RODENT INCURSION RESPONSE GUIDELINES (Concise)

FROM UK Rodent Eradication Best Practice Toolkit: BIOSECURITY PLANNING AND INCURSION RESPONSE FOR RODENTS

Guidelines for "probable/confirmed" sightings/evidence and shipwrecks:

Inform **xxxxx** of outcome of interview/site inspection (name/phone/email)

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UPDATE COMMUNITY/STAKEHOLDERS AND PUT RODENTCIDE WARNING SIGNS IN PLACE

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INCURSION RESPONSE TEAM (4 people minimum) ARRIVE ON ISLAND (preferably within 48 hours)

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SET UP BAIT, MONITORING AND TRAPPING GRID:

- Check permanent detection devices across the whole island for any further sign of rodent.
- Set bait stations 50 metres apart (or closer if establishing a mouse grid, e.g. 20 or 25m) using the locations from the original eradication operation (if applicable) spread out for 500 m in all directions from the sighting/evidence and any other sign picked up from island-wide check, dependant on terrain.
- Wire 3 20g blocks of rodenticide into each bait station in the permanent and incursion response/bolstered grid.
- Add a line of baited stations around the coast if one is not already in place.
- Place and set baited traps (or pairs of traps) (**T**) every 50 metres in all directions from the sighting/sign (i.e. N, NE, E, SE, S, SW, W, NW, total 8 or 16 traps).
- **Check all stations daily for five days, then once a week for six weeks, replenishing bait as required to keep it fresh**.
- **Check all traps twice daily**: set at night and disarm in the morning.
- After the first week of poison baiting, place monitoring stations halfway between each bait station and place

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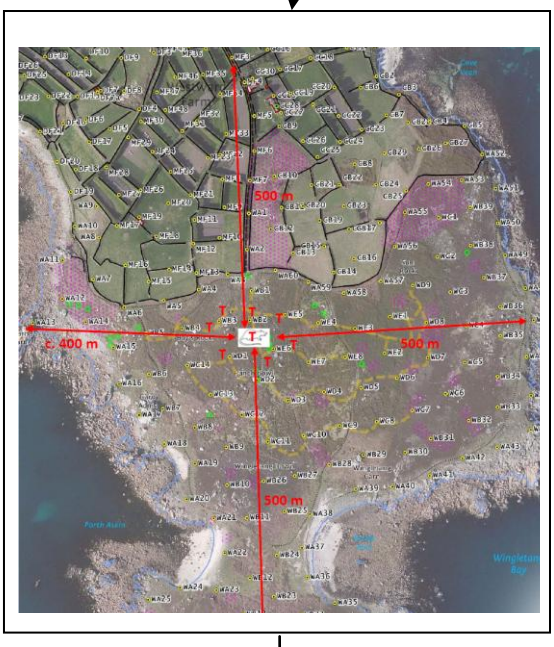

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AFTER SIX WEEKS: ANY POSITIVE RAT SIGN (e.g. teeth marks, droppings, dead rat, bait

NO

1. REVIEW THE SITUATION, WITH EXPERT INPUT
2. REMOVE NON-PERMANENT STATIONS & ALL TRAPS
3. INFORM (**name/phone/email**) OF RESULTS

YES

1. CONTINUE BAIT, MONITORING AND TRAP GRID for **at least** two weeks after the last rodent sign
2. INFORM **xxxx** (name/phone/email) OF RESULTS
3. GET EXPERT ADVICE FOR FURTHER ACTION [This could include wider-scale baiting and monitoring regime, more trapping, more surveys etc.]

Confirming and responding to incursion

Collecting evidence

Correct identification of any sign of rodent incursion is crucial to making the right decision on how to respond. In some situations the evidence of an incursion will be indisputable, e.g. a dead body in a trap on the island/footage captured on a trail camera. However in many cases the evidence will be open to interpretation – e.g. sightings by third parties. It is important, therefore, that evidence collection techniques maximise the information available and minimise the chance of wrong conclusions being drawn from it.

Collecting and archiving surveillance evidence

Sightings	Interview the person who made the sighting as soon as possible – preferably on the same day. Take account of their experience but do not judge a sighting on experience alone. The most important factors are how well they saw it, i.e. how close, how long, what visibility. *What made them think it was a rat/mouse?* Ask open questions e.g. "tell me what you saw? how long did you observe it? What did it look like?" DO NOT ask leading questions e.g. "was it brown and about this big?" Record or write <u>everything</u> down, including when the sighting took place, when the interview took place and who conducted the interview. Ensure the exact location of the sighting is recorded, if necessary take the person back to the location where they saw the animal. Always record the incident in the biosecurity log and check it against previous incident records. One vague sighting on its own may be dismissed but if you get a number of similar sightings in a similar area over time you may form a different conclusion. New techniques for identification may present themselves in the future which could allow the archived evidence to be reviewed. Try to establish other evidence that supports or challenges the sighting (could it have been a vole or a shrew, or even a wren?). Use a standard recording form to gather similar information from each sighting.
Droppings or feeding sign	Photograph the evidence *in situ* where possible before disturbing it. If taking digital photographs, use high definition settings for at least some photos and provide a size comparator (e.g. coin, pen lid). When retrieving evidence to take back, physically mark the spot and collect everything i.e. if there are 24 suspected rat droppings there pick up all 24 and take them back, not just one or two. Take time to look around carefully for other sign such as tracks, hair, scratch marks etc. Remember you are not only looking for evidence of the suspected species, you're also looking for evidence which may support an alternative explanation. Label the evidence, including photos with detail on when /where /who. If sending evidence to an expert for identification, think about the security of transporting it e.g. this evidence may be the crucial factor in a decision to spend thousands of pounds in a contingency response, so don't save £5 by sending it in the post instead of by courier or other traceable/more secure transport system. If the evidence is going to be difficult to identify, have more than one expert look at it independently to give their opinion. Ask each of them why they came to the conclusion they did and what other opportunities there may be to further verify this. Always archive the evidence and record the incident in the biosecurity log. Reference it

	against previous incident records.
Carcasses	Photograph *in situ*. Preserve in alcohol or triple bag and freeze. Label the evidence with details on location, state, and who found it and when. If species cannot be determined (e.g. due to decomposition), follow instructions on gathering DNA evidence .

If there is a **shipwreck**, the area is immediately **considered as a probable/confirmed incursion and triggers an incursion response.** Consider working with maritime authorities who get involved in the shipwreck response to get more information about the level of risk e.g. if salvage experts are going on board the vessel they could be trained to look for rodent sign in the galley. Knowing the cargo and the prospects for the ship breaking up could also forewarn your response.

The speed of a response is crucial. For a probable or confirmed incursion, you want a team on the island ready to deploy bait/set traps/bolster the grid **within 48 hours**. For this to be possible, the mechanisms for responding to a reported sighting/sign find must be slick and lines of responsibility need to be clear. Transport arrangements should be in place and all equipment ready for loading, if not stored on the island. As UK surveillance strategies are limited to detecting incursion events (by themselves they cannot deal with an incursion), it is even more imperative that plans for incursion response are in place and people are ready to respond immediately.

Where there is already a network of stations in place on the island, use it as the basis for the response. It may need to be bolstered – e.g. if rodent sign is discovered on a large island in an area where there is no grid or only a sparse grid. Speed is of the essence. A sparse but extensive network covering as much of the island as possible is probably better if a grid has to be established than a dense grid in a small area. 1 to 2 devices per ha targeting preferred habitat is sufficient – it doesn't need to be an exact grid because invading rodents are likely to travel. Cover all major habitat types, but focus on preferred sites and known invasion sites. If a grid is already established, you may have time to reduce the grid size around the area of the sighting/evidence.

Place traps around the area of the sighting/evidence where there is plenty of natural cover and where rodents are likely to be active (e.g. alongside large rocks or walls, around the base of trees, under logs, overhanging vegetation, and under buildings). Traps can be baited with a mixture of peanut butter and rolled oats for an easy, durable bait which can be stored as part of the Incursion Response Kit. Tracks are used by invading brown rats and mice. Brown rats tend to be coastal foragers while black rats might prefer interior forest and may avoid tracks. Additionally, refer to Section 6.6 for setting up rodenticide grid from point of rodent sighting.

Having a Rodent Incursion Kit stocked and stored in a suitable place is crucial to preparedness. Some items in the Incursion Response Kit will need to be replaced periodically even if not used (*****). An annual inspection of the kit is highly recommended. The contents of the kit will depend on the characteristics of your island, but a starter list is below.

Rodent Incursion Kit contents

Item
Reference information - consider having laminated copies
Biosecurity plan *****
Map of island
Map and description of GPS locations of permanent monitoring devices / grid
Species identification material
Operating instructions (e.g. CPS, trail camera, traps, installing bait stations)
Contact details for experts *****
Record keeping
Waterproof notebooks
Copies of maps for note-making (incl. some laminated)
Pens/pencils
Vivid marker pens
GPS (loaded with locations of stations) and spare batteries*****
Compass
Data sheets for recording activity at traps/tracking tunnels/monitoring stations
Flagging tape (at least two colours)
Specimen containers (jars, zip lock bags) & labels
1 litre of 70% ethanol
Sharp knife or dissecting tools (e.g. scalpel, tweezers)
Digital camera and spare batteries*****
50m tape measure
Detection
Tracking cards*****, ink***** & tunnels
Bait for tracking tunnels - peanut butter/oats, pieces of coconut, etc *****
Indicator baits - chocolate/peanut butter/coconut wax, soap, coconut, eggs, chocolate *****
Trail camera(s) and spare batteries*****
Headlamps/torches & spare batteries*****
Eradication
Snap traps and covers with length of wire for each trap to attach to anchor-point. Mouse and rat-sized if both species a risk.
Bait for traps – eg peanut butter***** and rolled oats*****
Wire and bait stations – sufficient to create correct grid size across island, if required
Second generation rodenticide*****- replace every couple of years: has limited shelf-life
Self-sealing bags
Disposable gloves***** for handling baits, traps or dead animals
Tools e.g. hammers, spades, pliers, nails, thin wire, thicker wire
1st Aid kit including blankets*****
Boat & safety gear*****
Rope access gear*****
Two means of long-distance communications – two-way radio and/or satellite phone and/or emergency locator beacons, and spare batteries***** or means to charge these.
Personal protective equipment
Tent and sleeping equipment (if no accommodation available on island)
Water***** and cooking implements (take fresh supplies of food and water as well)
Generator and fuel (if no electricity on island)
Rodent-proof and waterproof containers for all equipment to be packed in

Example incursion response bait take form

	Date	1/1/14			**Date**	2/1/14
	Surveyor	Sophie Thomas			**Surveyor**	Sophie Thomas
Station	**Bait taken**	**Notes**		**Station**	**Bait taken**	**Notes**
A1	2 blocks	Rat droppings found (all removed)		A1	0 blocks	Bait in good condition
A2	0.5 block	Suspected crow interference. Block replaced		A2	0.25 block	Block collected for tooth mark identification
A3	0 blocks	-		A3	0 blocks	bait replaced as damp around edges
A4				A4		
A5				A5		
A6				A6		
A7				A7		
A8				A8		
A9				A9		
A10				A10		
A11				A11		
A12				A12		
A13				A13		
B1				B1		
B2				B2		
B3				B3		
B4				B4		
B5				B5		
B6				B6		
B7				B7		
B8				B8		
C1				C1		