

## Appendix 2: Procedure Categories

Much of the animal research and teaching that is carried out will be relatively easy to categorise. The procedure categories are intended to give some indication of the impact to which the animal is subjected. With this in mind, use the brief guide and the examples given to help categorise the procedure.

The guide is ONLY a guide and does not exclude otherwise unlisted procedures which you and your AEC judge to have a similar level of impact.

**1. Observational Studies Involving Minor Interference:** Animals are not interacted with or, where there is interaction, it would not be expected to compromise the animal's welfare any more than normal handling, feeding, etc. There is no pain or suffering involved.

Examples:

- Observational study only such as photographing whales at close quarters
- Pasture studies using grazing animals
- Teaching of normal, non-invasive husbandry such as handling, grooming, etc
- Camera trapping studies for wildlife, or the use of underwater cameras/BRUV for aquaculture.
- Use of call playback
- Breeding or reproductive study with no detriment to the animal
- Feeding trial, such as Digestible Energy determination of feed in a balanced diet
- Behavioural study with minor environmental manipulation

**2. Minor Conscious Intervention (without Anaesthesia):** Animal is subjected to minor procedures that would normally not require anaesthesia or analgesia. Any pain is minor and analgesia usually unnecessary, although some distress may occur as a result of trapping or handling.

Examples:

- Trapping and release of wildlife as used in species impact studies. Can include sampling procedures that are considered minor.
- Capture (line/net/trap without anaesthesia) of fish and aquatic animals for identification, collection of specimens, or transmitter placement (where AQUI-S or local anaesthetic is not used)
- Injections (not vaccination trials), blood sampling in conscious animal
- Minor dietary or environmental deprivation or manipulation, such as feeding nutrient-deficient diets for short periods
- Stomach tubing, branding, dehorning young animals, shearing, etc

**3. Minor Operative Procedures with Recovery (includes use of sedatives/anaesthetics):** Animal may be rendered unconscious with as little pain or distress as possible. A minor procedure such as cannulation or skin biopsy is carried out and the animal allowed to recover. Depending on the procedure, pain may be minor or moderate and post-operative analgesia may be appropriate. Field capture using chemical restraint methods is also included here.

Examples:

- Biopsies
- Sedation/anaesthesia for relocation, handling/examination, sampling, or tagging.
- Cannulation
- Dehorning of adult animals with sedatives / local anaesthesia

**4. Surgery with Recovery:** Animal may be rendered unconscious with as little pain or distress as possible. A major procedure such as abdominal or orthopaedic surgery is carried out and the animal allowed to recover. Postoperative pain is usually considerable and at a level requiring analgesia.

Examples:

- Orthopaedic surgery
- Abdominal or thoracic surgery
- Mulesing, castration with/without anaesthesia
- Placement of intraabdominal/intracoelomic transmitters

**5. Minor Physiological Challenge:** Animal remains conscious for some or all of the procedure. There is interference with the animal's physiological or psychological processes. The challenge may cause only a small degree of pain/distress or any pain/distress is quickly and effectively alleviated.

Examples:

- Toxicity studies where the impact is minimal, or the impact is of a short duration/quickly alleviated
- Prolonged deficient diets, induction of metabolic disease
- Vaccination trials
- Antiserum production
- Polyclonal antibody production
- Minor infection, minor or moderate phenotypic modification, early oncogenesis
- Arthritis studies with pain alleviation

**6. Major Physiological Challenge:** Animal remains conscious for some or all of the procedure. There is interference with the animal's physiological or psychological processes. The challenge causes a moderate or large degree of pain/distress that is not quickly or effectively alleviated.

Examples:

- Toxicity studies where the impact is significant, or the impact is of a long duration/not quickly alleviated
- Isolation or environmental deprivation for extended periods
- Monoclonal antibody raising in mice
- Major infection, major phenotypic modification, oncogenesis without pain alleviation
- Arthritis studies with no pain alleviation, uncontrolled metabolic disease

**7. Euthanasia for voucher specimens or samples for analysis:** Animal is humanely euthanased, either to be retained as a voucher specimen or to obtain specimens for analysis. This includes trapping and capture methods for wild animals prior to euthanasia. This may include the use of sedatives or anaesthetics.

Examples:

- Trapping/capture and humane euthanasia of a voucher specimen (note: a voucher specimen is an animal that has been euthanased and is preserved and retained as a reference).
- Overdose of Aquil-S to sedate and humanely euthanase fish for otolith collection.
- Humane euthanasia for the collection of tissue samples such as organ samples for heavy metal analysis.

**8. Animal Unconscious without Recovery (not field euthanasia):** Animal is rendered unconscious or euthanased under controlled circumstances (**ie not in a field situation**) with as little pain or distress as possible. Capture methods are not required. Any pain is minor and brief and does not require analgesia. Procedures are carried out on the that is then killed without regaining consciousness.

Examples:

- No experimentation on living animals, eg animals killed painlessly for dissection, biochemical analysis, in vitro cell culture, tissue or organ studies
- Teaching surgical techniques on live, anaesthetised animals which are not allowed to recover following the procedure
- Live animals euthanased for later scientific use, eg rats and toads for dissection
- Collecting blood or plasma from anaesthetised dogs prior to euthanasia