BRITISH ANTARCTIC SURVEY

Preliminary Environmental Assessment

Antarctic Funding Office

The Protocol on Environmental Protection to the Antarctic Treaty (1991) requires the prior environmental impact assessment of all activities in the Antarctic Treaty area. Legislation exists also for South Georgia, in the form of the Wildlife and Protected Areas Ordinance (2011). The purpose of this Preliminary Environmental Assessment form is to identify any likely environmental impacts of your proposed project. The Antarctic Funding Office will work with you and the BAS Environment Office to instigate any measures to mitigate likely negative impacts, or where necessary, undertake further evaluation.

**Please submit this form electronically to the** [**Antarctic**](mailto:Antarctic) **Funding Office at BAS afibas@bas.ac.uk.** If you have any queries regarding the completion of this form please contact the Antarctic Funding Office in the first instance at afibas@bas.ac.uk.

#### Description of project

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| **1.1 Title of project:** |  |
| **1.2 Personnel involved:** *Please provide names and job titles of all personnel who will be involved in the project, including the Principal Investigator, Field Leader and external collaborators/contractors.* |  |
| **1.3 Location:** *Please provide the following:*   * *name of each location to be visited (including depot sites);* * *grid reference or GPS location; and* * *a description of the area, e.g., coastal, ice-free, glacier, etc.* |  |
| **1.4 Time, duration and intensity of proposed activity:** *Please include:*   * *proposed dates of the project* * *the duration of the project; and* * *the number of person days expected at each location (including field GA time).* |  |
| **1.5 Brief description of proposed activity:** *Please provide:*   * *a short non-technical summary of what the project aims to achieve; and* * *what activities it will involve.* |  |

#### Identification of potential impacts

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| ***Please contact Mick Cliff for advice on packaging hazardous goods and hazardous waste. (mpc@bas.ac.uk)*** | |
| **2.1 List any hazardous substances, radioactive material or stable isotopes that are intended to be used:** *Please include:*   * *the hazard class;* * *quantity of each material (****or append CAR form****); and* * *details on how they are intended to be used, e.g., will they be released into the environment?* |  |
| WASTE MANAGEMENT  All non-radioactive waste produced on BAS ships by science cruises within the Antarctic, should be consigned to the Environment Manager in the UK for disposal. The Environment Office will then organise and pay for the disposal of this waste. (Please see the BAS Waste Management Handbook for further information). Radioactive waste should also be consigned to the Environment Manager, but the project generating the waste will be cross charged for the transportation and disposal of this waste.  If a scientist or individual decides to consign waste to their own institute they must ensure that they are fully compliant with all appropriate legislation including the Waste (England and Wales) Regulations 2011, The Duty of Care Regulations 1991, and the Hazardous Waste Regulations 2005. These regulations affect the packaging, containment, storage, transportation and disposal of waste from source to final disposal. This includes transportation from the UK port where the waste it offloaded from the ship, to the research institute. By signing this form the PI provides confirmation that waste consigned to any organisation other than BAS, will be fully compliant with the legislation outlined above and that the duty of care for this waste is the responsibility of the PI. | |
| **2.2 How much waste (hazardous and/or non-hazardous) will the project produce?** *Please provide an estimate where specific details are unknown. Please include general field waste, where relevant.* |  |
| **2.3 If your project is to be undertaken on board the RRS James Clark Ross or the RRS Ernest Shackleton, please provide the quantities and type of waste packaging required:** (*IF YOU DO NOT PROVIDE ANY DETAILS HERE YOU MUST ORGANISE YOUR OWN PACKAGING PRIOR TO BOARDING THE SHIP AND ENSURE YOU ARE COMPLIANT WITH REGULATIONS CONCERNING THE TRANSPORTATION OF HAZARDOUS WASTE MATERIALS.)* |  |
| **2.4** (For field parties only) **Please confirm the type and quantity of fuel that will be taken into and stored in the field:** |  |
| **2.5** (For field parties only) **All field parties must be familiar with the BAS fuel spill protocols.**  *This requires some parties using and transporting large quantities of fuel to carry specific fuel spill kits. Please confirm that you have discussed your requirements with the field Operations Manager.* |  |
| **SPECIALIST ACTIVITY PERMITS**  Please note that if you answer YES to any of the following questions (2.6, 2.7, 2.8, and 2.9) you may require a permit, issued by the Foreign and Commonwealth Office in accordance with the UK Antarctic Act, to undertake the activity. The BAS Environment Office will advise you further if necessary . **NB: IMPORTATION OF NON-STERILE SOIL INTO ANTARCTICA IS NOT PERMITTED UNDER THE PROTOCOL ON ENVIRONMENTAL PROTECTION TO THE ANTARCTIC TREATY.**  If you intend to import any biological specimens (plant, soil or animal) to the **UK** you will need a relevant DEFRA/CITES import/export licence. Please seek advice from Mike Dunn ([mdunn@bas.ac.uk](mailto:mdunn@bas.ac.uk)) or Paul Geissler ([page@bas.ac.uk](mailto:page@bas.ac.uk) ). For details on the protocols and procedures for consigning biological samples from all Antarctic bases and ships please contact the Office at [afibas@bas.ac.uk](mailto:afibas@bas.ac.uk) or see the Antarctic Proposals and Fieldwork Planning website for further information: <http://www.antarctica.ac.uk/apfp/plan/permits.php> | |
| **2.6 Do you intend to sample, capture, kill or harmfully interfere with any marine or terrestrial flora or fauna (including invertebrates)?**  *If yes, please provide:*   * *a species list;* * *an estimate of the quantity and volume/mass of specimens;* * *the number of sampling sites; and* * *a short justification for the quantities listed.*   *You must inform the Environment Office if you deviate from the quantities stated.* |  |
| **2.7 Do you intend to import samples of any flora or fauna to the UK?**  *If yes please provide details. You must liaise with Mike Dunn for the appropriate licence (mdunn@bas.ac.uk)* |  |
| **2.8 Do you intend to remove rock, soil, sediment or fossil samples?**  *If yes, please provide, as accurately as possible:*   * *an estimate of the quantity and volume/mass of the material;* * *an estimate of the total quantity to be removed;* * *the number of sampling sites e.g. 50 x 20 g samples; and* * *a short justification for the quantity listed.* |  |
| **2.9 Do you intend to deliberately take to the Antarctic any non-native marine or terrestrial animal, plant, seed or microorganism?**  *If yes, please provide as, accurately as possible:*   * *an estimate of the quantity and volume; and* * *a short justification for this activity.* |  |
| **2.10 Do you intend to visit any marine or terrestrial protected areas? Such areas include:**   * **Antarctic Specially Protected Areas (ASPAs)** * **Antarctic Specially Managed Areas (ASMAs)** * **Historic Sites or Monuments (HSMs)**   *Please check the ATS websites:* [*http://www.ats.aq/e/ep\_protected.htm*](http://www.ats.aq/e/ep_protected.htm)  *If yes, please provide:*   * *details of which areas you intend to visit; and* * *if an ASPA or ASMA, a short justification of how your project meets the requirements of the protected area Management Plan* |  |
| **2.11 The Antarctic Treaty System has identified 37 locations (excluding research stations) that are amongst the most visited sites in Antarctica. Please provide details of which, if any of these sites you intend to visit.** The list of locations, and the associated Site Guidelines for Visitors, can be found at the following web link. All site guidelines must be adhered to. <http://www.ats.aq/e/ats_other_siteguidelines.htm> |  |
| **2.12 Do you intend to install any equipment (including data loggers and markers)?** *If yes, please provide :*   * *a brief description of the equipment;* * *a brief summary of the location;* * *details of how the equipment is to be labelled and referenced; and* * *how and when the equipment is to be maintained and removed* |  |
| **2.13** (For building projects only) **Will the work require concrete mixing on site:** *Please provide details of expected quantity* |  |
| **2.13 Do you intend to visit any previously undisturbed sites and/ or ice free ground?**  *Please include the details and co-ordinates of the anticipated locations to be visited.* |  |

1. **Environmental Impact Matrix**

Please complete the following matrix for each activity you intend to undertake as part of your project (add more rows to the table if required).

1. Firstly, list all activities involved in your project. The list should include science activities (such as the collection of samples and deployment of monitoring equipment) and logistical activities (such as the storage and handling of fuels and chemicals, waste management and camping activities).
2. Identify any possible direct impacts of your actions on flora, fauna, air quality, water quality (freshwater, marine and ice), geology, soils, noise levels, cultural heritage.
3. Identify whether or not there will be any residual impacts once your project is complete. Examples may include (a) leaving equipment in the field (e.g. for more than one season), (b) permanent removal of samples from the field, and (c) impacts on the value of the locality for future science (e.g. the release of stable isotopes).
4. If you are aware of other projects or activities in the past, present or reasonably foreseeable future which combined with your proposed project could result in a significant environmental impact, please include the details under cumulative impacts.
5. Provide details of the mitigation measures you intend to implement to ensure that negative impacts are minimised or avoided.

The following documents provide guidance for minimising impacts in the field and can be used to complete the matrix below.

* SCAR Code of Conduct for Terrestrial Scientific Field Research <http://www.scar.org/researchgroups/lifescience/Code_of_Conduct_Jan09.pdf>
* SCAR’s Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica <http://www.scar.org/treaty/atcmxxxiv/ATCM34_ip053_e.pdf>
* BAS Waste Management Handbook <http://www.antarctica.ac.uk/apfp/waste_management_handbook_ed._6_2013.pdf>
* BAS Biosecurity Handbook <http://www.antarctica.ac.uk/apfp/bas_biosecurity_handbook_2013_final.pdf>

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| **Example: Activity** | **Possible Impact (direct, residual and/or cumulative)** | **Mitigating Measures** |
| *Example: Travel on foot between ice-free areas* | *Possible introduction or intra-regional spread of non–native species (vegetation and/or invertebrates, including those in soil)* | * *Biosecurity briefing provided to all team members prior to departure* * *Boots, clothing and equipment to be cleaned thoroughly before departure from the UK.* * *Visual checks between sites to check no soil is stuck to boots or equipment* * *Follow guidelines in Scar Code of Conduct for Terrestrial Scientific Field Research* |
| *Example: Camping on ice sheet* | *Generation of domestic waste and human waste* | * *All team members to read and be briefed on the ‘Field Operations Manual’ Section 19 Environmental Management* * *Waste bags and poo bins to be issued by Field Ops Manager* * *All domestic waste will be segregated in the field and returned to Rothera prior to final disposal outside of the Antarctic. Human waste will be incinerated at Rothera.* |
| *Example: Deploying retrievable sensors in the field* | *Impact to wilderness and aesthetic value of the region.*  *Risk of equipment becoming waste if not recovered.* | * *Design phase of project has identified biodegradable and low toxic materials to be used in the construction of the sensors.* * *The Environment Office will be informed of sensor deployment locations if equipment is not retrieved and the details will be added to the ‘lost equipment’ log.* |

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| **Activity** | **Possible Impact (direct, residual and/or cumulative)** | **Mitigating Measures** |
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1. **Communication of information**

The information you have provided in this form, and the mitigation measures to which you have committed, should be communicated to all members of the project team. In signing this form, you the PI (or their designated deputy) are confirming that you will make all personnel involved in the project aware of the aforementioned information and that all appropriate environmental practices will be followed. **Any deviation from the information provided in this form must be communicated to the Environment Office.**

1. **Signature**

Please insert a **scanned signature** below and complete the date to confirm that the information you have provided is accurate and up to date.

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| **Signature:** | **Date:** |
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1. **Assessment (to be completed by the BAS Environment Office only)**

Project to proceed with mitigating measures in place

### Or

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An Initial Environmental Evaluation is required

Signature:

Date: