



Submit by Tuesday 1 December 2015

DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 22: STAGE 2

Please read the Guidance Notes before completing this form. Where no word limits are given, the size of the box is a guide to the amount of information required.

Information to be extracted to the database is highlighted blue. Blank cells may render your application ineligible

ELIGIBILITY**1. Name and address of organisation**

(NB: Notification of results will be by email to the Project Leader in Question 6)

Applicant Organisation Name:	University of Oxford
Address:	WildCRU, Recanati-Kaplan Centre, Department of Zoology, Tubney House
City and Postcode:	Tubney, OX13 5QL
Country:	UK
Email:	
Phone:	

2. Stage 1 reference and Project title

Stage 1 Ref: 3270	Title (max 10 words): Alleviating rural poverty through conflict mitigation and improved crop yields
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3. Project description (not exceeding 50 words)

(max 50 words)

Conflict with wildlife near protected areas hinders biodiversity conservation and impacts impoverished rural people. This project showcases methods for mitigating conflict with wild carnivores by engaging communities through a lion guardian programme and through novel livestock husbandry methods to reduce livestock losses, improve crop yields and therefore food security.

4. Country(ies)

Which eligible host country(ies) will your project be working in? You may copy and paste this table if you need to provide details of more than four countries.

Country 1: Zimbabwe	Country 2: Botswana
Country 3:	Country 4:

5. Project dates, and budget summary

Start date: 1 April 2016	End date: 31 March 2019	Duration: 3 Years		
Darwin request	2016/17 £128 831	2017/18 £90 181	2018/19 £99 815	Total £318 827
Proposed (confirmed & unconfirmed) matched funding as % of total Project cost				47%
Are you applying for DFID or Defra funding? (Note you cannot apply for both)		DFID		

6. Partners in project. Please provide details of the partners in this project and provide a CV for the individuals listed. You may copy and paste this table if necessary.

Details	Project Leader	Project Partner 1
Surname	Loveridge	Parry
Forename (s)	Andrew John	Roger Hugh
Post held	Research Fellow	Wildlife and Research Manager
Organisation (if different to above)	WildCRU, Oxford University	Victoria Falls Wildlife Trust
Department	Zoology	NGO and conservation charity
Telephone		
Email		

7. Has your organisation been awarded a Darwin Initiative award before (for the purposes of this question, being a partner does not count)? **If so, please provide details of the most recent awards (up to 6 examples).**

Reference No	Project Leader	Title
20-012	Prof. D.W. Macdonald	Improving anti-poaching patrol evaluation and design in African rainforests
EIDPO021	Prof. D.W. Macdonald	Implementing an otter action plan for marine environments of Tierra del Fuego, Patagonia
14-028	Dr C. Sillero-Zubiri	Conservation of Puna's Andean cats across national borders
EIDPO038	Dr C. Sillero-Zubiri	High Andes Conservation without borders
17-031	Dr A. J. Loveridge	Ecological sustainability of leopard trophy hunting in Zimbabwe
18-013	Dr P. Riordan	Building capacity for wild cat conservation in China

9. Please list all the partners involved (including the Lead Institution) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of partners to be involved in the project. Please provide written evidence of partnerships. Please copy/delete boxes for more or fewer partnerships.

<p>Lead institution and website: Wildlife Conservation Research Unit (WildCRU), Oxford University www.wildcru.org</p>	<p>Details (including roles and responsibilities and capacity to lead the project): (max 200 words)</p> <p>WildCRU, delivers practical conservation outcomes underpinned by rigorous scientific methods, with wide experience of a range of globally important conservation issues. WildCRU has studied carnivores in the Okavango-Hwange landscape in Zimbabwe and Botswana since 2000, including monitoring Human-wildlife conflict, establishing a large database of conflict incidents and monitoring anthropogenic mortalities of predators since 2008. Projects in Zimbabwe are run through a Charitable Trust Wildlife and Communities Action Trust (Registration number MA 151/2012) and in Botswana by Botswana Lion Corridor Project (BLCP), to co-ordinate field work, administration and to provide a local interface with government and community institutions.</p> <p>Roles and responsibilities: WildCRU staff will conceptualise and design the research work, contributing significant scientific and practical experience to the process. Staff will analyse baseline data to identify conflict hotspots, will monitor and evaluate project progress, contribute to reporting, analyse project data and in collaboration with project partners publish results in peer reviewed journals. WildCRU field staff will implement research activities.</p> <p>Capacity: WildCRU has successfully completed 14 Darwin Initiative projects and project principals (Loveridge, Macdonald) have significant and long standing experience with this kind of work. WildCRU has established field teams and local relationships in the area the work will take place.</p>
<p>Have you included a Letter of Support from this institution?</p>	<p>n/a</p>

<p>Partner Name and website where available:</p> <p>Victoria Falls Wildlife Trust</p> <p>www.vicfallswildlifetrust.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Victoria Falls Wildlife Trust (VFWT) is a non-profit organization whose mission is to promote environmental conservation in Southern Africa through practical wildlife research, veterinary diagnostics, wildlife rehabilitation and empowerment of local people through training and community outreach programs. The Trust has strong links with the local community, local administrators and traditional leadership (see supporting letters) and has been running surveys of human wildlife conflict and implementing solutions for co-existence with wildlife since 2012.</p> <p>Roles and responsibilities:</p> <p>VFWT will manage partner funds and allocate these to field teams in Botswana and Zimbabwe (via WildCAT and BLCP). VFWT will organise, co-ordinate and implement field work, provide training, organise workshops and dissemination of information about DI and the project. VFWT will provide material for and assist with project reporting.</p> <p>Capacity:</p> <p>VFWT has significant experience working in the local area and broad capacity to implement project actions. With charitable status in Zimbabwe (ref 200118094), USA (98-6061293) and establishing a charity in the UK, VFWT therefore has the institutional capacity to manage, disburse and report upon project partner funds. Mr R. Parry has 30 years experience in wildlife conservation and management and working with communities, NGOs and government institutions in Botswana and Zimbabwe.</p>
<p>Have you included a Letter of Support from this institution?</p>	<p>Yes</p>

<p>Partner Name and website where available:</p> <p>Department of Wildlife and National Parks, Botswana</p> <p>www.mewt.gov.bw/DWNP</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Department of Wildlife and National Parks (DWNP) has the mandate to conserve the wildlife of Botswana in consultation with local, regional and international stakeholders for the benefit of present and future generations. In addition they promote and facilitate sustainable utilization of fish and wildlife resources through active participation of citizens. They are the agency responsible for the control and management of problem causing wildlife and are responsible for oversight of research activities and permitting of research and wild animal handling activities. WildCRU has permits and permissions from DWNP in place to undertake the proposed work</p> <p>Roles and responsibilities:</p> <p>DWNP are highly supportive (see letter of support) of research that contributes to the management and mitigation of human wildlife conflict and have specifically requested that the project address the issue of human-lion conflict in the Chobe Enclave and on the Boteti River (see accompanying map); sites highly suitable for implementation of this project. DWNP will be partners and close collaborators in this project.</p> <p>Capacity:</p> <p>DWNP have an efficient management structure for facilitating research activities and field officers have been consulted and are supportive and enthusiastic about this initiative and will provide on the ground support for the project.</p>
<p>Have you included a Letter of Support from this institution?</p>	<p>Yes</p>

<p>Partner Name and website where available:</p> <p>Zimbabwe Parks and Wildlife Management Authority (PWMA).</p> <p>www.zimparks.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>The Zimbabwe Parks & Wildlife Management Authority (PWMA) operates under an Act of Parliament, the Parks and Wildlife Act of 1975. The Authority manages about 5 million hectares of protected area or 13% of Zimbabwe's total land area. The Authority has a mandate to manage the entire wildlife population of Zimbabwe, whether on private or communal lands and have ultimate responsibility for the control and management of conflict causing species.</p> <p>Roles and responsibilities:</p> <p>Both WildCRU and VFWT have a long standing relationship with PWMA and work closely with PWMA research officers and managers on predator management issues surrounding Hwange National Park in Zimbabwe (site of the pilot lion guardian programme) and in the Victoria Falls area. PWMA are responsible for permissions and permits to undertake research on wild animals. The project will work closely with PWMA field staff (see attached letter of support).</p> <p>Capacity:</p> <p>PWMA will facilitate research activities and field officers have been consulted and are supportive and enthusiastic about this initiative and will provide on the ground support for the project and for expansion of the programme into other areas where human-predator conflict is problematic.</p>
<p>Have you included a Letter of Support from this institution?</p>	<p>Yes</p>

<p>Partner Name and website where available:</p> <p>Elephants for Africa (EfA)</p> <p>http://www.elephantsforafrica.org</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>Elephants for Africa conducts research to understand the ecological and social requirements of African elephants, and put these into the context of human-wildlife conflict. They currently work in Botswana and South Africa, with local and international researchers, to deliver scientific data to local decision makers. They also run education programmes that focus on developing the conservation leaders of the future.</p> <p>Roles and responsibilities:</p> <p>EfA is undertaking research on human-elephant conflict in the Boteti area of Botswana. We have also identified this as an area where human-predator conflict is extremely high. We have linked with EfA to slip-stream our activities with theirs and develop synergies between our two projects to increase the overall effectiveness of the work. We will share field staff and resources for work in this area. Sociologist Prof. Alice Hovorka (CV accompanies) works closely with EfA in the Boteti area and her experience will be integral in planning and monitoring the work of this project.</p> <p>Capacity:</p> <p>EfA has a field team established in the Boteti area, with strong relationships with the local community. Our partnership with EfA will take advantage of this and allow rapid establishment of a lion guardian programme in this area.</p>
Have you included a Letter of Support from this institution?	Yes

<p>Partner Name and website where available:</p> <p>Other collaborative partnerships and project supporters:</p> <p>KAZA-TFCA secretariat http://www.kavangozambezi.org/</p> <p>Traditional leaders in the target communities</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): (max 200 words)</p> <p>Because this project requires uptake of novel approaches to human-predator conflict we have sought support and partnerships from a diverse range of stakeholders.</p> <p>The secretariat of the Kavango-Zambezi Transfrontier Conservation Area with responsibility to develop conservation initiatives within the internationally mandated KAZA TFCA has enthusiastically endorsed our proposal (see attached letter of support). The KAZA TFCA has links to significant donors within the conservation and development arena and their support and partnership will be beneficial in attracting the anticipated follow-up funding for the project.</p> <p>We have sought and received support for this project from traditional leaders in communities in which we hope to work and continue to develop these relationships. Letters of support accompany this application. The support of the traditional leadership in implementing this project and working within local communities is absolutely critical for the success of this work.</p>
Have you included a Letter of Support from this institution?	Yes

10. Key Project personnel

Please identify the key project personnel on this project, their role and what % of their time they will be working on the project. Please provide 1 page CVs for these staff, or a 1 page job description or Terms of Reference for roles yet to be filled. Please include more rows where necessary.

Name (First name, surname)	Role	Organisation	% time on project	1 page CV or job description attached?
Andrew Loveridge	Project Leader	WildCRU, Oxford	25	Yes
David Macdonald	Project scientist	WildCRU, Oxford	5	Yes
Alice Hovorka	Social scientist	Queen's University, Ontario	10	Yes
Kristina Kesch	Programme manager	Botswana Lion Corridor project, WildCRU	50	Yes
Roger Parry	Project manager, Zimbabwe	VFWT	35	Yes
Dominik Bauer	Project manager, Botswana	Botswana Lion Corridor Project, WildCRU	100	Yes
Brent Stapelkamp	Field co-ordinator (Hwange)	WildCRU, Oxford	100	Yes
Bongani Dlodlo	Field co-ordinator (Victoria Falls)	VFWT	100	Yes
TBA	Field co-ordinator (Botswana)	Botswana Lion Corridor project, WildCRU	100	Yes

11. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of biodiversity and (essential for DFID projects) its relationship with poverty. For example, what are the drivers of loss of biodiversity that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems?

If your project is working on an area of biodiversity or biodiversity-development linkages that has had limited attention (both in the Darwin Initiative portfolio and in conservation in general) please give details.

(Max 300 words)

Livelihoods in rural communities in western Zimbabwe and North-eastern Botswana rely precariously on subsistence agriculture. Our data show that, for most rural households, subsistence crop growing is the most important contributor to livelihoods, followed by livestock ownership. Only 15% households have alternative sources of income (usually employment in urban centres).

The area is agriculturally marginal, with poor soils and rainfall. Traditionally women bear the burden of land clearance and cultivation with limited access to inputs such as fertiliser or mechanisation. Crop failure in poor years often results in chronic malnutrition, particularly affecting households with no alternative incomes; frequently those headed by women. Poverty increases reliance on natural resources, leading to unsustainable, illegal or commercial utilisation of resources such as wood, wildlife products and bush-meat. Simple improvements to cropping methods could greatly improve yields and food security and reduce land and labour requirements and environmental damage.

28% of households around protected areas are adversely affected by livestock predation by large predators, particularly lions. Annual household losses average USD\$550; close to per capita GDP (USD\$562); representing significant loss for already impoverished people. Loss of draught animals impacts the ability to prepare fields. Livestock depredation routinely results in retaliatory killing of globally threatened predators which are critical components of biodiversity. This causes population declines and measureable impacts to biodiversity and ecosystem function in protected areas. Aside from intrinsic value to natural systems, large predators are economically valuable and attract significant revenue to host countries through tourism, which is frequently the largest and most viable local revenue generator.

Our data shows that most livestock depredation occurs when traditional livestock protection has been abandoned resulting in inadequate protection at night and when grazing. Improved community engagement, co-operation and appropriate contemporary solutions to livestock protection could greatly reduce livestock loss and the need to kill predators.

12. Biodiversity Conventions, Treaties and Agreements

Which of the conventions supported by the Darwin Initiative will your project support? Note: projects supporting more than one convention will not achieve a higher scoring

Convention On Biological Diversity (CBD)	Yes
Nagoya Protocol on Access and Benefit Sharing (ABS)	No
International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)	No
Convention on International Trade in Endangered Species (CITES)	No

12b. Biodiversity Conventions

Please detail how your project will contribute to the objectives of the convention(s), treaties and agreements your project is targeting. You may wish to refer to Articles or Programmes of Work

here. Note: No additional significance will be ascribed for projects that report contributions to more than one convention

(Max 200 words)

This project will primarily contribute to the objectives of Convention on Biological Diversity (CBD) and will do so in the following manner. Through **scientific research** (CBD article 12) by experienced UK scientists in close collaboration with local practitioners, it will address **in situ conservation** of key elements of biodiversity (CBD article 8) in rural Zimbabwe and Botswana. The project will focus on predators (predominantly lions) which are valuable ecologically and economically (through revenues from tourism) but also causing significant damage to rural livelihoods. Due to the high costs of this conflict to local communities, the implementation of a programme to test the effectiveness of **solutions to human-wildlife conflict** (CBD article 7) will help to alleviate rural poverty if shown to be effective and then widely implemented. Equally, reduced need to destroy damage causing wildlife (through adequate protection of crops and livestock) will encourage more **sustainable utilisation of biodiversity** (CBD article 10) and potentially more sustainable revenue from tourism. Finally, the project will train local field staff and train target communities in implementation of effective conflict mitigation thereby **building capacity** (CBD article 12) and ensuring continuation of activities and legacy of the project.

12c. Is any liaison proposed with the CBD/ABS/ITPGRFA/CITES focal point in the host country?

Yes No if yes, please give details:

The project leader has discussed this work with Ms Olivia Mufute at the Conventions office at Zimbabwe Parks and Wildlife Management Head Office. Continued liaison is anticipated. The project has a close working relationship with Department of Wildlife and National Parks, the body responsible for implementation of international conventions in Botswana.

13. Methodology

Describe the methods and approach you will use to achieve your intended outcomes and impact. Provide information on how you will undertake the work (materials and methods) and how you will manage the work (roles and responsibilities, project management tools etc.).

(Max 500 words – this may be a repeat from Stage 1, but you may update or refine as necessary. Tracked changes are **not** required.)

This project will showcase (through publications, reports, audiovisual material and meetings) and quantify success of mitigation strategies to encourage uptake of the concept by large development orientated institutions. A pilot Lion Guardian programme (LGP) in Hwange, Zimbabwe will be greatly expanded at 2 sites and a parallel programme established at 2 identified conflict hotspots in NE Botswana. The LGP, managed by local field managers responsible to the project leader, consists of 'lion guardians' (LGs); local men and women employed to provide an active interface between the community and conservation bodies. The traditional leadership and community participate in the recruitment process to ensure legitimacy and acceptance. 14 trained LGs will monitor and record conflict incidents, baseline wildlife monitoring data, take action to deter problem predators, advise people on animal husbandry (including use of mobile bomas, see below) and through a 'lion alert' programme (see below) warn people of lion presence. Pilot data suggest these actions can reduce predation incidents by more than 50%.

Retaliatory killing (legal and illegal) of predators will be monitored by LGs and field staff and compared against a decade of historical data in western Zimbabwe and DWNP records in Botswana. Data, analysed by project scientists, will determine effectiveness of mitigation strategies in reducing the need for lethal control. Through a questionnaire survey we will quantify the effect of LGP interventions on attitudes of men and women to predators and conservation and compare this to existing baseline survey data.

We will expand a pilot 'lion alert' warning system to inform, through LGs, the community about predator movements, sightings and conflict incidents in their area. Satellite linked GPS collars fitted to 3-5 potential 'problem' lions in each area to monitor real time movements which will be

communicated to the LG team by field managers via the 'whatsapp' smartphone platform. Based on this information LGs warn livestock owners about dangers to livestock and organise collective lion deterrence strategies (fires at night, noise makers etc). Pilot data suggest this approach is highly effective.

Adequate kraaling of livestock at night is critical to reducing predation. Traditional practices emphasizing this have been abandoned. We will introduce mobile communal livestock bomas into a minimum of 14 volunteer village communities in conflict hotspots (locations randomised where possible). Bomas consist of durable UV resistant, PVC sheeting suspended on cables and housing up to 200 livestock. Herd protection is managed communally on a rota and bomas moved between fallow fields at each participating household every 2 weeks. Field managers and LG team will monitor and quantify through structured surveys the efficiencies of collaborative herding, benefits to male and female headed households and survivorship of livestock compared to adjacent control herds.

Manure produced by kraaled animals as well as trampling action prepares and fertilises the field for the planting season (reducing labour required in field preparation). Pilot trials suggest that crop yields can be improved by as much as 30%. We will conduct a randomised, case controlled experiment to quantify yield and contribution to household food security.

14. Change Expected

Detail the expected changes this work will deliver. You should identify what will change and who will benefit a) in the short-term and b) in the long-term.

- If you are applying for Defra funding this should specifically focus on the changes expected for biodiversity conservation and its sustainable use.
- If you are applying for DFID funding you should in addition refer to how the project will contribute to reducing poverty. Q15 provides more space for elaboration on this.

(Max 300 words)

Based on pilot data and experiences elsewhere the introduction of an LGP is expected to reduce levels of conflict with predators (particularly lions) by up to 50% in the project lifetime, and potentially by much more in the long term as local people see benefits to adopting more effective and locally appropriate livestock husbandry practices. Consequently we expect that the need for lethal control of large globally threatened predators will decline locally, lessons incorporated into National predator management strategies, attitudes to predators will become less adversarial and recorded levels of retaliatory killing of predators will decline over the project lifetime and long term. Introduction of predator friendly livestock husbandry practices will halt decline of predators which are critical and keystone components of ecosystem biodiversity (in line with CBD Article 7 a-d and Article 8 c&e). Viable predator populations in protected areas are valuable national assets that attract tourism and generate valuable sustainable income for developing countries.

Given the high impact livestock predation has on communities, particularly vulnerable households, a reduction of 50% in predation incidents through introduction of an LGP represents a significant positive change to direct impacts on livelihoods. Use of mobile communal bomas as novel, labour saving husbandry techniques will encourage more effective livestock protection. We aim to entirely eliminate livestock loss for households using this technique, with early results suggesting this is feasible if bomas are correctly used. Additionally, fertilisation of fields using livestock in bomas is expected to reduce labour inputs (particularly by women), reduce crop failure and increase crop yields and self sufficiency for participating families by up to 30% during the project. To ensure long-term and larger scale impacts we aim to showcase to international development agencies the use of mobile communal bomas for mitigation of livestock predation and improvements to food security.

15. Pathway to poverty alleviation – ESSENTIAL FOR DFID PROJECTS, OPTIONAL FOR DEFRA PROJECTS

Please describe how your project will benefit poor people living in low-income countries. Give details of who will benefit and the number of beneficiaries expected to be impacted by your project. The number of communities is insufficient detail – number of households should be the largest unit used. If possible, indicate the number of women who will be impacted.

(Max 300 words)

Zimbabwe falls into the category of a 'low income' country (per capita GDP- \$856, 72% of population below national poverty line; <http://databank.worldbank.org>) and Botswana, while wealthier (per capita GDP \$6935), nevertheless has 19% of population below national poverty line - most in rural villages in the communities in which we will work. In this context the financial impact of human wildlife conflict is significant. Baseline survey data show that affected households (33% of total surveyed) lose, on average, \$473 per annum to livestock predation (i.e. 55% of per capita GDP in Zimbabwe). By reducing the instances of HWC a large positive impact on revenue streams within poor rural households can be achieved.

This project will have both direct and indirect benefits. The direct benefits will be felt by those households participating in testing mitigation methods (e.g. communal mobile bomas, community lion guardians). We estimate that up to 1000 households (conservatively 5000 people) will participate, with materials, training, set-up and maintenance costs covered through the project. The use of mobile bomas is expected to increase crop yields by at least 30% for around 250 households (750 people) and therefore food security (which is particularly important in vulnerable households).

Whilst the number of people benefitting directly from the project is relatively modest in the context of widespread rural poverty in Africa, the real, although indirect, benefit of the project is to showcase methods of reducing livestock loss and increasing crop yields. The project aims to demonstrate and publicise to the wider conservation and donor community the tangible benefits of community wildlife guardians and conflict mitigation methods to reduce losses and simultaneously improve food security. We aim to actively publicise the strengths of this approach to international donors and development agencies to facilitate extensive uptake and benefit significantly more people.

16. Exit strategy

State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave?

(Max 200 words)

The proposed project is based on long term research collaboratively undertaken by VFWT and WildCRU in ecosystems and community areas in the two countries, we anticipate that this collaboration will be ongoing beyond the end of the Darwin Project. Sustainability of the project will come through core findings being implemented beyond the end of the project period by local stakeholders and communities and for communities to take ownership of the initiatives.

This will be achieved through including local people in a stakeholder driven, consultative process starting at the beginning of the project. This process will incorporate needs and priorities of local people into the mitigatory solutions tested to ensure relevance and later uptake of the recommended solutions and training.

Through workshops, newsletters, online resources, reports and peer-reviewed literature the project will disseminate information about the project and ensure handover of know-how and technology to both local stakeholders and the wider public is achieved. Finally a core aim of this project is to showcase our successful approach to mitigation of HWC to international donors to encourage uptake of these concepts at a much wider scale.

17a. Harmonisation

Is this a new initiative or a development of existing work (funded through any source)? Please give details (Max 200 words)

The proposed project will significantly extend a small scale, pilot lion guardian project that has been run by WildCRU in the community surrounding Hwange National Park in Zimbabwe for the last two years. We will identify this more extensive project distinctively as a 'Darwin Initiative

Project'. Our pilot has allowed us to refine our approach and to demonstrate at a local scale that livestock depredation can be reduced through a community lion guardian programme. Furthermore the use of communal, mobile bomas are highly successful at reducing livestock losses while at the same time fertilising crop fields and increasing crop yields. Using Darwin Initiative funding we hope to take this project to the next level by expanding the project into four additional community areas. The expanded scope of the project will allow us to demonstrate that the approach has wide applicability across national and cultural boundaries and to ultimately attract further support from international donors and development agencies.

17b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work? Yes/No

If yes, please give details explaining similarities and differences explaining how your work will be additional to this work and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits.

The lion guardian concept is modelled loosely on similar programmes running in East Africa where community members are actively engaged in conservation and livestock protection (www.lionguardians.org). We have modified this concept to suit local cultural mores and conditions. We have adopted the concept of a communal, mobile bomas constructed of PVC sheeting from the Africa Centre for Holistic Management which, in turn, are based upon traditional livestock protection practices in nomadic cultures in Angola and western Zambia. We are not aware of any programmes that would exactly duplicate what we are aiming to achieve on this project. There are several organisations working with local communities to alleviate human wildlife conflict, we have partnered with one of these, Elephants for Africa, in our proposed Boteti River site to benefit from synergies in the use of resources and local community relations.

18. Ethics

Outline your approach to meeting the Darwin Initiative's key principles for research ethics as outlined in the guidance notes.

(Max 300 words)

The Project will take place in collaboration with people from rural villages in Zimbabwe and Botswana. We already have an established working relationship with both people in the villages and with the traditional leadership (traditional Chiefs, village Heads and *Kgosis*) and communities in these areas or are currently working to establish this. We will use these relationships to ensure that the community are aware of the work we anticipate doing and are involved in decision making and are able to incorporate their own priorities, traditional values and knowledge into shaping the research approach. We will achieve this by holding stakeholder meetings as well as *ad hoc* meetings when required.

Participation in research (eg livestock protection interventions and research interviews) will be by prior informed consent to ensure the safety, welfare and privacy of participants, and will conform to the standards set by Oxford's Central University Research Ethics Committee. We will ensure that both benefits and potential costs are explained and understood before implementation of any intervention. Research methods will be assessed to ensure that they are necessary and likely to be of benefit. Local people will be informed about the final outcomes of the research to ensure that they benefit from participation.

Animal handling and immobilisation procedures will conform to guidelines set out by the Oxford University Local Ethical Review Committee and will prioritise ethical and humane treatment of study animals as set out in the University's 'Code of practice for biologists using animals'. Staff undertaking animal immobilisations have received the appropriate training and will be overseen by a qualified veterinarian.

Health and safety of field staff will be considered at all times. Staff directly employed by Oxford University will follow the university's established risk assessment procedures and project partners will be encouraged to implement similar measures.

19. Raising awareness of the potential worth of biodiversity

If your project contains an element of communications, knowledge sharing and/or dissemination please provide a description of your intended audience, how you intend to engage them, what the expected products/materials there will be and what you expect to achieve as a result. For example, are you expecting to directly influence policy in your host country or is your project a community advocacy project to support better management of biodiversity?

Information dissemination and raising awareness about both the value of biological diversity and solutions to human wildlife conflict will take place at two levels. Firstly we will target audiences at the local level. These will include people in rural villages, local Chiefs and Villages Heads, school children and Wildlife managers. Audiences will be engaged through workshops, village meetings run by the project's field co-ordinators and managers, educational materials, and in Zimbabwe, school visits to the VFWT conservation facility (separate funding in place for 1000+ school children to visit annually). We will also design, print and distribute a booklet to school children (in comic format) to provide information and educational material on key animal species and means to alleviate conflict with them.

The second level we will target is the technical audience which will include local wildlife managers, conservation practitioners and local and international scientists. Workshops will provide a forum to disseminate the ongoing results of the more technical components of the project, including information on biodiversity, conflict interventions and behaviour of study animals in relation to these. Technical reports will be made available to wildlife managers and as online resources. At a national and international scale we anticipate that the project will report on the effectiveness of methodologies and ways in which impacts of biodiversity (through limiting the need to destroy damage causing species) can be mitigated and highlight the economic and ecological value of viable predator populations. Uptake of these ideas and strategies will potentially lead to better management of conflict situations in other regions.

20. Capacity building

If your project will support capacity building at institutional or individual levels, please provide details of what form this will take and how this capacity will be secured for the future.

The project aims to improve understanding of appropriateness, applicability and efficiency of methods to reduce conflict with wild predators and reduce the need to destroy predators in retaliation for livestock depredation. At the same time we will use mobile protective enclosures to fertilise crop fields and improve crop yields. These are simple measures that require little capital input once set up costs are met and can potentially be applied widely and greatly increase the capacity of local communities to better protect livestock against predation and improve their food security by enhancing crop yields in treated fields. We will publicise the project widely in the areas in which we work (through informal visits to project sites and annual workshops) as well as showcase methods to the donor community and potentially enhance regional capacity to address human- predator conflict.

The project itself will train 14 'lion guardians' in the areas we operate. Training will include data recording, use of GPS, first aid and methods of livestock protection and husbandry. As well as providing employment, training we will provide will greatly increase their capacity to serve and protect their communities. Lion guardians will be ambassadors for their communities and the project more generally. Three young conservation professionals (Stapelkamp, Bauer and Dlodlo) will gain on the job experience in managing field teams, training in the appropriate methods, data collection and collation and analysis. These skills will be useful in their continued work in African Conservation.

We will work with local wildlife managers (from DWNP and PWMA) and their field teams to incorporate the findings of the project into their best practice procedures. We anticipate working closely with these teams to provide cross fertilisation of ideas and methodologies.

21. Access to project information

Please describe the project's open access plan and detail any specific costs you are seeking from Darwin to fund this.

The project will provide access to information through annual workshops to bring together stakeholders in the project (researchers, wildlife managers, traditional leaders and community representatives). We have explicitly included this in the budget (£1000 in year 1 and 2 and £1500 in year 3). In year 3 we will hold a workshop for regional wildlife managers and government representatives to which we will invite potential funding agencies that might be interested in uptake of our findings at a much wider scale. This workshop will showcase the project.

The project will generate annual reports (to wildlife managers and donors) and ultimately peer reviewed papers. We will make this material available online via the VFWT and WildCRU websites and mechanisms already exist to enable this and ensure project information and published data are freely available. Key outputs and activities of the project will be reported on VFWT and WildCRU websites and where appropriate on social media sites. Websites are currently maintained by the respective institutions and will not require any Darwin funding. Educational information will be prepared and made freely available to around 1000 local children in each year of the project through the VFWT conservation facility.

Because human wildlife conflict is a problem that occurs globally at the interface of human settlement and wild lands, we will ensure that lessons learned are made available to other workers in this field through publication (2- 3 manuscripts prepared by end of year 3) of the findings of this work in peer reviewed journals.

22. Match funding (co-finance)

a) Secured

Provide details of all funding successfully levered (and identified in the Budget) towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity.

Confirmed:

We have **£203,066** in confirmed funds to leverage against the budget proposed here. This includes £XXX from Save Wildlife Fund (with further funding possible in year 3), £XXX from Panthera for 2016 (with further funds confirmed on a year to year basis). 5% of DWM salary is covered by existing funds for the duration of the project. We have an 'in kind' donation of PVC canvas sheeting worth £XXX and £XXX available from a series of anonymous donations in support of lion conservation and research in the Hwange-Okavango ecosystem.

22b) Unsecured

Provide details of any matched funding where an application has been submitted, or that you intend applying for during the course of the project. This could include matched funding from the private sector, charitable organisations or other public sector schemes.

Date applied for	Donor organisation	Amount	Comments
October 2015	Robertson Foundation	£90 000	Confirmation to be received in December 2015
Existing support to be confirmed on a year by year basis	Panthera	£60 000	£30K per year for 2017 and 2018, to be confirmed on year by year basis
Existing support to be confirmed for 2018	Save Wildlife Foundation	£4250	Existing support to be renewed in 2017 for 2018 and beyond

22c) None

If you are not intending to seek matched funding for this project, please explain why.

N/A

PROJECT MONITORING AND EVALUATION
MEASURING IMPACT

23. LOGICAL FRAMEWORK

Darwin projects will be required to report against their progress towards their expected outputs and outcomes if funded. This section sets out the expected outputs and outcomes of your project, how you expect to measure progress against these and how we can verify this.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: (Max 30 words) 30 Introduction of novel conflict mitigation measures demonstrates to donor community ways to reduce poverty and protect biodiversity by reducing livestock losses, improving food security and reducing necessity to kill predators			
Outcome: (Max 30 words) Trial and showcase novel livestock protection strategies that reduce livestock loss, improve crop yields, and food security, increase community engagement in conservation and reduce retaliatory killing of large predators	0.1: Conflict incidents with large predators reduced by 70% from a baseline of 200 predation incidents on average per year in each study area (approx 1250 households in each of 4 sites) by year 3 of project 0.2: Number of predators killed in retaliation for livestock loss reduced by 60% by project end (baseline annual mortality rates of lions 0.07 (7%) and 0.10 (10%), reduced to mortality rates of 1-3%) 0.3: Predator populations are stable or increasing during project lifetime 0.4: Approx 250 households participating in boma project increase crop yield by 30% - 50% (increases of 25% in cob sizes, 25 to 30cm, and number of cobs per plant increased from 2-3 to 3-4 on boma treated sites). Number households on fewer than 2 meals a day (currently 48%) reduced by 80% and those on only 1 meal to zero (currently 6%) by year 3, especially in vulnerable female headed households. 90% of 'boma' households self sufficient by year 3.	0.1: Project conflict incident reports collected over project duration, official predation reports database, analysis of livestock survivorship data published in peer reviewed paper and reports. Perception surveys of men and women in community 0.2: Project and management authority records on retaliatory killing (historical and current). 0.3: Project surveys of predators show an increase against baseline data on populations 0.4: experimental data collected on crop yields published in peer reviewed papers and reports. Comparative photographs in reports to illustrate yield difference. Household surveys of female and male headed households.	Communities are willing to participate in novel livestock husbandry techniques and herd livestock communally. Bomas and field rotation schemes are used correctly. Baseline data on predator populations are available for use. Baseline data on food security made available by local government or can be collated by project.

<p>Outputs: 1. The benefits of lion guardian programme and mobile bomas showcased to international development agencies to encourage uptake of the concept at a large scale</p>	<p>1.1: Report published highlighting benefits used by 2-3 development agencies to inform their funding allocations to this and similar concepts by year 3 1.2: Short video showcasing project seen by 2-3 international development donors and influences their policy choices by end of year 3 1.3: Contact made and meetings held with 3-4 international development NGOs and governments by year 3 1.4: Awareness raised of project results (through local workshop in year 3) and uptake of the project findings by government agricultural departments. 1.5: Findings of the project are reflected in National predator management plans in Zimbabwe and Botswana</p>	<p>1.1: Published report and information available on WildCRU project website, number downloads logged and analysed by country as part of ME. 1.2: Project highlighted in local and international press (2 articles per year) 1.3: Video available online and sent to donors (downloads logged and analysed as part of ME) 1.4: Records of discussions, meetings and contact with donor agencies 1.5: Donor agencies approached adopt or fund this and similar concepts 1.6: Workshop report and attendance list. 1.7: National Predator Management plans and strategies.</p>	<p>The project leaders are able to develop contacts in international development and donor agencies in order to effectively present the concept.</p>
<p>2. Decrease in the levels of human-predator conflict in the study areas implemented through lion guardian programme</p>	<p>2.1: 12 LGs recruited, trained and active in community by end of year 1 2.2: Conflict levels decline by 50% by end year 1 and 70% by year 3, from a baseline of around 200 per year in each area, through interventions of LGP and use of mobile bomas. 2.3: Data show attitudes of men and women in community to predators and conservation improves against existing baseline attitudinal data by year 3. 2.4: Analysis of GPS collar data from 15 lions show that potential problem lions avoid agro-pastoral lands due to LG interventions, starting year 1 with final analysis by year 3.</p>	<p>2.1: Reports on recruitment, Records of training sessions attended by LGs in mitigation techniques. 2.2: Conflict incident records database, Wildlife management agency records, monthly lion guardian field reports 2.3: questionnaire surveys, project reports and publications. 2.4: 'Problem' lions collared and records of interventions kept GPS database on lions analysed to verify avoidance behaviour at short and long term time scales.</p>	<p>Lion guardian programme successfully set up, lion guardians trained and facilitate improved livestock husbandry. Permissions remain in place to collar lions in host countries, ethics committees approve animal handling protocols.</p>
<p>3. Decrease in the numbers of predators killed in retaliation for livestock predation contributes to goals</p>	<p>3.1: The number of predators killed in retaliation for livestock predation declines by 60% by year 3 of project</p>	<p>3.1: Project and wildlife management records of legal and illegal retaliatory killing.</p>	<p>Project continues to have access to data on predator populations to add to existing data on historical trends and</p>

of Convention on Biodiversity	(mortality rates decline from 7-10% to 1-3% of predator population, approx 25-30 lions to 3-10 lions and similar for spotted hyaena. 3.2: Predator population size in protected areas adjacent to study sites stable or increasing, with current population densities of 3.5 lions/100km ²)	3.2: Project reports to management agencies and publications 3.3: Ongoing predator population surveys by linked NGOs and WildCRU projects 3.4: Analysis and publication by project scientists of predator population trends using existing baseline data	surveys continue to be undertaken.
4. Increased crop yields and food security through use of mobile bomas to fertilise fields highlighted	4.1: Fifteen volunteer village communities (approx 300 households average of 25 households per village, 6.9 people per household, 10% female headed, 15% with no working age male) in four conflict hotspots introduced to the mobile communal boma concept and receive bomas and training by end of year 1. 4.2: Crop yields in 'boma treated' fields increases by at least 30% in crop seasons from project year 1 to 3. 4.3: Food security, particularly in vulnerable households measurably increased in the approximately 300 households participating in boma project, by project end. Increased crop yield by 30% - 50% (see baselines above) and number households on 2 meals or less a day (currently 48% of households) reduced by more than 80% and reduce to zero number of households on only 1 meal a day (currently 6% households) by year 3, especially in vulnerable female headed households. 90% of 'boma' households self sufficient by year 3.	4.1: Reports of training sessions, logs of community training and meetings kept. LG monthly reports 4.2: Crop monitoring data in database for analysis. Data on crop yield experiment (standardised seed and planting in randomised treated and untreated plots) published in reports and peer reviewed literature. 4.3: Community survey data quantify savings in time and labour input and benefits in food security felt by households headed by men and women in boma project villages. A particular focus of the survey to be benefits to women in their traditional role in crop husbandry.	Village communities are willing to function as a collective and take part in the mobile boma trial and use the boma correctly and consistently. Care is taken to ensure inclusion of vulnerable households (e.g. female headed households) in village communal boma collective so uptake of scheme is not just by community elites. Crop growing is not adversely affected by external factors (drought, disease etc).

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

- 1.1 Workshops organised yearly in years 1-3
- 1.2 Workshop interim reports written in years 1 and 2 and disseminated to stakeholders and via websites
- 1.3 Final report written end of year 3 and used to solicit further donor support to roll out concept
- 1.4 Video material collected throughout project and short video made of project to publicise work to future donors
- 1.5 Meetings requested in year 3 with key conservation and development donor agencies (e.g. FAO, development banks etc) to publicise the work and solicit further funding.
- 1.6 Awareness of project raised in national wildlife management departments and conservation NGOs to engage support and incorporate findings into national policy in year 3 and throughout project where possible

- 2.1 Recruit men and women as 'lion guardians' in 4 community areas (Zimbabwe: Hwange Communities, Mvuthu Community (Vic Falls), Botswana: Chobe Enclave and Boteti River, year 1
- 2.2 Provide training in data collection, HWC mitigation methods, etc to 'Lion guardians' in year 1
- 2.3 Select communities that will receive mobile bomas (paying special attention to inclusion of vulnerable communities and vulnerable households, ensure the female livestock owner are included).
- 2.4 Provide training in boma management and implement boma rotation schedules for movement of bomas between community crop fields in dry season
- 2.5 Set up monitoring protocols to record conflict incidents, retaliatory killing of predators, predator numbers and trends and collate historical data on these, data recorded throughout.
- 2.6 Sociologist designs and implements survey to quantify baseline attitudes to predators and conservation, year 1, follow up survey in year 3 to quantify change
- 2.7 Capture and radio collar 15 lions in the study sites
- 2.8 GPS satellite collars monitored by field managers and communities alerted (via mobile phone app- 'whatsapp') when lions approach their area (throughout)
- 2.9 Collect, collate and analyse lion GPS data to quantify changes in behaviours due to lion guardian activity (years 1-3)
- 2.10 Prepare report (1) and publications for peer review (1- 2) showcasing reductions in HWC (year 3)

- 3.1 Collate baseline data on predators destroyed as problem animals against which to measure change over the project (year 1)
- 3.2 Record problem animal control incidents at each site throughout project and use this to compare to baseline levels of retaliatory killing of predators (by year 3)
- 3.3 Collate existing survey data where possible (from WildCRU, PWMA, DWNP, conservation NGOs) or run baseline surveys to obtain data on predator populations in year 1
- 3.4 Survey predator populations (using a spoor transect method) in year 2 and 3 to compare to baseline to show trends
- 3.5 Analysis of data on trends in problem animal control and predator populations for peer review and publication (quantity 1, year 3).

- 4.1 Monitoring protocols put in place for crop growing season to measure increases in crop yields through use of mobile bomas to fertilise fields. Randomised, case controlled experiments using standardised seed to compare treated (fertilised via boma) and untreated field sites (wet season of yr 1- 3)
- 4.2 Throughout growing season of yr 1 – yr 3 crops monitored and growth and yields measured (according to above protocol).
- 4.3 Survey of households by sociologist to determine change in food security in households in participating village communities at outset and yearly to show increases in food security (with particular attention paid to female headed and vulnerable households).
- 4.4 Analysis of data on crop yields and improved food security and report written (1) to high these changes for donor community and for peer reviewed publications (1) in year 3.

24. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project (Q1 starting April 2016)

Activity	No of months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1													
1.1 Workshops organised yearly in years 1-3	3				x				x				x
1.2 Workshop interim reports written in years 1 and 2 and disseminated to stakeholders and via websites	3				x				x				x
1.3 Final report written and used to solicit further donor support to roll out concept	2											x	x
1.4 Video material collected throughout project and short video made of project to publicise work to future donors	3 (& throughout)												x
1.5 Meetings requested with key conservation and development donor agencies to publicise the work and solicit further funding.	6									x	x	x	x
1.6 Awareness of project raised in national wildlife management departments and conservation NGOs to engage support and incorporate findings into national policy in year 3 and throughout project where possible	6 (& throughout)									x	x	x	x
Output 2													
2.1 Recruit men and women as 'lion guardians' in 4 community areas	4	x	x										
2.2 Provide training in data collection, HWC mitigation methods, etc to 'Lion guardians'	4	x	x										
2.3 Select communities that will receive mobile bomas	4	x	x										
2.4 Provide training in boma management and implement boma rotation schedules for movement of bomas between community crop fields in dry season, bomas rotated throughout	36	x	x	x	x	x	x	x	x	x	x	x	x
2.5 Set up monitoring protocols to record conflict incidents, retaliatory killing of predators, predator numbers and trends and collate historical data on these, data recorded throughout	34	x	x	x	x	x	x	x	x	x	x	x	
2.6 Sociologist designs and implements survey to quantify baseline attitudes to predators and conservation, year 1, follow up survey in year 3 to quantify change	6	x	x	x									
2.7 Capture and radio collar 15 lions in the study sites	6	x	x	x									

2.8	GPS satellite collars monitored by field managers and communities alerted (via mobile phone app- 'whatsapp') when lions approach their area	36	x	x	x	x	x	x	x	x	x	x	x	x
2.9	Collect, collate and analyse lion GPS data to quantify changes in behaviours due to lion guardian activity	34	x	x	x	x	x	x	x	x	x	x	x	x
2.10	Prepare report and publications for peer review showcasing reductions in HWC	4											x	x
Output 3														
3.1	Collate baseline data on predators destroyed as problem animals against which to measure change over the project	4	x	x										
3.2	Record problem animal control incidents at each site throughout project and use this to compare to baseline levels of retaliatory killing of predators	34	x	x	x	x	x	x	x	x	x	x	x	
3.3	Collate existing survey data where possible (from WildCRU, PWMA, DWNP, conservation NGOs) or run baseline surveys to obtain data on predator populations	4	x	x										
3.4	Survey predator populations (using a spoor transect method) in year 2 and 3 to compare to baseline to show trends	12	x	x					x	x			x	x
3.5	Analysis of data on trends in problem animal control and predator populations for peer review and publication	6											x	x
Output 4														
4.1	Monitoring protocols put in place for crop growing season to measure increases in crop yields through use of mobile bomas to fertilise fields. Randomised, case controlled experiments using standardised seed to compare treated (fertilised via boma) and untreated field sites	2			x	x								
4.2	Throughout growing season (Nov-Feb) crops monitored and growth and yields measured (according to above protocol)	6			x	x			x	x			x	x
4.3	Survey of households by sociologist to determine change in food security in households in participating village communities	6	x	x				x	x			x	x	
4.4	Analysis of data on crop yields and improved food security and report written (1) to high these changes for donor community and for peer reviewed publications (1) in year 3.	2											x	x

25. Project based monitoring and evaluation (M&E)

Describe, referring to the Indicators above, how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E. Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact.

(Max 500 words)

Key areas of monitoring and evaluation will hinge on demonstrating a reduction in conflict and associated reduction in financial loss, increases in crop production and a reduction in both the need to destroy predators and stable or increasing predator populations. Data collected by field teams and reported monthly, reporting by Loveridge, Macdonald and Parry. We will monitor the project's impact on provision of training, building capacity and disseminating information. Monitoring and evaluation of these key project components will be undertaken as outlined below.

- 1) Implementation of solutions to mitigate conflict
 - By end of year 1, establish 15 mobile boma sites, verified by existence of sites and project reports. Workshop reports verify community involvement and engagement.
 - Collect data on livestock losses at all sites over project period and compare to baseline data (available in Zimbabwe and to be collated from official records in Botswana), interim analysis undertaken each year by project principals verifying protocols are followed and data are adequate to demonstrate change. Interim data in project reports to donors and wildlife managers. Throughout project compare losses with baseline data of losses prior to intervention (lion guardians and bomas) as well as against areas where the project has not implemented solutions and modify approach as required. Analysis of success (quantification of financial benefit to rural households through reduced losses) published in peer reviewed literature
- 2) Monitoring of crop yields
 - Crops monitored (growth, production) at treated and untreated sites in a case controlled experimental framework in the crop season of yr1- yr3. Results published in reports and peer reviewed literature.
- 3) Verification that methods of reducing HWC have biodiversity benefits
 - Predator populations will be surveyed at project sites and compared to existing historical baseline data (bearing in mind three years may be insufficient to show population trends).
 - Data on retaliatory killing of problem animals collated and verified against official records and reported monthly and recorded in databases. Data compared against existing baseline records of problem animal control measures. The success of programme to be measured as a reduction in incidences of lethal control against the historical background and compared to areas where no interventions implemented. Results will be made available in project reports to wildlife managers and donors, yearly. Final results will be analysed and published in the peer review scientific literature.
 - Data on potential 'problem' animal movements in relations to HWC test sites will be recorded using GPS collars (collecting hourly position data). 15 lions will be captured and collared in appropriate areas in year 1. Data will be collated in databases and interim analyses undertaken every 6 months to ensure data are adequate to demonstrate behavioural reactions to interventions. Results will be made available in reports to manager and donors and on project websites. Preparation of analysis for peer reviewed publication by end of year 3.

Provision of training and capacity building for project staff and wildlife guardians will be ongoing and will be reported in annual reports and on the project website.

Total budget for M&E	£15 500.00
Percentage of total budget set aside for M&E	2% in 2016/17 and 2017/18 and 3% in 2018/2019. Overall M&E is 2% of the Total budget.

FUNDING AND BUDGET

Please complete the separate Excel spreadsheet which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet. You should also ensure you have read the 'Finance for Darwin' document and considered the implications of payment points for cashflow purposes.

NB: The Darwin Initiative cannot agree any increase in grants once awarded.

26. Value for Money

Please explain how you worked out your budget and how you will provide value for money through managing a cost effective and efficient project. You should also discuss any significant assumptions you have made when working out your budget.

(max 300 words)

Every effort has been made to ensure that the requested budget is realistic and cost effective. Project partner costs were provided by VFWT. These costings are based on historical cost factors based on experience of running similar research and fieldwork in the Zimbabwean and Botswanan environment, baseline wage data were used to calculate host country staff salaries and are in line with salaries for the relevant positions in country. VFWT overheads were charged at a flat rate of £750 per annum (approximately 1% of total project partner costs). Value for money is achieved because much of the administration cost within the host country will be provided by existing institutional resources and personnel within VFWT. Research equipment (including research vehicles and dart rifles and capture equipment) is also already in place so is not charged in the budget. Because the project staff have very high levels of experience and expertise it is not necessary to cost for specific professional services such as veterinary professionals as this work can be undertaken 'in house'. In Botswana, veterinarians undertake capture operations for our conservation work at very subsidised rates which greatly reduces costs.

The lead organisation budgets were costed out by the Zoology Department's Grants Office, using Oxford University's X5 software. Full Economic Costing of 40% was calculated only on UK project staff salaries in the budget that are directly incurred by the DI grant (i.e. only Loveridge). No other overheads were incurred by the project. Project equipment (GPS collars) was costed against proforma estimates from Africa Wildlife Tracking, an existing University Supplier who from experience provides the best value for money for the equipment in question. Travel and consumable costs were estimated based on the costings of similar previous work in Zimbabwe and Botswana.

27. Capital items

If you plan to purchase capital items with Darwin funding, please indicate what you anticipate will happen to the items following project end.

(max 150 words)

The following capital equipment (and likely end of project provisions) will be purchased using Darwin funds. Project vehicle (we seek permission from the DI secretariat for continued use on WildCRU conservation project in Zimbabwe or Botswana), 15 lion GPS collars (likely to be unserviceable after 3 years and reuse is not viable), boma materials (likely to last 5-10 years, donated to relevant user community), smart phones for lion guardians (will be purchased second hand and likely to depreciate in value to close to zero).

FCO NOTIFICATIONS

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise the project's success in the Darwin competition in the host country.

No sensitivities are anticipated

Please indicate whether you have contacted your Foreign Ministry or the local embassy or High Commission (or equivalent) directly to discuss security issues (see Guidance Notes) and attach details of any advice you have received from them.

Yes (no written advice)

CERTIFICATION

On behalf of the trustees of **The University of Oxford**
(*delete as appropriate)

I apply for a grant of **£ 318 827** in respect of **all expenditure** to be incurred during the lifetime of this project based on the activities and dates specified in the above application.

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- I enclose CVs for key project personnel and letters of support.
- I enclose our most recent signed audited/independently verified accounts and annual reports (if appropriate)

Name (block capitals)	Dr Daniel Blakey
Position in the organisation	Deputy Head of Research Services

Signed** Signed in accompanying scanned pdf **Date:** 1 December 2015

If this section is incomplete or not completed correctly the entire application will be rejected. You must provide a real (not typed) signature. You may include a pdf of the signature page for security reasons if you wish. Please write PDF in the signature section above if you do so.

Stage 2 Application – Checklist for submission

	Check
Have you read the Guidance Notes ?	yes
Have you provided actual start and end dates for your project?	yes
Have you indicated whether you are applying for DFID or Defra funding? NB: you cannot apply for both	yes
Have you provided your budget based on UK government financial years i.e. 1 April – 31 March and in GBP?	yes
Have you checked that your budget is complete , correctly adds up and that you have included the correct final total on the top page of the application?	yes
Has your application been signed by a suitably authorised individual ? (clear electronic or scanned signatures are acceptable)	yes
Have you included a 1 page CV for all the key project personnel identified at Question 10?	yes
Have you included a letter of support from the <u>main</u> partner organisations identified at Question 9?	yes
Have you been in contact with the FCO in the project country/ies and have you included any evidence of this?	yes
Have you included a signed copy of the last 2 years annual report and accounts for the lead organisation?	yes
Have you checked the Darwin website immediately prior to submission to ensure there are no late updates?	yes

Once you have answered the questions above, please submit the application, not later than 2359 GMT on Tuesday 1 December 2015 to Darwin-Applications@ltsi.co.uk using the application number (from your Stage 1 feedback letter) and the first few words of the project title **as the subject of your email**. If you are e-mailing supporting documentation separately please include in the subject line an indication of the number of e-mails you are sending (eg whether the e-mail is 1 of 2, 2 of 3 etc). You are not required to send a hard copy.

DATA PROTECTION ACT 1998: Applicants for grant funding must agree to any disclosure or exchange of information supplied on the application form (including the content of a declaration or undertaking) which the Department considers necessary for the administration, evaluation, monitoring and publicising of the Darwin Initiative. Application form data will also be held by contractors dealing with Darwin Initiative monitoring and evaluation. It is the responsibility of applicants to ensure that personal data can be supplied to the Department for the uses described in this paragraph. A completed application form will be taken as an agreement by the applicant and the grant/award recipient also to the following:- putting certain details (ie name, contact details and location of project work) on the Darwin Initiative and Defra websites (details relating to financial awards will not be put on the websites if requested in writing by the grant/award recipient); using personal data for the Darwin Initiative postal circulation list; and sending data to Foreign and Commonwealth Office posts outside the United Kingdom, including posts outside the European Economic Area. Confidential information relating to the project or its results and any personal data may be released on request, including under the Environmental Information Regulations, the code of Practice on Access to Government Information and the Freedom of Information Act 2000.