

# The Orkney Native Wildlife Project



## Strategic Environmental Assessment Scoping Report

October 2019



Scottish Natural Heritage  
Dualchas Nàdair na h-Alba

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# Orkney Native Wildlife Project

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# 1. Project Summary, Objectives and Outcomes

## 1.1 Project Summary

This five year project aims to eradicate the stoat populations on Orkney Mainland, South Ronaldsay, Burray, Glimps Holm, Lamb Holm and Hunda and prevent the spread of stoats to the non-linked islands of the archipelago. Stoats are non-native to the Orkney Isle with the first confirmed sightings in 2010. Stoats have never been part of the ecosystem in Orkney and the ecological consequences of stoat introduction to Orkney are predicted to be devastating. The stoat will impact a whole array of species across the landscape, from hen harriers and short-eared owls nesting on the moors, voles, corncrake and wading birds breeding on farmland, seabirds breeding on cliffs and land, and twite nesting on coastal heath.

The Orkney stoat eradication will be the largest of its kind ever attempted, in terms of the land area targeted. It will also be the world's largest eradication operation carried out on an inhabited island. Around 20 of the Orkney Islands are inhabited, with a total population of around 21,000 people.

This eradication will be delivered by the Orkney Native Wildlife Project (ONWP) partnership, formed by the Royal Society for the Protection of Birds (RSPB), Scottish Natural Heritage (SNH) and the Orkney Islands Council (OIC). This project is funded by the National Lottery Heritage Fund and the EU LIFE in addition to financial contributions from the partners.

## 1.2 Operational Summary

The delivery phase of the project is expected to commence in October 2019. Around 10,000 traps, consisting of DOC 150 and DOC 200 in double-set tunnels and single-ended cubby configuration have been set out by the project trappers. A small number of Goodnature A24 traps will also be trialled and may form part of the delivery phase. The traps will be set and checked at least once every three weeks. Dogs will also be used to search for the presence of stoats. This phase of the eradication operation is expected to last up to three years. It is anticipated that once the trapping rate has reached zero then there will be a further 2 year period of trapping effort. At the completion of a 2-year period with no confirmed reports of stoats and no fresh sign detected by the conservation detection dogs, the eradication can be declared a success and the operation will end.

Stoat biosecurity for the Orkney Islands is also an essential component of a successful eradication, and will guarantee a long-lasting legacy for the benefit of natural heritage. A suite of biosecurity measures will be implemented on the stoat free islands.

This eradication operation will be supported by a monitoring programme, which will collect data on stoat abundance using tracking tunnels and motion-triggered trail cameras operated by citizen scientists. Orkney's native wildlife will also be monitored by volunteers and citizen scientists, and seasonal research assistants will collect wader and hen harrier productivity data to gather evidence on the conservation impact of the stoat removal in Orkney.

## 1.3 Aims and Objectives

The primary objective of this eradication operation is to remove the predation pressure posed by the invasive non-native stoat on the Orkney native wildlife. The purpose of the eradication is to safeguard Orkney's native wildlife population. The main objectives are outlined in table 1 below.

Objectives	Outcomes
1. By August 2019, the extent of the stoat invasion across the Orkney islands is known, robust biosecurity measures are in place to prevent further spread, and plans and funding are in place to remove any satellite populations that have become established on the	1.1 The risks and uncertainties associated with the stoat eradication are reduced and managed

non-linked islands	
2. By August 2023, stoat density on Orkney Mainland and linked isles is reduced to a level where they are no longer a significant threat to Orkney native wildlife	2.1 Stoat predation pressure has been reduced for the benefit of Orkney native wildlife
By August 2025, no stoats remain in Orkney and the risk of new incursions is effectively reduced through a comprehensive and well-resourced biosecurity strategy for the archipelago	3.1 The long-term sustainability of stoat-free Orkney islands is secured

**Table 1: Project objectives**

## 2. Relevant Plans, Programmes and Strategies

Table 2 below details the related policy and regulatory framework which sets the context for the assessment.

<b>Related Policy and legislative context.</b>	<b>Summary description</b>	<b>Relevance to the project</b>
<b>Nature conservation law</b>		
EC Habitats & Species Directive 1992	Ensures the conservation of a wide range of rare, threatened or endemic animal and plant species.	The project has the ability to affect the habitats and species within Orkney's SACs. An HRA has been undertaken to determine if the project will have an adverse effect on the integrity of these SAC's.
EC Birds Directive 1992	Protects wild birds within the EU, including their eggs, nests and habitats.	The project has the ability to affect SPA birds. An HRA has been undertaken to determine if the project will have an adverse effect on the integrity the Orkney SPA's.
Habitats Regulations 1994	Implements Birds and Habitats Directives in the UK	Plans or proposals affecting any Natura site (SAC or SPA), would require a 'Habitats Regulations Appraisal' before proceeding. Some of these might require an 'Appropriate Assessment' before a decision is made about whether or not to proceed
Wildlife & Countryside Act 1981	The protection of sites and species and the licensing of activities that might affect them.	Licences may be required to disturb Schedule 1 breeding birds.
Nature Conservation (Scotland) Act 2004	Duty on public bodies to further the conservation of biodiversity; also protection for Sites of Special Scientific Interest and threatened species.	The project has the potential to affect Orkney SSSIs. SSSI consents will be required for potentially damaging operations.
Wildlife and Natural Environment (Scotland) Act 2011	The act amends existing legislation relating to the protection of certain birds, species, habi-	Any feral/domestic cats caught in the traps will not be released into the wild.

	tats and activities, aiming to make law on wildlife and the natural environment more effective and proportionate.	
<b>Animal welfare law</b>		
Animal Health & Welfare (Scotland) Act 2006	This law protects the welfare of all vertebrate animals kept on a temporary or permanent basis in Scotland.	The welfare of stoats and any by-catch must adhere to this legislation.
<b>Cultural Heritage</b>		
Passed to the Future (Sustainable Management of the Historic Environment) 2002	Scottish Government policy on the historic environment.	The project had potential to affect historic or archaeological sites through the compaction of soil when placing traps and through physical damage to historic features of interest during digging of soil for trap placement.
Scottish Historic Environment Policy 1: The Historic Environment 2006	Sets out Scottish Government strategic policy for the historic environment. Provides a framework for more detailed strategic policies on the management of the historic environment	See above.
<b>Other Related plans and Policies</b>		
The 2020 challenge for Scotland's Biodiversity	Statutory role relating to the biodiversity duty in the Nature Conservation (Scotland) Act. Scotland's contribution to meeting the Convention on Biological Diversity	The project (if successful) will contribute to safeguarding Orkney's biodiversity.
The Orkney Local Biodiversity Action Plan 2018-2022	Measures to protect and enrich the biodiversity in the Orkney Isles.	See above.
RSPB's Policy on the Killing or Taking of Vertebrates (section 6.1.4)	Guiding policy of RSPB (lead partners) in the humane trapping of vertebrates.	The project conservation dogs can not be used to flush out target species.

**Table 2: Related policies and plans**

### 3. Environmental Baseline

The Environmental Report will consider the detailed impacts on biodiversity, flora and fauna. In order to be able to understand the significant environmental effects of the ONWP it is necessary to set out some basic information about the current environment in Orkney relative to the issues.

In Orkney there are thirteen SPAs, five SACs and one Ramsar site. Seven SPAs in Orkney include marine areas that are important to breeding seabirds for essential resting and maintenance activities. Work is ongoing throughout the UK to identify a suite of wholly marine SPAs, and the following areas within Orkney waters are currently identified as proposed SPAs:

- North Orkney
- Scapa Flow

- Pentland Firth

A SEA consultation has proposed that the North Orkney and Scapa Flow sites should be combined to form the Orkney Inshore Waters SPA. Decisions on this new classification are currently pending by Scottish Ministers. Nationally protected sites include the Sites of Special Scientific Interest (SSSI) of which there are 36. Figures 1 and 2 in the appendix show the distribution of protected areas across Orkney.

Stoats are not native to the Orkney archipelago where they are a recent introduction. First reports of stoats on Orkney Mainland were received in 2010, and the population has since expanded rapidly. Figure 3 (see appendix) shows the recorded sightings of stoats on Orkney Mainland, South Ronaldsay, Burray, Glimps Holm, Lamb Holm and Hunda between 2010- 2018.

The lack of native mammalian predators on Orkney means that populations of wildlife, especially ground nesting birds, have flourished and distinct farming practices, such as free-range poultry rearing, have developed. But it also makes Orkney's native wildlife very vulnerable to the introduction of non-native predators.

Harper (2017) <sup>1</sup> speculated that stoats in Orkney might already be at carrying capacity, and that it was highly likely that they would be dispersing to the non-linked islands of the group, most of which are within stoats' swimming distance from each other.

There are currently no protected areas on Orkney which are in unfavourable condition as a result of the stoat introduction. An SNH commissioned report, "Stoat (*Mustela ermine*) on the Orkney Islands – Assessing the risks to native species"<sup>2</sup> has highlighted that stoats could have a serious detrimental effect on the endemic Orkney vole, (*Microtus arvalis orcadensis*), and consequently on the populations of Hen harrier, (*Circus cyaneus*), and Short-eared owl, (*Asio flammeus*) who rely on the vole as their main prey.

These two species of bird have sites of international importance for them in Orkney, and the appearance of stoats on Orkney is likely to lead to a significant deterioration in the condition of the species. This is not only through predation on the vole, but also through direct predation on the chicks and eggs of these birds. The opportunistic predation habits also means that other species of ground nesting birds such as terns, skua, and waders will occur. The predatory modes of stoats further indicates that internationally important seabird colonies of species such as guillemots, kittiwakes and puffins around Orkney are at risk from predation, especially as stoats are very mobile, and there are no top predators in Orkney to impact, in turn, upon the stoat population as their numbers increase.

#### **4. Scope of the Assessment**

Table 3 in the appendix identifies the SEA objectives to be scoped in and out of the assessment together with relevant justifications. In summary the following SEA objectives will be scoped in:

- Biodiversity flora and fauna
- Cultural heritage
- Population and human health
- Material assets

#### **5. Reasonable Alternatives**

The SEA will assess the preferred option and also the alternatives which include the following:

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<sup>1</sup> Harper, G. 2017a. *The feasibility of eradicating stoats from the Orkney Islands*. Unpublished report, RSPB Scotland, 35 pp.  
<sup>2</sup> Fraser, E.J., Lambin, X., McDonald, R.A. & Redpath, S.M. 2015. Stoat (*Mustela erminea*) on the Orkney Islands – assessing risks to native species. *Scottish Natural Heritage Commissioned Report No. 871*.

- Long term control of stoats rather than eradication
- No control of stoats

## 6. Assessment Methodology

An environmental topics based approach to the assessment will be undertaken with a focus on the likely significant effects of the project on the key environmental objectives.

It will consider:

- the nature of each objective
- The current baseline and how it will evolve without the project
- The effects of the project on each objective
- Mitigation and enhancement of any significant effects.

Within the SEA topics scoped in as detailed in Table 3, the key environmental objectives include:

Biodiversity, flora, fauna, soils

- **woodland habitats and geomorphological features including effects on the related species:**
  - bryophytes, fungi and lichens
  - terrestrial vascular plants
  - invertebrates
  - birds
  - mammals

Population and Human health

- **population and human health**

Cultural heritage

- **cultural heritage including archaeology**

The assessment will consider where appropriate cumulative, inter-related and synergistic effects arising from the policy.

### SEA Environmental Objectives

The following SEA objectives will form the basis against which the nature of the environmental effects on the receptors identified above will be considered:

- Biodiversity, flora and fauna – *to conserve and enhance the integrity of ecosystems on the Orkney Isles.*
- Population and human health – *to protect human health*
- Cultural heritage including archaeology – *to conserve and enhance the historic environment in the Orkney Isles.*

## 7. Consultation period and next steps

The Environmental Report will be published alongside the Project policy statement and draft management framework. SNH proposes a period for consultation of 6 weeks for the Environmental Report.

# Appendix 1

## Environmental Baseline Figures

### Orkney SPAs and SACs

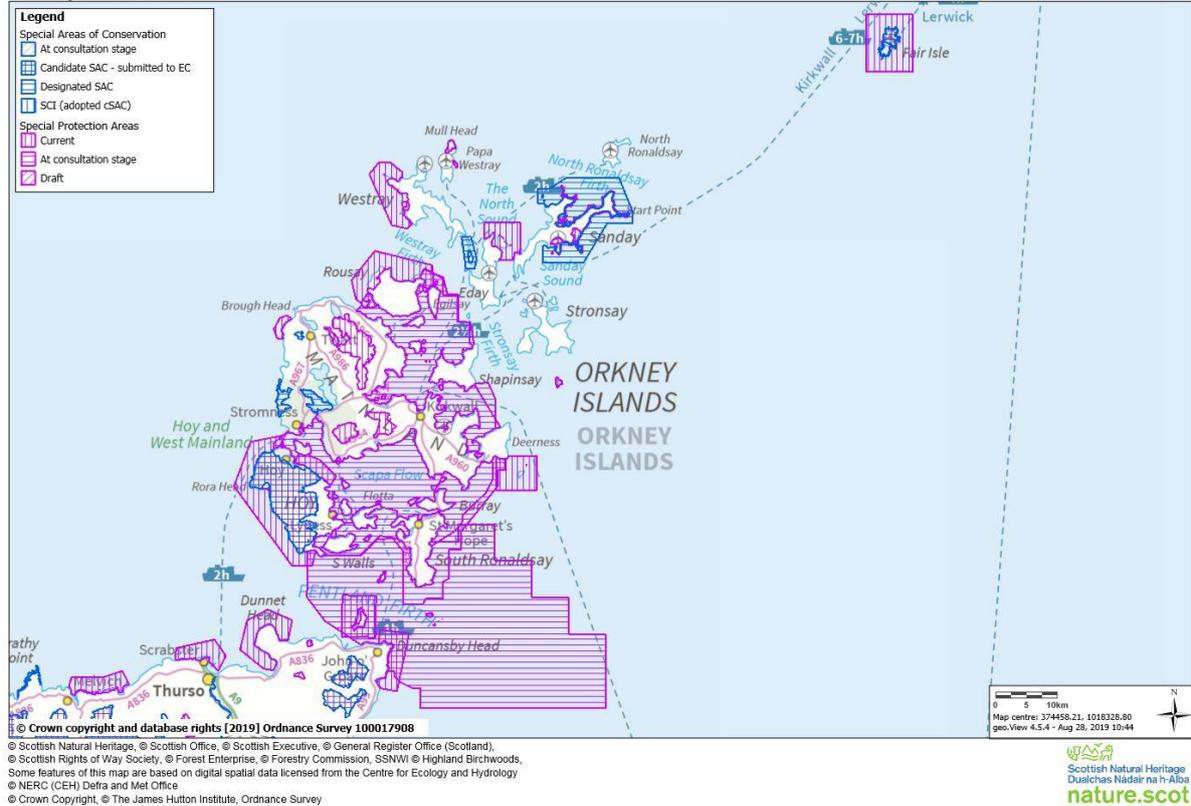


Figure 1. Designated sites of the Orkney Islands, including the Mainland and linked isles.



### Appendix 3

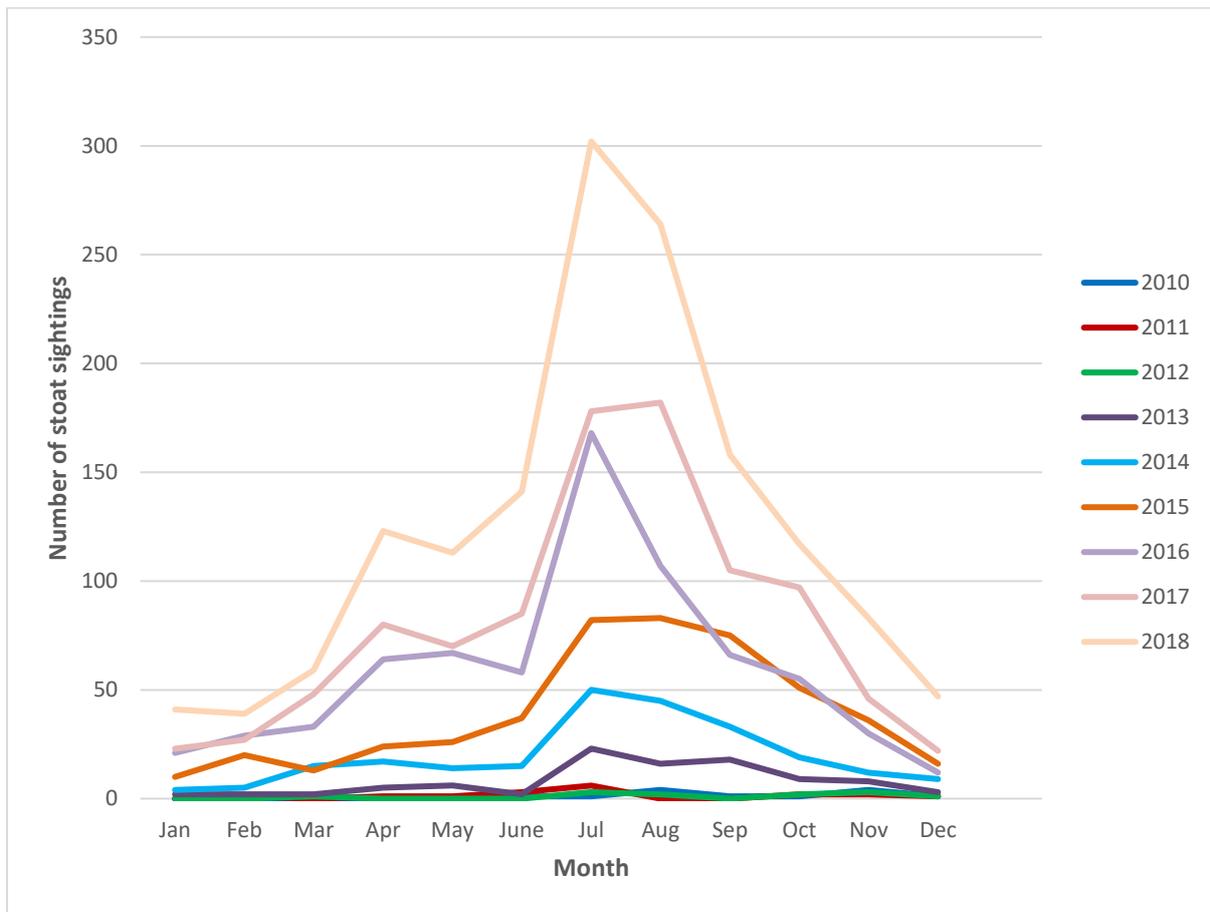


Figure 3. Number of confirmed stoat sightings on Orkney between 2010-2018

## Appendix 4

### Scope of Assessment

<b>SEA topic</b>	<b>Scoped in or out</b>	<b>Reasons</b>
<b>Biodiversity, flora and fauna</b>	<b>In</b>	Stoats predate on many species of native wildlife on Orkney. The eradication of stoats should therefore have positive benefits to Orkney's wildlife. During the operation phase of the project there is potential for disturbance, damage and death to some of the wildlife on Orkney. There is also potential for habitats to be temporally damaged when installing and checking the traps.
<b>Population and Human Health</b>	<b>In</b>	Bio-hazardous animal waste will be a by-product of the project. This could potentially affect human health if not disposed of correctly.
<b>Soils and geomorphology</b>	<b>out</b>	No significant impacts to soils or geomorphology are anticipated.
<b>Water quality, resource and ecological status</b>	<b>out</b>	No significant impacts to water quality are anticipated.
<b>Air</b>	<b>out</b>	The project is unlikely to result in any significant changes to atmospheric emissions or air quality.
<b>Climatic factors</b>	<b>out</b>	The project's carbon footprint is considered to be minimal therefore not considered significant.
<b>Landscape</b>	<b>out</b>	There are not any landscape impacts anticipated.
<b>Cultural heritage</b>	<b>in</b>	There are a number of sites of historic value within the project area. The placement of traps could potentially have an adverse impact on these.

Table 3 – Environmental Topics to be scoped in and out of the assessment process

# **SCREENING REPORT**

## STEP 1 – DETAILS OF THE PLAN

**Responsible Authority:**

[Error! Reference source not found.](#) Scottish Natural Heritage

**Title of the plan:**

[Error! Reference source not found.](#) The Orkney Native Wildlife Project

**What prompted the plan:**

(e.g. a legislative, regulatory or administrative provision)

[Error! Reference source not found.](#) Predicted catastrophic loss of endangered native wildlife from an island archipelago

**Plan subject:**

(e.g. transport)

[Error! Reference source not found.](#) Invasive species removal

**Screening** is required by the Environmental Assessment (Scotland) Act 2005.

Based on Boxes 3 and 4, our view is that:



**An SEA is required, as the environmental effects are likely to be significant:** Please indicate below what Section of the 2005 Act this plan falls within



Section 5(3)



Section 5(4)



**An SEA is not required, as the environmental effects are unlikely to be significant:** Please indicate below what Section of the 2005 Act this plan falls within



Section 5(3)



Section 5(4)

**Contact details:**

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Date:

31 October 2019

## STEP 2 – CONTEXT AND DESCRIPTION OF THE PLAN

**Context of the Plan:**

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Stoats are non-native to the Orkney Isle with the first confirmed sightings in 2010. Stoats have never been part of the ecosystem in Orkney and the ecological consequences of stoat introduction to Orkney are predicted to be devastating. The stoat will impact a whole array of species across the landscape, from hen harriers and short-eared owls nesting on the moors, voles, corncrake and wading birds breeding on farmland, seabirds breeding on cliffs and land, and twite nesting on coastal heath.

A feasibility study on stoat eradication on the Orkney Isles was commissioned by the RSPB in 2017 and the operation plan was developed following this. This operating plan is the subject of the SEA

**Description of the Plan:**

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This five year plan aims to eradicate the stoat populations on Orkney Mainland, South Ronaldsay, Burray, Glimps Holm, Lamb Holm and Hunda and prevent the spread of stoats to the non-linked islands of the archipelago

The stoats will be eradicated using DOC150 & 200 traps in secure boxes. Trap locations will be selected by experienced trappers. Taps will be checked at least once every three weeks.

A waste management plan will be implemented to ensure safe disposal of stoat and by catch carcasses.

A suite of biosecurity measures will also be implemented on the stoat free islands to ensure there is no further spread of stoats.

This eradication operation will be subject to active adaptive management, with a 6-monthly technical review process built into this operational plan.

**What are the key components of the plan?**

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The main component of the project is the trapping phase. Further components of the plan include:

- Waste management and the disposal of carcasses
- Biosecurity measures on non-linked and stoat free islands

**Have any of the components of the plan been considered in previous SEA work?**

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No

**In terms of your response to Boxes 7 and 8 above, set out those components of the plan that are likely to require screening:**

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- The eradication of stoats via the 5 year trapping phase.
- Waste Management Plan

**STEP 3 – IDENTIFYING INTERACTIONS OF THE PLAN WITH THE ENVIRONMENT AND  
CONSIDERING THE LIKELY SIGNIFICANCE OF ANY INTERACTIONS (Error! Reference source not found.)**

Plan Components	Environmental Topic Areas										Explanation of Potential Environmental Effects	Explanation of Significance
	Biodiversity, flora and fauna	Population and human health	Soil	Water	Air	Climatic factors	Material assets	Cultural heritage	Landscape	Inter-relationship is-		
Trapping of stoats	✓	✓						✓			<p><b>Biodiversity, flora and fauna -</b> There are expected positive benefits to biodiversity, flora and fauna following the eradication of stoats and the restoration of the natural ecosystem on Orkney. There is also potential for negative impacts through disturbance to breeding birds, trampling of sensitive habitats</p> <p><b>Population and human health –</b> there is a minor risk associated with environmental health impacts on humans from decaying stoat/rat carcasses in the traps. This is expected to be a minor risk.</p> <p><b>Cultural Heritage-</b> There are a number of sites of historic value within the project area. The placement of traps could potentially have impact on these.</p>	<p><b>Biodiversity, flora and fauna -</b> Following stoat eradication it is expected the native wildlife on Orkney will recover from predation pressures.</p> <p><b>Population and human health –</b> Stoat &amp; rat carcasses could be left within traps for up to 3 weeks .The boxes are very secure so unlikely to be accessed by the public. Waste will be disposed of in accordance with the waste management plan.</p> <p><b>Cultural Heritage-</b> Traps will not be placed adjacent to scheduled monuments and no digging of soil to a depth greater than 100mm will be undertaken within the vicinity of archaeological features or heritage sites.</p>
Waste Management											<p><b>Population and human health-</b> The disposal of carcasses may pose</p>	<p><b>Population and human health-</b> Options for carcass disposal have</p>

											a threat to human health	been explored in the waste management plan. Incineration is considered to be the best option to minimise impacts on human health.

#### STEP 4 – STATEMENT OF THE FINDINGS OF THE SCREENING

**Summary of interactions with the environment and statement of the findings of the Screening:**

(Including an outline of the likely significance of any interactions, positive or negative, and explanation of conclusion of the screening exercise.)

**Error! Reference source not found..**

The five year plan is likely to result in significant positive benefits to biodiversity, flora and fauna. The plan has the potential to have significant but minor negative effects on cultural heritage and population and human health but the assessment process will explore mitigation measures to avoid adverse effects.

When completed send to: [SEA.gateway@scotland.gsi.gov.uk](mailto:SEA.gateway@scotland.gsi.gov.uk) or to the SEA Gateway, Scottish Government, Area 2H (South), Victoria Quay, Edinburgh, EH6 6QQ.

