So far all the evidence (photos, videos and witness statements) that has already provided to the RSPCA throw doubt on the competency of the Strathbogie shooters.

Attached is a video provided by an anonymous shooter that appears to show a defenceless kangaroo being incorrectly shot in the head. The correct placement would have been a chest shot.

Key factors that influence the effectiveness of shooting a kangaroo in the brain include proper shot placement, the caliber and type of firearm and ammunition used, and the distance from which the shot is taken and whether the kangaroo is moving. Accurate targeting of vital areas, such as the medulla oblongata, is crucial for ensuring a rapid and humane death.

Proper shot placement in the chest or head disrupts vital organs and major blood vessels, causing rapid unconsciousness and death with minimal suffering. The chest kill zone is generally preferred because it offers a larger target area, reducing the risk of wounding and ensuring a more humane kill.

According to a number of shooter's webpages (see link below), the only way to cause instantaneous death from a head shot is to shoot a kangaroo through the medulla oblongata. This method effectively destroys the part of the brain responsible for controlling vital functions, leading to immediate cessation of life.

Mechanism of Action

Target Area: The medulla oblongata is located at the base of the brain and controls essential functions such as breathing and heart rate. When a kangaroo is shot in the forehead the bullet should be directed down the spine through the medulla oblongata, resulting in instant death. The risks are minimal if carried out by skilled personnel in a suitable location.

Impact: A projectile that strikes this area causes extensive damage, resulting in rapid loss of consciousness and death.

Benefits of This Method

Minimized Pain: This approach aims to reduce suffering by ensuring a quick and humane death.

Effectiveness: When performed correctly, it is one of the most reliable methods for killing large animals, including kangaroos.

In summary, shooting a kangaroo through the medulla oblongata is intended to achieve instantaneous death, minimizing pain and distress for the animal.

https://farmerassist.com.au/humane-shooting-and-shot-placement/