

# **Initial Environmental Evaluation for the eradication of rodents from the Mercer baiting zone, South Georgia\***

**South Georgia Heritage Trust**

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\*to be read in conjunction with 'Environmental Impact Assessment for the eradication of rodents from the island of South Georgia' of the same date.

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## 1 INTRODUCTION

The Mercer zone is one of 19 identified rat-infested treatment zones on South Georgia, bounded by glaciers, mountains and the sea (EIA Appendix 5). This zone is one of three which have been proposed for treatment under Phase 1 of the South Georgia Habitat Restoration project, the others being the adjacent Greene and Thatcher Peninsulas. Subsequent phases of the operation will eradicate rodents from other discrete areas, leading to complete clearance of the island over a period of several years.

This first phase of the eradication will allow for the evaluation and optimisation of the proposed operational procedures in the challenging conditions of South Georgia. Monitoring of the impacts on non-target species and vegetation will inform subsequent phases of the operation.

The Mercer eradication zone is located on the north-east coast of South Georgia at the west end of Cumberland West Bay. The main operating base for the eradication project at Grytviken and King Edward Point (KEP) will be used for operations in the Mercer zone.

The Mercer eradication zone does not contain any visitor sites, heritage sites or areas of particular conservation value. It is a relatively small zone, but its eradication as part of the first phase is important due to the potential recession of the Geikie Glacier, which could allow rats to reinvade the Thatcher zone following eradication, were the Mercer zone not cleared of rats.

This Initial Environmental Evaluation (IEE) assesses the site specific environmental impacts of the rat eradication operation the Mercer zone. It should be read in conjunction with the island-wide Environmental Impact Assessment for the eradication of rats from South Georgia (SGHT, 2010).

## 2 PROPOSED OPERATION

### 2.1 Proposed eradication methodology

The Mercer baiting zone is shown as the shaded area in Figure 1. Grytviken will be used as the main operating base. The flight distance from Grytviken to the eastern part of the Mercer zone is 11 km over Thatcher Peninsula (see Figure 2). The zone includes an area of around 1601ha of apparent land to which rats could have access, although some of this is probably moraine-covered ice. The vast majority of the zone (94%) is unvegetated (EIA Appendix 5). The zone has 10.3km of coastline.

This zone will take an estimated 9 hours of helicopter flying time to complete, and will require some 4 tonnes of bait.

This zone will be treated as late as reasonably possible, consistent with other operational priorities, to minimise the number of birds present in the gentoo penguin colony (see below). This will minimise disturbance and loss of bait to trampling.

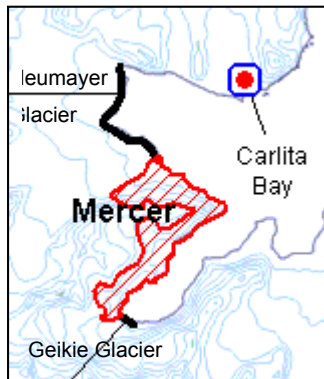


Figure 1. Mercer baiting area (from EIA Appendix 6)

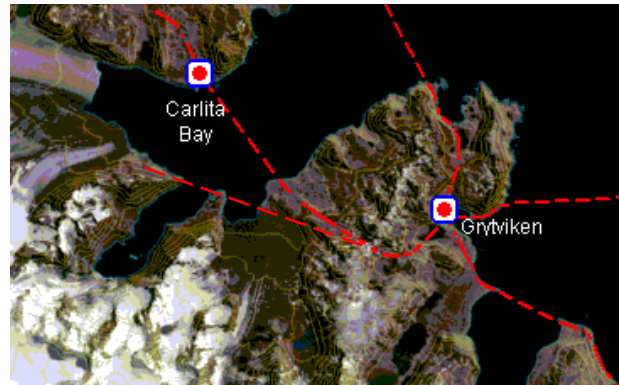


Figure 2. Flight lines for gaining access to Mercer zone for helicopter bait spreading (adapted from EIA Appendix 5).

### 3 STATE OF THE ENVIRONMENT

#### 3.1 Location

The Mercer eradication zone is situated on the north-east coast of South Georgia at the west end of Cumberland West Bay.

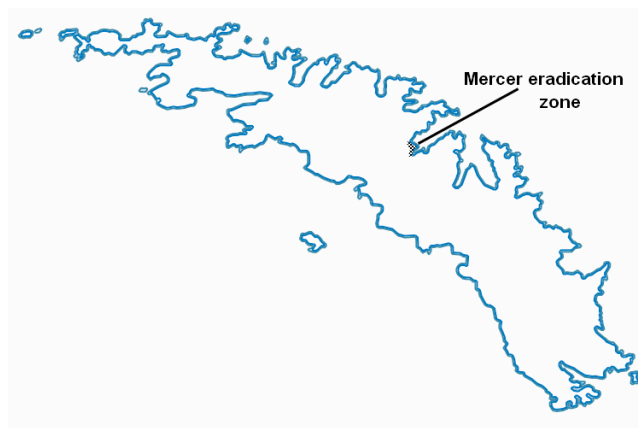


Figure 3. Location of Mercer eradication zone

#### 3.2 Landforms, glaciology and hydrology

There are no significant lakes or ponds in the Mercer baiting zone and no major streams. The zone is characterized by a ridge which descends from the Three Brothers - three peaks at the north-west end of the Allardyce Mountain range. A subsidiary peak, Headland Peak is situated to the north of Geikie Glacier.

The Geikie Glacier is considered to be a poor ice barrier. Conducting the eradication of rats from the Mercer and Thatcher zones during the same season will therefore reduce the risk of failure of the operation.

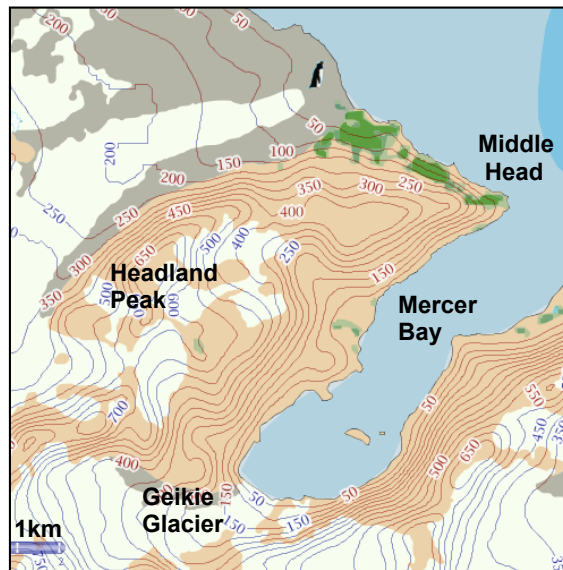


Figure 4. Topography, hydrology, vegetation and location of gentoo penguin colony

### 3.3 Flora

The Mercer eradication zone has very little vegetation (less than 6% of the eradication area). The main area of vegetation is along a stretch of coastline to the west of the entrance to Mercer Bay.

### 3.4 Fauna

There are no other land mammals apart from rats in the Mercer eradication zone.

There are no known albatross nesting sites in the Mercer zone. A gentoo penguin colony is close to the northern boundary of this zone.

Detailed information about the presence of other nesting birds in this zone is lacking.

### 3.5 Visitor sites

There are no tourist visitor sites in the Mercer eradication zone.

### 3.6 Conservation Status

The Mercer eradication zone has no special conservation status. The gentoo penguin colony is identified in the *South Georgia Low Flight Avoidance Manual* (GSGSSI, 2004).

### 3.7 Heritage sites and buildings

None recorded.

## 4 EVALUATION OF ENVIRONMENTAL EFFECTS OF RAT ERADICATION FROM THE MERCER ERADICATION ZONE

The environmental impacts of the proposed eradication of rats from South Georgia are described in the island-wide EIA.

No special issues have been identified for the Mercer eradication zone.

## 5 CONCLUSIONS

The Mercer eradication zone has been selected for the first phase of rodent eradication on South Georgia. It is a relatively straight-forward site and is close to the operations base at Grytviken, which will facilitate baiting operations.

No special issues have been identified for this eradication zone.

## 6 REFERENCES

- GSGSSI. (2004). South Georgia Low Flight Avoidance Manual. Document of GSGSSI
- Pasteur, E.C. and D.W.H Walton. (2006). South Georgia: Plan for Progress. Prepared for GSGSSI.
- SGHT. (2010). Environmental Impact Assessment for the eradication of rats from South Georgia. South Georgia Heritage Trust.