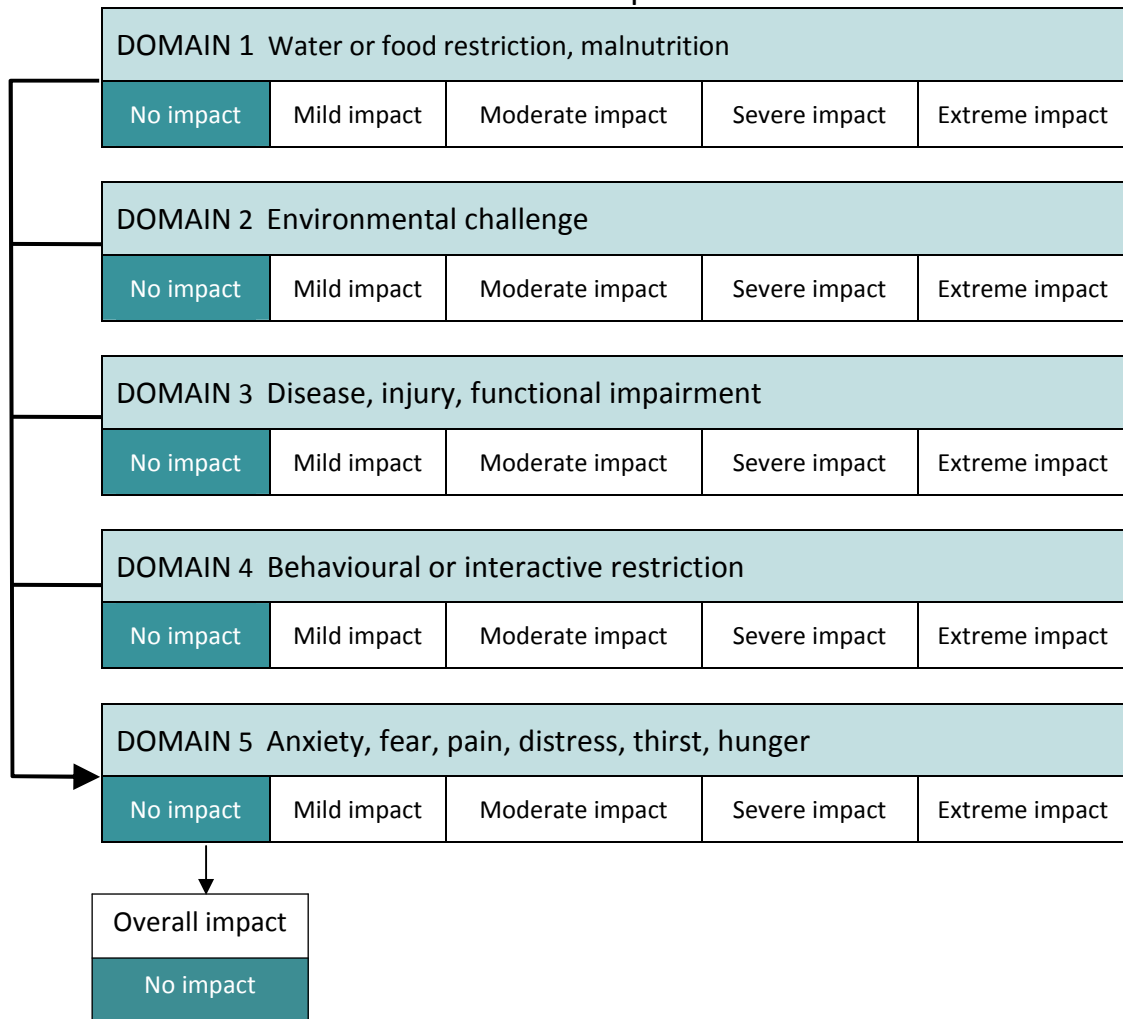


## Control method: Baiting of feral pigs with sodium nitrite

**Assumptions:**

- Best practice is followed in accordance with a standard operating procedure. (Note that a standard operating procedure for baiting of feral pigs with sodium nitrate is currently under development).
- The effect on dependent young is not taken into consideration with this assessment only the impact on the target animal.

### PART A: assessment of overall welfare impact



DURATION OF IMPACT				
Immediate to seconds	Minutes	Hours	Days	Weeks

<b>SCORE FOR PART A:</b>	<b>1</b>
Summary of evidence:	Note that Part A of the assessment examines the 'impact on the animal prior to the action that causes death'. Part B then looks at the 'actual mode of death' and the 'extent and duration of suffering caused'. With ingestion of lethal toxic baits there is usually little or no impact in Part A.
Domain 1	
Domain 2	
Domain 3	
Domain 4	
Domain 5	

### PART B: assessment of mode of death

Time to insensibility (minus any lag time)				
Very rapid	Minutes	Hours	Days	Weeks
Level of suffering (after application of the method that causes death but before insensibility)				
No suffering	Mild suffering	Moderate suffering	Severe suffering	Extreme suffering

<b>SCORE FOR PART B:</b>	<b>D</b>
Summary of evidence:	
Duration –	In a study to assess the humaneness and efficacy of sodium nitrite in domestic pigs, four out of five pigs died within 2 hours of toxic bait consumption. Another pig that consumed a smaller amount of bait took 3 hours to die but did not show any major clinical signs until 2 hours post ingestion <sup>1</sup> .  Levels of methaemoglobin in arterial blood were greater than 10% within 20 minutes of consuming the toxic bait.
Suffering –	Signs of sodium nitrate poisoning in pigs progress rapidly and are limited to 1) progressive lethargy, in-coordination and reduced consciousness; 2) limited vomiting in some animals; 3) increased respiratory rate; 4) severe dyspnoea when close to death; 5) limited terminal seizure events (i.e. associated with death); and 6) coma and death <sup>2</sup> .  Animals appear to show signs of distress for a short period (5 to 10 minutes) prior to reduced consciousness (as indicated by dilated pupils, reduction or loss of reflexes) <sup>1</sup> .

### Summary

<b>CONTROL METHOD:</b>	<b>Baiting of feral pigs with sodium nitrite</b>
<b>OVERALL HUMANENESS SCORE:</b>	<b>1D</b>

### Comments

In human cases of sodium nitrite poisoning, greyish cyanotic skin colour and chocolate brown arterial blood are observed at methaemoglobin levels of 10-20%. Dyspnoea, lethargy, dizziness, headaches and fainting are associated with levels of 20–50%. Above 50% methaemoglobin, signs and symptoms of cerebral, cardiac and metabolic hypoxia, including confusion, seizure, arrhythmia and metabolic acidosis, occur. Levels above 70% are usually fatal but survival has been reported with levels of up to 83%<sup>3</sup>.

### Bibliography

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3. Chui, J.S.W., Poon, W.T., Chan, K.C., Chan, A.Y.W. & Buckley, T.A. (2005). Nitrite-induced methaemoglobinaemia – aetiology, diagnosis and treatment. *Anaesthesia* **60**, 496–500