

UNUSUAL ANIMAL MORTALITY



STANDARD OPERATING PROCEDURE

STANDARD OPERATING PROCEDURES – UNUSUAL ANIMAL MORTALITY

1. Background

Events of unusual animal mortality can occur for a range of reasons, including infectious disease and changing environmental conditions, and may pose a significant risk to wildlife populations. Infectious diseases are one cause of such events, particularly in species that form large aggregations, where close contact facilitates rapid transmission or that migrate over long distances, increasing the potential for pathogens to spread between geographically distant populations.

Avian influenza is one example of an infectious disease affecting wildlife on South Georgia. While some strains cause little or no illness, highly pathogenic forms can result in sudden and widespread mortality. Highly pathogenic avian influenza (HPAI) is a current concern but is not the only possible cause of mass wildlife mortality events.

Since 2022, H5N1 HPAI has caused significant mortality in seabirds and has also affected some mammals. In South Georgia, the virus was first detected in 2023 and is now considered endemic. Although impacts vary across sites, HPAI is known to cause significant mortality in seals, contributing to broader animal mass mortality events across the Territory.

2. Scope and application

This SOP applies to all activities and visitors in South Georgia & the South Sandwich Islands, including tourism, science, government operations, logistics, and vessel-based activities, where unusual animal mortality or suspected disease may be encountered.

3. Management approach

The Government of South Georgia & the South Sandwich Islands applies a risk-based approach to managing unusual animal mortality events, informed by scientific evidence, field observations, and experience since the emergence of HPAI in the Territory.

Management measures aim to mitigate risk in the following key areas:

3.1 Human health

The UK Health Security Agency (UKHSA) and Animal and Plant Health Agency (APHA) advise that the risk of HPAI to people remains very low when standard biosecurity and hygiene measures are followed. Human infections globally are extremely rare and typically associated with prolonged, close contact with infected animals.



3.2 Wildlife welfare

Reducing disturbance helps to limit behavioural stress in affected wildlife and may improve survival. Non-essential activities involving close approach or handling are minimised, and responsible wildlife viewing is encouraged.

3.3 Biosecurity

Although diseases such as HPAI spread primarily through natural pathways, human activity can increase the risk of transferring contamination between sites. Maintaining appropriate distance from sick or dead animals and thorough cleaning of clothing, footwear, and equipment are essential.

4. Activity-specific response measures

As HPAI is now widespread across South Georgia, activity-based measures apply Territory-wide. These measures will be reviewed and updated if conditions change.

4.1 All activities / general tourism

Standard biosecurity measures apply (See Visitor SOP)

- Prior to landing in areas of high wildlife density, a period of observation must be undertaken to check for signs of disease or unusually high mortality.
- Boats and tenders must be inspected for rodents, invertebrates and organic material before embarking passengers and again before departing the shore.
- All biological material must be removed from boots and outer clothing. Non-porous surfaces must be treated with an appropriate biocide (e.g. Virkon S, Bioguard, or soap followed by 3.5% bleach). This must be carried out before arrival in the Territory and between every site.
- Clothing or equipment that cannot be adequately cleaned must **not** be brought into the Territory.
- A minimum separation distance of at least 5 metres must be maintained from all wildlife and carcasses unless a specific Regulated Activity Permit (RAP) authorises a closer approach. Landings must be aborted if visitors cannot maintain a minimum distance of 5 metres from wildlife or carcasses.
- A greater separation distance of up to 10 metres is recommended where animals show visible signs of illness
- Dead wildlife must not be touched, and no collections may be made, unless authorised under a RAP.
- Bags must not be left open or unattended ashore.
- Visitors must not sit, kneel, or lie on the ground. At coastal locations, crouching should also be avoided as it increases risk of harmful interactions with fur seals.



- Equipment should not be placed on the ground unless unavoidable or in a designated clean area.
- Fresh fruit, vegetables, meat, eggs and unpasteurised dairy products must not be taken ashore.
- Any permitted food items taken ashore must be carried in robust, fully sealed containers made of plastic/ metal.
- After visiting areas with wildlife, good hand hygiene should be practiced using alcohol hand sanitiser or washing with soap and water.

4.2 Research involving animal approach or handling (<5 m)

- Routine animal handling may only proceed where there are no signs of disease or elevated mortality in the colony.
- Where signs of disease or elevated levels of mortality are present, observational studies may proceed with caution.
- In all cases, a valid Regulated Activity Permit (RAP) must be place and appropriate PPE worn (see section 6)
- If symptomatic animals are observed in a colony, routine animal handling work must halt.
- Handling activities may resume gradually once mortality has ceased for at least seven days, subject to agreement with GSGSSI.

4.3 Sampling where disease is suspected

- No handling is permitted for symptomatic animals.
- Sample collection on dead animals, or asymptomatic live animals in colonies where disease is suspected, is restricted to authorised personnel operating under a valid RAP, specific to the disease in question.
- All proposed animal handling activities conducted in colonies experiencing an active disease outbreak, or involving populations targeted for disease-related research due to known vulnerability, must be reviewed and approved by the BAS Animal Welfare and Ethical Review Body (AWERB) prior to commencement
- Appropriate PPE and safety procedures must be followed.
- Testing and reporting are coordinated through established UK pathways.

5. Observation and identification of disease

Before entering areas of high wildlife density, a trained or experienced guide or researcher familiar with bird and seal behaviour must undertake a minimum five-minute observation period. For tourism visits, this forms part of the standard 30-minute site observation prior to landing.

Observation may be conducted from:

- A small boat.



- An elevated viewpoint.
- A drone (only where authorised under a RAP).

5.1 Signs and symptoms

Signs associated with HPAI and similar diseases may include:

- Neurological signs (e.g. seizures, loss of coordination)
- Trembling of head or body
- Sudden increases in numbers of dead animals
- Swelling of the head
- Closed or excessively watery eyes (including corneal whitening in fur seals)
- Lethargy, unresponsiveness, drooping wings or dragging limbs
- Twisting of the head or neck
- Haemorrhaging under the skin
- Respiratory distress (e.g. gaping, coughing, sneezing, gurgling). In marine mammals this may manifest in usual buoyancy

NOTE: During 2024/25, corneal oedema (cloudy eyes) was commonly observed in fur seals suspected of HPAI.

6. Personal Protective Equipment (PPE) for science activities

PPE requirements are proportionate to risk and defined through project-specific RAPs. Individuals may adopt a more precautionary approach where appropriate.

6.1 Level 1 PPE

- Fluid-resistant face mask.
- Disposable coveralls or waterproof outerwear.
- Eye protection (depending on local risk assessment).
- Disposable gloves or alcohol hand sanitiser between individuals.

Used for: Most close-proximity (<5 m) work or wildlife handling.

6.2 Level 2 PPE

- Tyvek 400 or equivalent suit.
- FFP2 mask (or respirator depending on local risk assessment).
- Visor/eye protection.
- Non-porous boots.
- Double-layered disposable gloves (outer glove changed between individuals).

Required for: High-risk activities such as invasive sampling or necropsy. Additional PPE may be required for specific procedures.



All personnel must be trained in correct PPE use. WHO online training is available.

7. Bird strike procedures

A precautionary approach must be taken where bird strike occurs.

- Live birds must be released by trained staff wearing the level 1 PPE.
- Dazed birds may be held for recovery only where organisational SOPs allow and PPE is worn.
- All materials contacting birds must be treated as biosecurity waste.
- Dead birds must be disposed of via incineration, biological waste streams, or overboard disposal by appropriately protected staff.
- All bird strikes must be reported on the GSGSSI bird strike pro-forma.

Guano should be cleaned using low-pressure water and the area treated with an approved biocide.

8. Removal of carcasses

Routine carcass removal is not recommended, as it may increase disturbance and disease spread and is generally ineffective as a mitigation measure.

Carcasses may only be moved or collected:

- For post-mortem confirmation of disease, or
- Within the station footprints of King Edward Point or Bird Island, where there is a risk to human health.

This must only be undertaken by GSGSSI or BAS staff named on an appropriate RAP and wearing Level 2 PPE.

9. Reporting

Any reports of animal mass mortality must be reported to GSGSSI as soon as practical, ideally within 24h. Use this online form:





NOTE: Where animal mass mortality events are reported that make a landing unsafe or indicate the need for additional caution, Government officers will issue a notification to vessels operating in the area. Notifications are advisory in nature. Routine communications will not be issued to confirm the absence of mass mortality events, or where mortality levels do not affect safe landing operations.

