384 J	1,943 J

.300 Winchester Magnum[®] ammunition: Sako 170 gn Powerhead Blade[®] (Pb-free)

	Muzzle	50 m	100 m	150 m	200 m	300 m
Velocity	920 m/s	883 m/s	847 m/s	812 m/s	778 m/s	711 m/s
Energy	4,655 J	4291 J	3,948 J	3,627 J	3,325 J	2779 J

Above ammunition is manufactured by Winchester and Sako.

Data above is from the manufacturer via website or packaging.

Only the 300wm ammunition has gone through the full trial process as of April 2022.