

# DPLR4\1071

Darwin Plus Local - Final Report (1)

Officer: Linzi Ogden

## Section 1 - Darwin Plus Local Project Information (Essential)

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### Project Reference Number

DPL00099

### Q1. Project Title

*No Response*

### Overseas Territory(ies)

☒ South Georgia and The South Sandwich Islands (SGSSI)

### Lead Organisation or Individual

South Atlantic Environmental Research Institute (SAERI)

### Partner Organisation(s)

UK Centre for Ecology and Hydrology, Wallingford, UK; University of Exeter, Penryn, UK Swedish University of Agricultural Sciences, Uppsala, Sweden

### Value of Darwin Plus Local Grant Award

£49,724.18

### Project Start Date

01 October 2024

### Project End Date

31 March 2025

### Project Leader Name

Pierre Tichit

### Project Website/Twitter/Blog etc.

*No Response*

### Report Author(s)

Report Date

30 April 2025

Project Summary

No Response

Project Outcomes

Checked	<b>Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;</b>
Unchecked	<b>Climate Change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;</b>
Checked	<b>Environmental quality: improving the condition and protection of the natural environment;</b>
Checked	<b>Capability and capacity building: enhancing the capacity within OTs, including through community engagement and awareness, to support the environment in the short- and long-term.</b>

Section 2 - Project Outcomes (Essential)

On a scale of 1 (high – outcome substantially exceeded ) to 5 (low – outcome substantially did not meet expectation ), how successful do you think your project has been?

⦿ 3 - Outcome met expectation

Project outcomes and justification for rating above

The primary goal of this Darwin Local project was to develop and test a method using volatile baits to capture non-native 11-spotted ladybirds on South Georgia, and to disseminate the results to key stakeholders. This is particularly relevant given that ladybirds could have a negative impact on the terrestrial ecosystem of South Georgia.

The project started in early October 2024. The project partners and I managed the project thanks to monthly meetings (evidence 1). We decided to test the traps in the field instead of the laboratory, as was initially planned in the application (see project challenges for details). Thanks to a visit to the partner laboratory of Velemir Ninkovic in November 2024, I produced olfactory lures impregnated with Methyl Salicylate (evidence 2), a compound that is known to attract other species of ladybirds. These - together with all equipment necessary for a field trial - were shipped to the Falkland Islands, where the 11-spotted ladybirds are invasive and active during the austral summer.

The field trial was performed in December by two field operators (Simon Browning and Stephen Gillanders) in the Falklands (evidence 3). Two types of traps with or without olfactory lures were installed for 3 weeks,


demonstrating our capacity to design and test new capture methods (measurable indicators 1&2). Unfortunately, no specimens were captured despite the known presence of ladybirds in the area (evidence 4). This suggests that volatile-based traps are not a suitable capture/monitoring method for non-native ladybirds under these conditions and on South Atlantic islands (measurable indicator 4). From late January to early February, a team consisting of Simon Browning and Victoria Foster performed an extensive survey on South Georgia, combining >60 intensive hand searches and a few traps. They also searched for ladybirds while commuting to intensive search sites (>50 km) and covered over 3000 m2 of searched area (evidence 5-6). No ladybirds were found, even in the areas that were known to be infested in 2023. These negative results suggest that ladybirds may not have survived on South Georgia, but continued monitoring efforts are needed to confirm this. As such, it improves our knowledge of the invasion status of ladybirds (measurable indicators 3).


Results from field campaign were disseminated in person by Simon Browning to personnel of the Government of South Georgia & South Sandwich Islands (GSGSSI), including the Chief Executive Laura Sinclair Willis (measurable indicators 5). To continue to raise awareness about invasive species in South Georgia and the sub-Antarctic, a postcard featuring the eleven-spotted ladybird is being designed and will be distributed to Antarctic cruise operators in the coming weeks (evidence 7).


This pilot study meets our expectations even though it does not lead to a ground-breaking method. It establishes that volatile traps are not suitable for non-native ladybirds, provides reassuring updates about the invasion of ladybirds on South Georgia (relevant for GSGSSI) and strengthens the biosecurity awareness and vigilance in the OT and the wider region.

## Supporting Evidence - file(s) upload


 [Evidence 1](#)


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 [Evidence 4a](#)


 30/04/2025


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 [Evidence 5a](#)


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 [Evidence 5b](#)


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 [Evidence 6](#)


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 [Evidence 4b](#)


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 pdf 375.88 KB


 [Evidence 2b](#)


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 [Evidence 3a](#)


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 [Evidence 3b](#)


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 [Evidence 2a](#)

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## Supporting Evidence - links to published document/online materials

Evidence 1: Collated minutes and agendas of the project's meetings.

Evidence 2: Production of bead impregnated by Methyl Salicylate for the field trial in the laboratory of Velemir Ninkovic.

Evidence 3: Pictures of field trial in the Falklands.

Evidence 4: Protocol and GPS coordinates of field trial in the Falklands.

Evidence 5: Picture of field expedition on South Georgia.

Evidence 6: Datasheets with GPS coordinates of the field expedition on South Georgia.

Evidence 7: Postcard that will be edited and distributed to Antarctic cruise operators. The eleven spotted ladybird will be added to the species list in the coming weeks: <https://www.ceh.ac.uk/our-science/projects/inns-ukots-resources>.

## Project Challenges

When the project started in October, we could not find a commercial provider of eleven spotted ladybirds, and specimens could not be found in the wild in Sweden/Europe. Furthermore, a laboratory experiment to test olfactory traps would have been challenging because ladybirds were already entering hibernation and would have been unlikely to be active during behavioural assays. This is why we decided to test the traps in the Falklands, where the summer was starting, and ladybirds were active.

"Negative results" are challenging, because they may indicate a flaw in the sampling design or a true absence of biological effect. In our case, the ladybirds were not captured by any of our traps in the Falklands. This could indicate that the traps themselves are not efficient, possibly due to windy conditions that quickly weakens the scent on the olfactory lure, or that specimens were not active during that time in the sampling area. In any case, it suggested that the olfactory lures were not particularly good to attract ladybirds, and for the following study on South Georgia, we decided to prioritize hand searches over traps to assess the presence of ladybirds. Similarly, our team recorded only absences of ladybirds on South Georgia, which could be due to a lack of detection or a true absence of individuals.

## Lessons Learned

Project planning and communication worked well. We could recruit personnel for a field trial and a field expedition on South Georgia.

We had not anticipated the difficulty to obtain ladybirds for laboratory experiments, thinking that the species would be sold as a biocontrol for horticulture. However, we managed to mitigate this problem by moving the method trial from the lab to the field.

We have gained knowledge of ladybird ecology via interaction with the project partners, and are now aware that the species is notoriously hard to capture, often with a very patchy and seasonal distribution. We suspect that some of the "negative results" obtained in the Falklands might be due to this.


Monitoring non-native species at a very early stage of invasion is necessary (this is the critical window when eradication is feasible), but also difficult due to the restricted number of individuals. I would recommend future projects with similar goals to consider all scenario for their field inventories, including the impossibility to detect the species, and how this may influence their project and research plans.

## Section 3 - Project Finance (Essential)

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### Project Expenditure

Project Spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual Darwin Plus Costs (£)	Variance %	Comments (please explain significant variances)
<b>Staff Costs</b>				
<b>Consultancy Costs</b>				
<b>Overhead Costs</b>				
<b>Travel and Subsistence</b>				
<b>Operating Costs</b>				
<b>Capital Items</b>				

Others			
Total			
	49,724.18	41,574.34	-16.4

## Please provide a short narrative summary on project finances.

Overall, the project used less financial resources than planned while attaining the objectives of developing and testing a method to capture non-native ladybirds. This underspend is due to a large extent to the reduce field costs compared to budget, which was a consequence of the field expedition being shorter than anticipated due to logistical constraints with berths to/from South Georgia.

## Section 4 - Contribution of Project to Darwin Plus Programme Objectives

Please select up to **one** indicator that applies within **each group/indicator list (A, B, C, D)** and report your results for that indicator in the text box underneath. If you do not have relevant results to report for any of the indicators in a particular group, you can leave them blank.

Please also submit some form of evidence (above) to demonstrate any results you list below, where possible.

### Group A: Capability and Capacity - Core Darwin Plus Standard Indicators (select one)

Unchecked	<b>DPLUS-A01: Number of people from key national and local stakeholder groups completing structured and relevant training.</b>
Unchecked	<b>DPLUS-A02: Number of secondments or placements completed by individuals of key local and national stakeholders.</b>
Checked	<b>DPLUS-A03: Number of local/national organisations with improved capability and capacity as a result of project.</b>
Unchecked	<b>DPLUS-A04: Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.</b>

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Unchecked	<b>DPLUS-A05: Number of trainers trained reporting to have delivered further training by the end of the project.</b>
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## Group A Indicator Results

One organisation (Government of South Georgia and South Sandwich Islands) with improved capacity to develop biosecurity strategies.

## Group B: Policies, Practices and Management- Core Darwin Plus Standard Indicators (select one)

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Unchecked	<b>DPLUS-B01: Number of new/improved habitat management plans available and endorsed.</b>
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Unchecked	<b>DPLUS-B02: Number of new/improved species management plans available and endorsed.</b>
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Unchecked	<b>DPLUS-B03: Number of new/improved community management plans available and endorsed.</b>
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Unchecked	<b>DPLUS-B04: Number of new/improved sustainable enterprises/ community benefits management plans available and endorsed.</b>
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Unchecked	<b>DPLUS-B05: Number of people with increased participation in local communities / local management organisations (i.e., participation in Governance/citizen engagement).</b>
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Unchecked	<b>DPLUS-B06: Number of Local Stakeholders and Local Communities (people) with strengthened (recognised/clarified) tenure and/or rights.</b>
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## Group B Indicator Results

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## Group C: Evidence and Best Practices - Core Darwin Plus Standard Indicators (select one)

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Unchecked	<b>DPLUS-C01: Number of best practice guides and knowledge products published and endorsed.</b>
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Unchecked	<b>DPLUS-C02: Number of new conservation or species stock assessments published.</b>
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Unchecked	<b>DPLUS-C03: New assessments of habitat conservation action needs published.</b>
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Unchecked	<b>DPLUS-C04: New assessments of community use of biodiversity resources published.</b>
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Unchecked	<b>DPLUS-C05: Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.</b>
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## Group C Indicator Results

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### Group D: Sustainable Benefits to People, Biodiversity and Climate - Core Darwin Plus Standard Indicators (select one)

Unchecked	<b>DPLUS-D01 Hectares of habitat under sustainable management practices.</b>
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Unchecked	<b>DPLUS-D02: Number of people whose disaster/climate resilience has been improved.</b>
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Unchecked	<b>DPLUS-D03: Number of policies with biodiversity provisions that have been enacted or amended.</b>
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## Group D Indicator Results

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### Section 5 - Project Partnerships, Wider Impacts and Contributions

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#### Project Partnerships

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#### Wider Impacts and Decision Making

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#### Sustainability and Legacy

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### Section 6 - Communications & Publicity

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#### Exceptional Outcomes and Achievements


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Photo, video or graphic to be used for publicity and communications.




Please upload at least one relevant and engaging image, video or graphic that you consent to be used alongside the above text in Defra, JNCC or NIRAS communications material.

 Evidence 3b

 30/04/2025

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Photo, video, and/or graphic captions and credits.

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I agree for the Biodiversity Challenge Funds Secretariat, Administrator, and/or JNCC to publish the content of this section.

☒ No, I have no project photos for reasons of sensitivity.

Please list any accounts that you would like tagged in online posts here. This can include project pages, partners’ pages or individuals’ accounts for any of the following platforms: LinkedIn, Facebook, Twitter, or Instagram.

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Section 7 - Darwin Plus Contacts

Please tick here to confirm that you have read and acknowledge the BCF's Privacy Notice on how contact details will be used and stored and that you have sought agreement from anyone that you are sharing personal details with us on their behalf.

☒ I confirm I have read the Privacy Notice and have consent to share the following contact details

Project Contact Details

Project Contact Name	Pierre Tichit
Role within Darwin Plus Project	Project leader
Email	
Phone	
Do you need further sections to provide additional contact details?	<input checked="" type="radio"/> No