

DPLR2\1034

Hedgehog conservation initiative at the Western SBAs Cyprus

The aim of the proposed project is to carry out a short survey at different habitats with the Western SBAs in Cyprus (Akrotiri and Episkopi) and raise awareness regarding the importance of hedgehogs, their threats and the need for their conservation. Furthermore, we will investigate the role of hedgehogs as reservoirs for vector borne diseases such as Leishaniasis by collecting roadkill samples and sending them for screening for pathogens at the University of Thessaloniki, Greece.

Sovereign Base Areas of Akrotiri and Dhekelia (on Cyprus)

*** if you have indicated a territory group with an asterisk, please give detail on which territories you are working on here:**

No Response

In addition to the UKOT(s) you have indicated, will your project directly benefit any other UK OT(s) or country(ies)?

Yes

Please list these below and describe how they will benefit:

As the Western Sovereign Base Areas is located on the Island of Cyprus, the project will also benefit the Republic of Cyprus by providing informational and educational services to the local public. This will help to expand the local knowledge of the species and will encourage conservation efforts. The project will increase our knowledge on the Cypriot hedgehog and will help us gain a preliminary understanding of the threats that hedgehogs face.

Section 3 - Project Partners

Q4. Project partners (Guidance section 3.2)

In this section, please give details of all the partners involved (including the Lead Partner) and provide a summary of their roles.

Project Leader name (Guidance section 3.1):	Eloise Springate
Lead Partner name (if applying as an organisation; Guidance section 3.1):	<i>No Response</i>
Lead Partner Website (if applicable):	<i>No Response</i>
Is the Lead Partner based in a UKOT where the project is working (Guidance section 3.1)?	<input checked="" type="radio"/> Yes
List other partners involved and where are they based (Guidance section 3.2):	Dr Kelly Martinou, Vector Ecology and Applied Entomology Laboratory, Joint Services Health Unit Akrotiri Dr Anastasia Diakou- Aristotle University of Thessaloniki, Greece Ms Elena Erotokritou- Ministry of Environment ,Republic of Cyprus

Eloise Springate - Lead applicant- will be reasonable for development and implementation of project. Will have primary responsibility for sample collection as well as developing running workshop sessions as well as running media campaign

Dr Kelly Martinou- Ecologist/Entomologist will have the overall supervision of this project. Providing expertise and support to the project. She will review for accuracy and will help develop materials dedicated to Hedgehog conservation efforts.

Summary of roles and responsibilities of each partner in the project:

Professor, Dr Anastasia Diakou- Veterinarian at the University of Thessaloniki, will be responsible for screening hedgehog specimens for pathogens. She will be conducting an in depth analysis of deceased Hedgehog specimens to investigate their role as reservoirs for vector borne diseases in Cyprus. Professor Diakou will also be invited to give talks during one hedgehog conservation workshop and discuss findings.


Ms Elena Erotokritou, Environment Officer at the Ministry of Environment Cyprus, will have an advisory role and provide insights in terms of legislation and conservation activities. She will also be a Greek language expert and will oversee all materials produced in Greek to check for accuracy and participate during the workshops to Greek speaking audiences.


I confirm that all listed partners are aware of this application and have indicated support:


Checked

Attach a Cover Letter for your application (Guidance section 4.2).

 [Darwin plus local Cover Letter Final](#)

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Section 4 - Project Summary & Description

Q5. Project Summary (Guidance section 3.8)

Please provide a brief summary of your project. This may be used in communication activities and/or published online, if your application is successful.

The aim of the proposed project is to carry out a short survey at different habitats with the Western SBAs in Cyprus (Akrotiri and Episkopi) and raise awareness regarding the importance of hedgehogs, their threats and the need for their conservation. Furthermore, we will investigate the role of hedgehogs as reservoirs for vector borne diseases such as Leishaniasis by collecting roadkill samples and sending them for screening for pathogens at the University of Thessaloniki, Greece.

Q6a. Description (Guidance section 2.1 and 6)

Please provide a description of your project, including:

- the overall objective
- the current situation and the problem the project is trying to address
- what success will look like and how you will measure it

Please be as specific as possible when describing the project, using quantified data and evidence where available. You may wish to consider: what are the specific threats to the environment that the project will attempt to address, and what should we know about these threats? What does your successful project look like? And how will you demonstrate whether and how your project has been successful?

The aim of the proposed project is to carry out a short survey at different habitats within the Western Sovereign Base Area (WSBA) in Cyprus (Akrotiri and Episkopi) and raise awareness regarding the importance of hedgehogs, their threats and the need for their conservation. Furthermore, we will investigate the role of hedgehogs as reservoirs for vector borne diseases such as Leishaniasis. By collecting roadkill samples and sending them for screening for pathogens at the Aristotle University of Thessaloniki, Greece.

The European Hedgehog (*Erinaceus europaeus*) is an important part of the ecosystem of Cyprus, being one of the few small mammals on the island. Hedgehogs in Cyprus are threatened by collisions with vehicles, habitat loss, disease and parasites (Zotos & Vogiatzakis, 2018). Deaths through traffic collisions is ranked as the biggest threat to hedgehogs (Kontsiotis et al. 2023) due to their attraction and close proximity to urbanised areas. The volume and frequency of mammal road collisions appears to be increasing, with a possibility being the global increase in traffic volume (Madsen, Strandgaard & Prang, 2002). Moreover parasites including brown dog ticks (*Rhipicephalus sanguineus*) also present a significant risk to hedgehogs due to the risk of transmission of diseases (Šlapetae et al, 2023). Hedgehogs are prone to hosting many species of parasites (Riley & Chomel, 2005). There has been extensive research in other countries to determine the zoonotic risk to humans (Rasmussen et al, 2021; Cirak et al, 2010), however there remains limited information in Cyprus as to the frequency and prevalence of parasitic transmission. With these risks in mind, the project aims to highlight these issues to the local SBA population and establish a foundational interest in conservation efforts.

The project will have two main objectives; data collection through samples killed by road collisions and a local engagement and awareness campaign. The collection of any samples will be sent to the University of Thessaloniki where they will be analysed in collaboration with Prof. Anastasia Diakou. There will be a deeper analysis to investigate the role that hedgehogs play as reservoirs for vector borne diseases. Samples will be sent via air travel to Prof. Diakou. Moreover, initially 35 tunnel lures will be set in locations of varying proximity to urban areas to determine hedgehog frequency in the area surrounding the SBA.

The objective of the campaign will be to inform and work with local stakeholders and members of the public to fill knowledge gaps and engage in conservation efforts. Seven hedgehog information and home building workshops will be organized for children in the SBA as well as local Cypriot schools in both Greek and English. Surveys will be carried out in hedgehog workshops in Akrotiri aimed at adults. These will have guest speakers e.g. Prof Diakou as well as Elena Erotokritou from the Ministry of Environment (Cyprus). There will be a local radio and social media campaign to promote them. Workshops will be developed to encourage the use of accessible software including Inaturalist to promote and facilitate interest. The project will help develop the Sovereign Base Areas responsibility to the environment. We intend to undertake surveys to help expand the knowledge of the local wildlife in order to comply with The Protection and Management of Nature and Wildlife Ordinance (2007).

The success of the project will be measured by public participation (e.g. number of participants). The project will aim to create the foundation for a long term study into population health and the legislative measures. This can be used to promote long term conservation for the species. However, in order to achieve this goal, there must first be public awareness.


Q6b. Long-term sustainability (Guidance section 2.1 and 6)


Please describe the long-term benefits of the project and the change it will bring about. How will the outcomes of the project be sustained after the funding is finished?


The primary benefit of the project will be to create a better understanding of the challenges that Hedgehogs face at the Western Sovereign Base Areas. By working with members of the JSHU (Dr Martinou) the project will also encourage staff members to want to understand the risks to hedgehogs health and population. This will help develop the base knowledge of the species. This can be used to inform the public as well as create an interest in the conservation of the species. The project will help to create a foundation for a long term sustainable project on population trends and the impact of urbanization on the species. This long term study will help to create an in-depth understanding of the species role in Cyprus and the need for conservation planning and protective legislation. The ecology and management training knowledge that is developed over the project will be shared with members of The Akrotiri Environmental Education Center. Many employees of the center are teachers and can use this knowledge to help run future projects. Moreover any resource created for this project(information leaflets, guides, presentations on Hedgehog Ecology) will be left with the center to be used for future workshops.

(Optional) Please upload any additional and supporting materials or files (such as maps of project sites, etc) below. Maximum of 5 pages:


 [References final \(1\)](#)


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Section 5 - Project Outcome(s)

Q7. Project Outcome(s) (Guidance section 1.2)

Successful Darwin Plus Local projects must demonstrate measurable outcomes in at least one of the themes of Darwin Plus, either by the end of the project or soon after through a credible plan.

Please tick which theme(s) of Darwin Plus your project contributes to:

Biodiversity: improving and conserving biodiversity, and slowing or reversing biodiversity loss and degradation;

Climate change: responding to, mitigating and adapting to climate change and its effects on the natural environment and local communities;

Unchecked **Environmental quality: improving the condition and protection of the natural environment**

Checked **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.**

Please justify your selection. Please use quantitative information where possible here.

The project's objective within the Western SBA is to improve the understanding of Hedgehogs and their importance within local biodiversity. The project will, through workshops and communication methods, inform the public on threats the species face and the need for conservation in order to protect the local biodiversity. The data collection will help to strengthen the knowledge around the species as well as the potential for being carriers of disease which can potentially impact the local population. The project will be the foundation for a long study into the population trends and the impact of urbanization on the species.





Section 6 - Workplan

Q8. Workplan (Guidance section 2.2)

Please provide anticipated dates for the start and end of your planned project here. Please use the Darwin Plus Local Project Workplan (available at: <https://darwinplus.org.uk/apply>) to provide a list of the individual activities you have planned for this project, a brief description of what each activity entails, and the months in which the activities will be carried out. If the project involves only one activity (e.g. a purchase), please still provide project start and end dates (noting estimated times for procurement). Please note that your project must be completed by 31 March 2024.

Start date:	End date:	Duration (e.g. 3 months):
02 October 2023	31 March 2024	6 months

Please upload the completed Darwin Plus Local Project Workplan with your proposed project activities here

 [activity timetable Hedgehog project final.doc](#)
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Section 7 - Costs

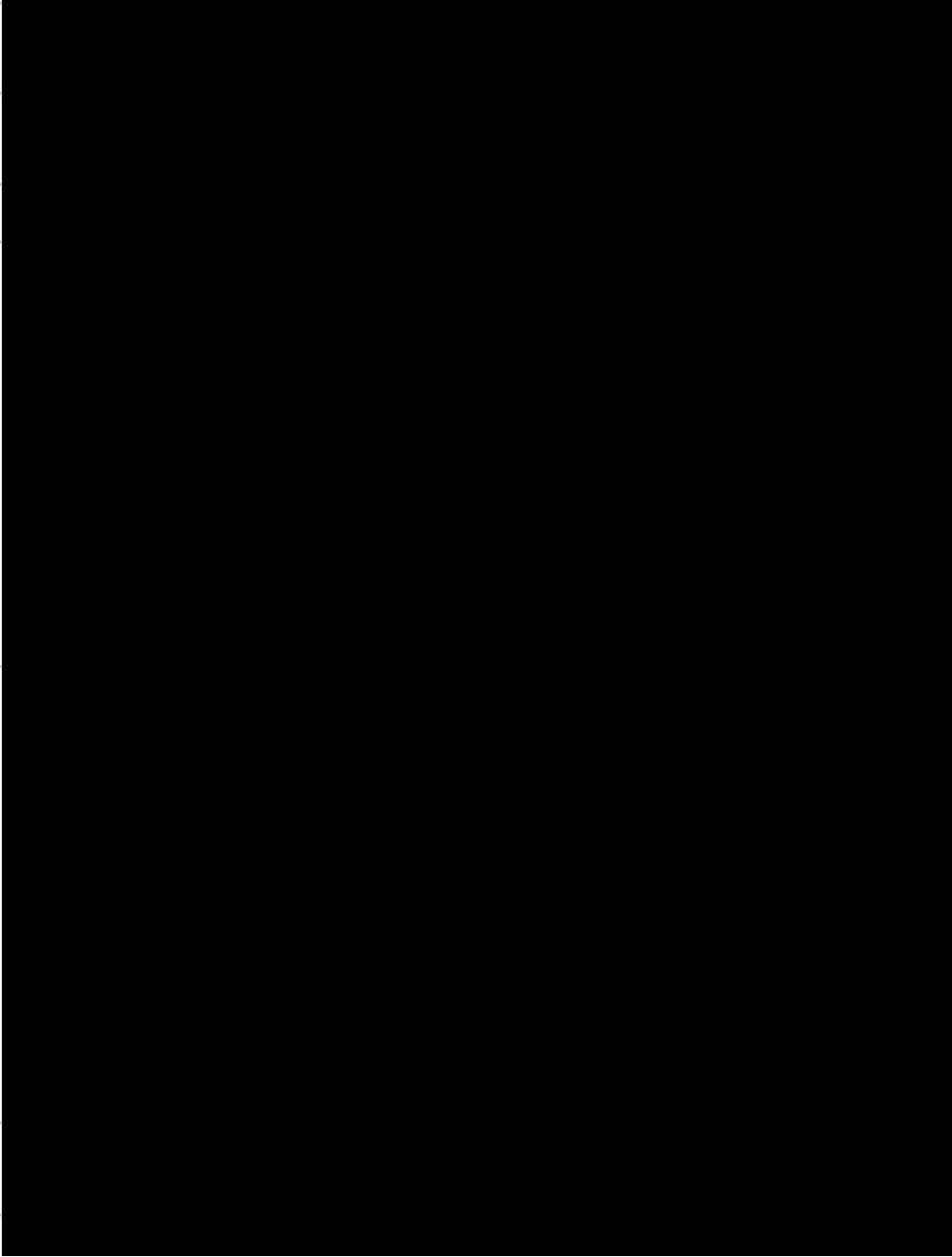
Q9. Costs (Guidance section 2.2 and please read the Finance Guidance)

Please provide a breakdown of costs to be funded through Darwin Plus Local (in GBP).

Are you seeking any matched funding for this project? (Please note that this is optional and there is

no requirement to seek matched funding for Darwin Plus Local projects).

No

Budget line	Explanation	Cost in GBP	
Staff costs:			
Consultancy costs:			
Overhead costs:			
Travel & subsistence costs:			
Operating costs:			
Capital equipment:			
Other Costs			
Total:			19,984.80

This section provides more information on the budget to help evaluators understand how you will use the funds you are requesting. You do not need to list all costs, but please list and detail costs of more than £1,000 per item below, under the appropriate budget line.

Details of staff costs over £1,000 (if relevant)

Eloise Springate, to be a full time staff member to work for the full 6 month duration of the project to manage the delivery of project as well as final write up. Further project duties will include:

- Daily sample collection & tunnel data collection
 - Workshop events planning and execution (7 events total)
 - Running media and social media campaign to promote project
 - Meet and work with collaborators to expand topic knowledge and provide workshop support
 - Organise all accommodation and travel expenses for collaborators.
 - Complete training course in Hedgehog ecology and management
 - Promote project within local communities and answer queries about project
-

Details of overhead costs over £1,000 (if relevant):

NA

Details of travel and subsistence costs over £1,000 (if relevant):

Samples required to be transported via cold storage boxes, an estimated 6 boxes will be required. FedEx company provides the best value for money per box. Cost per box is approximately £■■■■ Fuels costs to provide fuel for 1 car travelling to site locations. Based on £■■■ per week for the duration of 4 and a half months of sample collection. Travel and subsistence for 2 expert visitations. One from University of Thessaloniki, the other from ministry of environment to provide expert knowledge. Travel and subsistence for Training course in UK for staff member to learn hedgehog conservation & management

Details of operating costs over £1,000 (if relevant):

- Tunnel trap costings for 35 individual tunnels in order to hedgehog proximity to urbanized areas
 - Camera purchases to for visual species verification (used alongside tunnels) (approx £■■■■)
 - 7 workshop events (3 school events/4 public (Akrotiri Environmental Education Centre)) to be run with the focus of building hedgehog homes and promoting conservation. Resources required to build the homes to be given to attendees of workshop (approx £■■■■)
 - Protective equipment relating to handling and storage of deceased samples
 - Educational information leaflets (approx. 500) and posters (approx 240) relating to hedgehog conservation and any other consumables needed.
-

Details of capital equipment costs over £1,000 (if relevant):

Dell Laptop to be purchased for purposes of communication, data collection, presentations and project reporting. cost is £■■■■

Details of consultancy costs over £1,000 (if relevant):

Consultancy Fee for Dr Diakou. Costings will include a fee payment for time and service given to the project. Will cover the period of consultation and visitation for workshop events. Expert in the field who will be able to provide an in-depth understanding to the topic as well as being able to provide training to staff members which can be used for future studies.

Details of other costs over £1,000 (if relevant)

N/A

If your project budget was prepared in another currency and converted to GBP, please provide the exchange rate, its source, and the date it was accessed:

Other currency:	Exchange rate:	Source of this exchange rate:	Date exchange rate accessed:
No Response	No Response	No response	22 June 2023

Darwin Plus Local has been created to build capacity and contribute to local economies in-territory.

What % of the total will be spent in the OTs?



If less than 80% of the total project spend is to be spent within the OT(s), please explain why.

No Response

Section 8 - Local and National Priorities

Q10. Local and national priorities

Please explain how this project aligns with local and national priorities? You may wish to consider the project in the context of national environmental laws, objectives, strategies, territory specific agreements, action plans or policies.

There is currently no legislation that protects or promotes conservation for the Hedgehog species in Cyprus. Cypriot Legislation for the Protection of Nature (153 (I/2003)) has no mention of Hedgehogs protection or species status. SBA Legislation mirrors legislation from the RoC as closely as possible and therefore also has little reference to hedgehogs or their need for protection as they are not listed as a species of interest. After investigation and personal communication with Elena Erotokritou from The Cyprus Ministry of Environment and Savvas Zotos from the CyRos project, it was confirmed that deaths by traffic collisions are common for hedgehogs and present a real threat to the species and that current legislation does not reflect this threat. This therefore highlights the importance of this project and will bring awareness for the need for recognition of the species to be one of importance and deserving of protection and conservation efforts. This investigation will help to expand the knowledge of the local wildlife and help develop the SBA responsibility to the environment as per the Nature and Wildlife Ordinance (2007).

Will the project take place on Government owned land or water or involve biocontrol, invasive alien species control or eradication?

Yes

Please attach evidence that you have Government support for this project i.e. a Letter of Support. Applications which indicate that they do not take place on Government land or water, but which propose work that appears to the reviewers would be difficult/impossible to carry out without working on government land or waters may be ineligible if no Letter of Support is provided.

Section 9 - Project Risks

Q11. Project Risks

Please demonstrate your consideration of any risks involved in this project and how you intend to manage them. Please note the importance of health and safety and environmental risk assessment in the design of your project. If there is any possibility that your project may have negative impacts on the environment or human health, it is important that you provide a comprehensive analysis of potential environmental and human health risks, and the prevention measures you will take to ensure the work does not cause harm.

Depending on your project, you may wish to consider:

- Biosecurity risks – particularly for projects involving external equipment.
- Safeguarding risks – particularly for projects involving vulnerable groups such as children, older people or people with disabilities.

Risk	Mitigation
	-Protective equipment will be worn at all times when near a sample disposable bags will be used in order to minimise direct exposure to the animal
By collecting and handling deceased samples it presents the risk of potentially harmful exposure to pathogens and parasites	-Only members of staff will handle any samples and any member of public who reports a sighting will be encouraged not to touch sample. -Any samples collected will be handled with caution and will be stored correctly in suitable conditions (contained in freezer in -80 degrees C)
Members of the public will be encouraged to report any sighting of samples found at road side. Some members of the public may pull on to the side of the road in order to obtain specific location	-Participants will be briefed to remain a safe distance away from the road wherever possible -Participants will be reminded of road safety and the importance of remaining aware of surroundings as all time

Any work involving vulnerable groups including children

-Staff members of JSHU and Akrotiri Environmental Education Centre already have experience and training for working with children

-No information will be given or obtained from a minor without explicit parental consent for online software i.e. inaturalist

-Parents will be encouraged to stay with children throughout any public events

-Teachers will stay during school events to ensure safeguarding protocols are followed and that there is the correct ratio for staff and students

Do you require more fields?

No

Section 10 - Terms & Conditions

Q12. Terms and conditions (Guidance section 3.10)

By applying for Darwin Plus Local you are adhering in full to the grant Terms and Conditions in full (available at: <https://dplus.darwininitiative.org.uk/apply> and as referenced in the Guidance at section 3.10). For information, the Terms and Conditions include requirements for all applicants to (amongst other requirements as per the full Terms and Conditions):

- Uphold a zero tolerance for inaction approach to tackling sexual exploitation, abuse, and harassment.
- Where appropriate, make all reasonable and adequate efforts to address gender inequality and other power imbalances.
- Notify all cases of fraud and theft (whether proven or suspected) relating to the project to the Grant Administrator as soon as they identified.

Please indicate you have read, and understood, and will adhere to the Terms and Conditions.

Checked

Supporting documents list (please have these ready to attach with application)

- Cover Letter of no more than two A4 pages. (Guidance section: 4.2 has information on what this cover letter should include).
- If the project takes place on public land or water or is addressing invasive alien species, a Letter of support from OT Government.
- Project Workplan in the template provided for Darwin Plus Local (available at: <https://darwinplus.org.uk/apply>).
- Map and additional information (optional) maximum five additional pages.

If your application is successful

If your project application is successful, the Fund Administrator (NIRAS) will ask you to provide some financial evidence for due diligence checks before you receive your project grant. (Please see section 3.3 of

the Darwin Plus Local Finance Guidance). Please be ready to provide this evidence promptly.

- **Financial evidence for organisations:** Year-end financial statements, the latest management accounts or audited accounts (if you have these).
- **Financial evidence for individuals:** Proof of identity such as a passport, ID card or driving licence and solvency (such as bank statements) and a police check.

Section 11 - Certification

Certification

I certify that, to the best of my knowledge and belief, the statements made in this application are true and the information provided is correct.





Checked

I have the authority to submit an application on behalf of my organisation.

Checked

Name: Eloise Springate

**Position in the organisation:
(if applicable)** *No Response*

Signature (please upload e-signature)  [Eloise Springate Signature](#)
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Date: 22 June 2023

Section 12 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance documents, including the “Darwin Plus Local Guidance” and the “Darwin Plus Local Finance Guidance”.	Checked
If my proposed project takes place on public lands or water or is addressing alien invasive species, I have uploaded a Letter of Support from Government.	Checked
I have uploaded a cover letter that details the information requested in the guidance (Guidance section 4.2 has information on what this cover letter should include).	Checked
I have read, and can meet, the current Terms and Conditions for this fund.	Checked

I have provided actual start and end dates for my project that fit this Round.	Checked
I have provided my summary budget based on UK government financial years i.e. 1 April – 31 March and in GBP in the application form.	Checked
I have uploaded my project workplan using the specific template provided.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Checked
The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable).	Checked
I have checked the Darwin Plus website immediately prior to submission to ensure there are no late updates.	Checked
I have read and understood the Privacy Notice on the Darwin Plus website.	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under Darwin Plus. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share project news. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

Information supplied in the application form, including personal data, will be used by Defra as set out in the **Privacy Notice**, available from the [Forms and Guidance Portal](#).

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising Darwin Plus including project details (usually title, lead partner, project leader, location, and total grant value).

Project Title: **Hedgehog conservation initiative at the Western SBAs Cyprus**

Darwin Plus Local

Provide a **Project Work Plan** that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project. Round 2 is for a **maximum of six months** with activities starting from 1 October 2023 and all projects must be completed by 31 March 2024.

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and shade only the months in which an activity will be carried out. The workplan can span multiple pages if necessary.

Activity	Description (max 25 words)	No. of months	UK Financial Years 2023/24						
			Calendar Year 2023			Calendar Year 2024			
			Oct	Nov	Dec	Jan	Feb	Mar	
			Creation of promotional material	creation of posters and information leaflets and printing resources to be used for public awareness campaign and advertising workshops and project aim	1 months				
Hedgehog tunnel monitoring	sites to apply hedgehog tunnels in order to determine locations and proximity to urbanised areas (2nd Oct -8th Dec) (15th feb -15th mar)	4½ months							
Pathogen detection in collected hedgehog specimens	Hedgehog road kills will be collected from Akrotiri and Episokpoi will be sent to Dr Diakou (2nd Oct -8th Dec) (15th feb -15 th mar)	4½ months							
public engagement	Using media sources such as local radio interviews and	6 months							

Project Title: **Hedgehog conservation initiative at the Western SBAs Cyprus**

Activity	Description (max 25 words)	No. of months	UK Financial Years 2023/24					
			Calendar Year 2023			Calendar Year 2024		
			Oct	Nov	Dec	Jan	Feb	Mar
			promotion through media campaign (radio/social media)	social media posts to advertise projects. Will also be used to advertise workshops				
Visitation from Dr Diakou	Dr Diakou (expert) will be invited to give talks and present information on Hedgehog reservoir potential, also invited to take part on select workshop days	1 month (4 day visitation)						
Completing Training in Hedgehog ecology and management	Training sessions will be completed in order to strengthen knowledge of species conservation and land management. Knowledge will be used in workshops. Approximately 3 days	1 month (3 day course)						
write up and assessment of and findings	Project write up and finalisation of results. To be submitted to darwin plus by final project date of 31st March 2024	2 months						
running workshops in schools to promote	4 x1 day workshop in schools to raise awareness to children to engage with subject and encourage	2 months (4 individual						

Project Title: **Hedgehog conservation initiative at the Western SBAs Cyprus**

Activity	Description (max 25 words)	No. of months	UK Financial Years 2023/24					
			Calendar Year 2023			Calendar Year 2024		
			Oct	Nov	Dec	Jan	Feb	Mar
			hedgehog conservation	conservation action. Workshop cost free to schools	day sessions)			
Running workshops in Akrotiri	3 x 1 day workshops will take place to raise awareness to the public, will be open to anyone and will be free to participate	2 months (3 individual day sessions)						