

A guide to going south with British Antarctic Survey



**British
Antarctic Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

**POLAR SCIENCE
FOR PLANET EARTH**

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For further information about BAS, please visit:

www.bas.ac.uk

Director's foreword

Season 2018/19

The forthcoming field season 2018/19 is going to be one of the busiest that BAS has undertaken for many years. Rothera will be a hive of activity with the demolishing of the old wharf and building of a bigger better new one, ready for the new ship, RRS *Sir David Attenborough*, in future years. The station will be full to capacity with Rothera station staff, construction teams and extra support, working together as one team, collaboratively and safely.

We will also be closely monitoring the movement of the cracks in the Brunt Ice Shelf and looking after Halley station after its lonely winter closure. Bird Island has a brand new building to enjoy and other stations will be hosting exciting science projects.

In particular, we will be putting logistics in place to support the Thwaites project, a major collaboration between UK and US scientists and operators, funded by the US National Science Foundation (NSF) and the UK Natural Environment Research Council (NERC). This is an ambitious project to understand how climate change is affecting the Thwaites Glacier in the Amundsen Sea region. In many places around Antarctica, deep warm ocean water is beginning to lap up under the ice shelves, melting them from below. If this is happening to the Thwaites Glacier then we need to know what the impact will be on the huge West Antarctic Ice Sheet, which holds several metres worth of global sea-level rise.

The strength of any organisation lies in the expertise and enthusiasm of its people. Keep safe, whatever you will be doing, look after your colleagues, and give your best – Antarctica is an amazing place and deserves nothing less.

Professor Dame Jane Francis

Director, BAS



Checklist

This handbook contains a great deal of information, and you can not be expected to absorb it all immediately. Please carry it with you when you go south as a source of reference. We have created a checklist of the most important things to remember before you leave home.

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Basic preparations



Health matters

Medical examination – Everyone who travels with BAS to the Antarctic must pass a strict medical examination. The purpose of the medical is to determine whether you are fit for the arduous nature of Antarctic service.

As the medicals are often completed many months before travelling south, it is vital that you report any subsequent medical problems to the BAS Medical Unit.

The final decision rests with the Senior Medical Officer at BASMU.

Please refer to the BASMU document 'Medical aspects of living and working in Antarctica' for more information (www.bas.ac.uk/for-staff/polar-predeployment-prep/intro-guidelines-and-forms/medical-guidelines-and-forms).

Dental check – You must ensure that you have a thorough dental check before leaving the UK and that a letter from your dentist confirming your dental fitness is supplied to BAS. Your own dentist should carry out this check.

Confidentiality – Medical records are retained by BASMU. BAS does its utmost to maintain the confidentiality of medical information. However, as there may be safety, welfare or operational implications, personnel additional to the medical staff may sometimes be involved.

Immunisation – Prior to departure from the UK, you must be well in date with the following immunisations, which are freely available from your GP.

- Diphtheria, Tetanus, Pertussis (DTP or Revaxis Polio)
- Meningitis ACWY
- Measles, Mumps, Rubella (MMR)

Please refer to BASMU document 'Immunisation Policy' for more information: www.bas.ac.uk/for-staff/polar-predeployment-prep/intro-guidelines-and-forms/medical-guidelines-and-forms

Ensure that you have a record of your immunisations with you when you leave for the Antarctic. A BASMU doctor may wish to see this.

Passports and visas

Please ensure that your passport will be in date throughout your stay in Antarctica plus at least an extra six months after your planned date of return, including time for any subsequent travel.

This is vital: you cannot renew your passport once you have left the UK, nor can you travel on a passport with less than six months' life on it.

We have been advised that those travelling through South Africa need to ensure that they have at least two adjoining pages clear of all immigration stamps for use by South African authorities.

You are responsible for obtaining any necessary visas. UK citizens do not require visas for travel to South Africa, Chile, Uruguay or the Falkland Islands.

Citizens of other countries, and UK citizens travelling elsewhere, should check their visa requirements well in advance of travel.

Financial affairs

We cannot provide financial advice. To prevent problems and minimise worries for yourself and your family, you should take every step to ensure that your financial arrangements are organised. Further details on the tax and NI situation can be obtained from the BAS Personal Accounts Manager.

You should consider giving someone you trust Power of Attorney.

You should inform your bank that you are going to be away and you may also have to inform insurance companies.

Voting

There are no arrangements for you to vote in general or local elections whilst you are in Antarctica. If you wish to retain your entitlement to a vote the only way to do so is by arranging a 'proxy' vote before you leave the UK. Please contact your District Council for more information.

Making a will

It is always prudent in terms of personal affairs to have a will in place. You are strongly advised to make a will if you haven't already done so.

Bad news whilst you are away

You should also take the opportunity to discuss with your friends and family the possibility that there may be bad news from home whilst you are in the Antarctic.

Your next-of-kin should understand and be aware of your wishes. We recommend that news be passed in 'real time', via HR in Cambridge.

Packing for the Antarctic



What NOT to take to Antarctica

- Importation of PCBs (polychlorinated biphenyls) and pesticides is banned under the Antarctic Treaty. These materials may persist in the Antarctic environment and damage local wildlife
- Do not use polystyrene chips or similar packing for your equipment; these items are also banned under the Treaty system. Wrap fragile items in clothing, foam or newspaper (not shredded)
- Equipment containing elemental mercury (such as thermometers)

Importing non-sterile soil and non-native species (such as plants, seeds, bulbs and invertebrates) is strictly banned under the Antarctic Treaty. If you require a non-native species for your scientific research or other work you will need to obtain a permit – contact the BAS Environment Office for more details.

Non-native species can be introduced inadvertently to Antarctica on visitors' clothing and in their personal belongings. For

example, seeds and spores can get trapped on outer clothing and mud can be imported on boots. To reduce the risk of non-native species introduction through BAS activities, the Environment Office has developed the BAS 'Biosecurity Handbook' (Internal access via the BAS Intranet: <https://ishare.apps.nerc.ac.uk/basintranet/PeopleAndTeams/environment/antarctica/Biosecurity/Pages/default.aspx>). Please consult this for further biosecurity information.

Individuals shall not import any of the following into South Georgia or Antarctica:

- Any living plant, animal or micro-organism (unless in possession of a GSGSSI permit or a Section 12 permit issued under the Antarctic Act)
- Non-sterile soil or compost
- Any plant propagules (e.g. seeds, bulbs, cuttings) or invertebrate eggs (e.g. brine shrimp or sea monkey eggs)
- Untreated wood where bark remains attached

Image: The Clothing Store at BAS Cambridge.

i For more information, please visit: www.bas.ac.uk

- Any perishable foods including fruit, vegetables, cheese, fish or meat

Please ensure that any person that is likely to send gifts or packages to you while in South Georgia or Antarctica is also aware of these restrictions.

What to take to Antarctica

If you buy anything new to take south, such as a camera or outdoor equipment, you should carry the receipt with you. When you re-import the goods to the UK, the receipt will provide clear evidence that duty has been paid on the goods. There should be no problems re-importing equipment that is clearly well aged.

Antarctic clothing

BAS issues appropriate outdoor and work clothing that are specifically designed for each location, activity and length of tour. A stock of specialist and back up clothing is maintained on each BAS station and vessel.

Clothing is issued from the Clothing Store in Cambridge. You should contact the Clothing Store (clothing@bas.ac.uk) and arrange a fitting session well before you go south.

All BAS issue clothing remains the property of BAS and must be returned at the end of your Antarctic tour. A kitbag and its contents are tracked via the Bill of Lading (BOL) system and you are accountable for it.

BAS does not supply indoor clothing, so take your own. All ships and stations are warm inside. You will require items such as jeans, tracksuit bottoms, shorts, t-shirts, sweatshirts or similar, as well as nightwear, underwear, indoor socks and indoor shoes and slippers.

You may have some time in the Falkland Islands, Punta Arenas or Cape Town without your kitbag, so you should carry some of your own outdoor clothing such as outdoor shoes or boots, trousers, tops, insulated jacket and waterproof jacket for immediate use. Most stations have semi-formal meals or other events on Saturday nights and RRS *James Clark Ross* runs a formal messing system, so you will need at least one set of reasonably smart clothes.

More information on issued clothing can be found in the clothing catalogue on the BAS Intranet or speak to your Station Leaders for more specific information.



Images: Top: All outdoor clothing is issued from the BAS Clothing Store in Cambridge and transported south on one of the BAS ships. **Bottom:** Digging snow for the melt tank at the Subglacial Lake Ellsworth drill site, Antarctica.

Packing for the Antarctic *continued*

Glasses

If you wear glasses, ensure that you take at least one spare pair with you. Leave a copy of your prescription with Human Resources so that replacements could be obtained in an emergency. Contact lenses have the advantage that they do not get steamed up or frozen.

As part of the clothing issue, BAS will pay an amount towards the purchase of prescription sunglasses if required. These may be obtained by you to a maximum cost of £220.00. Please speak to the Clothing Store Manager if you require any further information (clothing@bas.ac.uk).

Provision of contact lenses and supplies for them is your own responsibility.

Toiletries

We will supply all items necessary for your safety in the Antarctic. High-factor sun cream and lip salve are freely available on ships and stations (although you will have to provide your own when you first arrive in the Falkland Islands/Chile/Cape Town).

General toiletries are supplied on station – these include soap, shampoo, toothpaste, toothbrushes, floss, razors and shaving foam (but not deodorant or shower gel). On the ships, these items have to be purchased from the ship's bond.

For women, wintering personnel should purchase their requirement of sanitary towels or tampons and reclaim the cost via the expenses system. Summer-only personnel must take their own supplies.

Medication

All ships and stations carry stocks of medicines, covering requirements from first aid to emergency treatment. The ships carry various anti-seasickness remedies although it is worth starting such a course just prior to the voyage if you are so disposed. The field rations are nutritionally balanced but many people take vitamin supplements when in the field for longer periods.

The stations are well supplied, but do not have the range of medication available in the UK, and are equipped to deal with emergencies, not ongoing problems. If you are taking regular medication of any kind (including contraceptive pills) you will, as far as possible, need to take sufficient quantities for your tour.

If your tour is longer, or there are any problems with this, contact BASMU as soon as possible, and well in advance of your departure date. If you have any concerns at all, please discuss your medication with BASMU well in advance, who will advise or assist in ensuring you have what is needed. To avoid potential problems at Customs, ensure that all medicines are carried in their original containers with labels intact. If you are taking any prescription medicines, or are carrying any controlled drugs, this must be declared on your medical questionnaire and at your medical and should also be advised to the doctor or ship's Master/Station Leader when you join a BAS ship or station.

Photography

Don't panic about the cold, most modern cameras work perfectly well in Antarctica, but be aware that in the winter, extreme low temperatures will dramatically reduce battery performance, so ensure that you have spares. The camera killer is condensation, so take a plastic bag! – more at the Pre-deployment Training.

Don't underestimate the compact camera. It'll often capture those unforgettable moments simply because it's there in your pocket.

A good camera bag and a few cleaning cloths are a sound investment and think about UV filters on all your lenses, if only for protection.

In our world of digital imaging, the one thing people underestimate is just how much storage capacity you need, so take twice as much as you think. A top tip for digital SLR users: never change lenses with the power on – the powered sensor acts like a vacuum cleaner for dust!



One final point, the BAS image collection relies heavily on photos taken by everyone who goes south, so, to find out more about submitting your pictures or just to get those questions answered, you can email: Pete Bucktrout (pbu@bas.ac.uk) and/or Jamie Oliver (jaol@bas.ac.uk).

Music, films and books

All stations hold large collections of music, films and books (including e-books). A personal MP3 player with headphones is useful and wintering personnel may wish to take a mini hi-fi system/iPod dock/speakers etc. Remember to take rechargeable batteries (with a charger) for any portable equipment. Musical instruments are popular and concert nights are sometimes organised. Ask for packing advice if you wish to take musical instruments.

Skis and snowboards

There is a selection of skis available on the larger stations, but you may wish to take your own skis or snowboard. Recommendations vary between stations – you should consult your Station Leader as to local preferences before purchasing new equipment.

Appropriate protective equipment should always be used when skiing or snowboarding, and all skis must have releasable bindings and be set up by a qualified person before use. Please consult the Operations Group if you intend to hand carry your skis.

Other items

The Antarctic is hard on watches. You should take at least two watches – inexpensive digital watches are quite adequate. Spare straps and batteries are also useful. A watch with an alarm is recommended. You may consider taking items such as binoculars, a hair dryer, alarm clock, etc. but avoid power hungry items as generator capacity on the stations is limited. The latest best-sellers and newspapers/magazines are always welcome on the stations.



Packing for the Antarctic *continued*

P-Boxes

(Applies to wintering staff only)

Winterers may consign personal belongings as manifested cargo (that is, cargo officially declared to Customs) on a BAS ship, for delivery to their wintering station. This cargo will not be available until the ship arrives at your station, which may be some time after your own arrival. It is not accessible whilst onboard ship.

Space on stations is extremely limited – you should therefore give careful thought to your requirements and not pack more equipment than is completely necessary.

All wintering personnel will be issued from Operations Supply Chain Logistics, a box 75 x 38 x 41 cm in which to pack breakable items and a soft kitbag for clothing. These containers will remain the property of BAS and will be retained when your possessions reach Cambridge at the end of your tour. In addition you may consign a bag containing skis and/or a snowboard.

Personal boxes must NOT contain any perishables, fireworks, aerosols, batteries etc and liquids such as shower gel shampoo should be securely sealed in leak-proof packaging. As a guide, any material that has an orange warning label on the original packaging is hazardous and may not be transported. As the cargo is shipped through the tropics, heat-sensitive material should not be shipped, but rather hand carried south.

Cargo packing dates are usually around the end of July for RRS *James Clark Ross* and the end of August for RRS *Ernest Shackleton* (contact Operations Supply Chain Logistics (SCL) (cargo@bas.ac.uk) for routings and precise dates). You should deliver your personal belongings to the BAS SCL Store by dates advised by Operations Supply Chain Logistics. All boxes must be accompanied by a full list of contents and be clearly labelled with your name and station. An electronic copy of the contents should also be supplied. Unmanifested cargo will not be accepted onboard ships.

Scientific cargo

All scientific cargo must be delivered to the BAS SCL Store by the published packing date unless specific arrangements have been made in advance with Operations Supply Chain Logistics.

All cargo must be accompanied by a cargo packing note giving a full description of cargo including hazard data information and stowage conditions if appropriate. Cargo will not be accessible onboard ship unless it has been exceptionally designated as 'Wanted on Voyage' and approved as such by Operations Supply Chain Logistics in advance.

Scientific cargo is only transported by air to Rothera or Halley on an exceptional basis, and must first be approved by the Operations Delivery Team. You should contact the Operations Manager by the middle of July for authority if you think you might have an exceptional justification to ship cargo by air.

Further details concerning cargo movements are included in the Operations Supply Chain Logistics Shipping Guide and individual station Visitors' Guides.

Northbound cargo

Your Station Leader will supply you with more information regarding northbound cargo for return from Antarctica. Essentially the same procedures apply as for southbound cargo. Your possessions should fit into one of the supplied cargo containers as described above.

Travelling to and from Antarctica



How do I get there?

Most people travelling to Antarctica will transit through the Falkland Islands, Punta Arenas or Cape Town (Halley only). These are known as the Gateway Destinations.

BAS organises transport from BAS Cambridge to the departure airport. If you do not wish to use this transport you will need to make your own arrangements to get to the airport, but may then reclaim reasonable expenses incurred depending on your funding arrangements. Please note we cannot refund internal UK flight costs.

BAS will arrange all your travel from the UK airport onwards, as well as any accommodation and transfers required during your journey.

What information can I expect to receive from BAS?

Approximately two weeks before your planned departure date you will receive your travel confirmation details from the Polar Operations support team.

This will either be a commercial flight departing from London Heathrow or an MOD flight departing from RAF Brize Norton in Oxford.

You are required to confirm receipt of your travel documents, raise any queries and finalise any UK travel arrangements.

Travel dates can be changed at short notice for operational reasons. You should allow seven days' leeway in any plans you make prior to leaving for Antarctica and after your planned return date.

What facilities are available at the Gateway Destinations?

You will be met at the airport and transferred to your accommodation.

If you are accommodated at any Gateway Destination onboard a BAS ship, all your meals will be provided onboard. You may eat elsewhere at your own expense.

For more information please refer to the Gateway Guidance Notes: www.bas.ac.uk/for-staff/polar-predeployment-prep/intro-guidelines-and-forms.



Images: Top: RRS James Clark Ross arriving at Rothera Research Station.
Bottom: The Dash-7 aircraft landing on the blue-ice runway at Sky-Blu Field Station.

 For more information, please visit: www.bas.ac.uk

Travelling to and from Antarctica *continued*

Gateway Destination: The Falkland Islands (FI)

The BAS office in Stanley will arrange and pay for your transfers and accommodation in FI.

Your accommodation will be full board (i.e. breakfast, lunch and dinner). You will normally stay in Stanley in bed and breakfast accommodation, with lunch and evening meals provided at a specific restaurant. You may arrange to eat elsewhere but this will be at your own expense.

Gateway Destination: Punta Arenas

The BAS-appointed agent, Agunsa, will arrange and pay for your transfers and accommodation in Punta Arenas which will be provided on a B&B basis.

For lunch and dinner we can only reimburse actual costs so receipts must be kept or you will not be entitled to make a claim.

Gateway Destination: Cape Town

The BAS-appointed agent in Cape Town, ALCI, will arrange and pay for your transfers and accommodation in Cape Town which will be provided on a B&B basis.

For lunch and dinner we can only reimburse actual costs so receipts must be kept or you will not be entitled to make a claim.

How will I travel onwards from the Gateway Destination?

You can normally expect to have at least one night's accommodation at your Gateway Destination before departing for Antarctica. However, due to the unpredictability of the weather in Antarctica, last-minute changes can occur:

Those travelling to/from Rothera can be routed either by air or by sea. All other BAS personnel will normally travel to/from their Antarctic destination by sea.

If you are travelling by ship on any leg of your journey you will be required to complete a Personal Survival Techniques (PST/STCW '95) course prior to your departure and you MUST carry the original document with you onboard when you deploy.

Travel home from Antarctica

Your northbound travel arrangements will be distributed by the station/ship at the end of your stay in Antarctica.

You will have the option to make your own arrangements to travel home from your Gateway Destination. Please refer to the Own Arrangements Guidelines for more information: www.bas.ac.uk/for-staff/polar-predeployment-prep/intro-guidelines-and-forms.



Image: Routes taken by BAS ships and aircraft to the Polar Regions.

i For more information, please visit: www.bas.ac.uk

Living in Antarctica



Living on ships

You may travel on BAS ships either in transit to or from a station, or as part of a science cruise. Shortly after joining the ship, you will be given a briefing on the ship's layout, safety, security and emergency procedures and the plans for the coming work period.

Please read the booklet that is in your cabin as soon as you join the ship. This will tell you everything you need to know about safety and the ship's routine. This booklet is available on the internet for RRS *Ernest Shackleton* at: www.bas.ac.uk/polar-operations/sites-and-facilities/facility/rrs-ernest-shackleton and for RRS *James Clark Ross* at: www.bas.ac.uk/polar-operations/sites-and-facilities/facility/rrs-james-clark-ross.

The Master has overall authority onboard. Any of the ship's crew will be pleased to explain the operation of the ship and the routines. It is possible to visit the Bridge and Engine Room in small groups after first obtaining permission. Otherwise, you must not enter restricted areas.

All non-crew members on the ships are designated as Special Purpose Personnel, SPP. This means legally you are a mariner; with a job to do on the ship. Therefore whilst in transit, (unless you are currently working on scientific data collection/support – see Science Cruises) you may be required to provide galley and general assistance.

Staff should expect to share cabins. You will be expected to keep your own cabin, working and living areas clean and tidy.

Seasickness remedies are available from the ship's doctor. Ask whether any have side effects e.g. drowsiness in which case you may be limited in what you do while taking them.

Both ships have a gym and sauna for general use and carry a selection of books, DVDs and games to pass the time. If you are travelling for more than a few days, you are advised to take some leisure items with you, especially your own choice of reading. If you have an electronic book

Image: Deployment of the benthic sledge from RRS *James Clark Ross* on a snowy morning in Marguerite Bay, Antarctica.

i For more information, please visit: www.bas.ac.uk

like a Kindle, iPad or laptop, download your books, movies or music before you leave home.

Many people get dehydrated on ships; you should drink plenty of water and may wish to take a skin moisturising cream. Soft and alcoholic drinks are available from the ship's bars, which are run on a 'tick sheet' system. The ship's Bond (shop) sells toiletries and souvenirs as well as drinks and cigarettes using a chitty system. Any expenditure will be taken directly from your personal account. You will not require money whilst onboard.

Science cruises

Science cruises typically last two-to-six weeks. Scientific work on ship during the cruise frequently continues 24-hours-a-day, seven-days-a-week, with personnel working 12-hour shifts. A Principal Scientist (PS) for the cruise will assume responsibility for cruise personnel. He or she will nominate watch leaders for each shift who will co-ordinate requests between the science and ship operations. Guidelines for Cruise Participants are at: www.bas.ac.uk/polar-operations/sites-and-facilities/facility/rrs-james-clark-ross.

All Personnel must have completed an STCW 1995 Personal Survival Techniques course to sail on BAS ships. You are required to send a copy of the certificate to BAS. The original certificate must be taken with you to the ship. BAS will organise this training for its own personnel.

Safety shoes and a helmet must always be worn whilst working on deck. Additional personal protective equipment (PPE) must be worn as appropriate. For health and safety reasons, flip flops are only permitted for use within cabins.

Ships' laboratories are small and usually shared by different projects. It is important for everyone to be considerate of other users and work in a tidy manner. All laboratory regulations and guidelines apply as they do in the UK. However there are extra risks in ship laboratories and the ship-specific Laboratory Code of Practice and Cruise Risk Assessments should be thoroughly read before undertaking any laboratory work onboard. The Code of Practice and the Risk Assessments for the cruise are available in the ships' laboratories.

Internet

The bandwidth on the ships is very limited, you should not expect to surf the web as you might at home.



Images: Top: RRS Ernest Shackleton at the Brunt Ice Shelf, Antarctica, for relief of Halley Research Station.

Bottom: RRS James Clark Ross on a science cruise in the Bellingshausen Sea.

 For more information, please visit: www.bas.ac.uk

Living in Antarctica *continued*

Living on stations

Each station has a Station Leader (SL) who is present each summer and has overall authority on the station. A Winter Station Leader (WSL) is appointed as the deputy and will act as the SL's representative during the winter.

Accommodation and work routines vary between the BAS stations. When you first arrive on station you will be given an introduction and tour of the facilities. Incoming personnel are provided with training before they are allowed to undertake field activities or use boats or vehicles. This training builds on that received over the preceding summer, including at the Antarctic Pre-deployment Training Course and/or Winter Teams Training Week.

Technical and support staff generally work a structured five or six-day week, whereas science and operational staff may work different hours as projects or workloads require. There are times, for example when discharging cargo, when personnel may be required to work shifts to ensure efficient operations. However, it is intended that there should be adequate time in each week for personnel to undertake recreational and social activities. It is important that everyone is aware that their leisure hours may not coincide with those of personnel working on other projects. Do not get upset if others are playing whilst you are working.

Staff should expect to share accommodation on stations. At Rothera and Halley meals are normally provided by professional chefs, but at other stations all personnel take turns to cook.

Vegetarian food is available on all stations. There are communal tasks to be undertaken at all BAS stations. The tasks differ from station to station, however you will be expected to take part in domestic duties on a rota basis. These tasks include washing up, dealing with waste and general cleaning (especially at the weekly 'scrubout'). You may also be required to assist in other duties such as station maintenance, cargo

handling, staffing of field huts, acting as night watch and assisting with flying operations. BAS has always believed that everybody who lives on a station should take equal responsibility for its daily maintenance.

In addition, staff will probably be co-opted into some science support work at some point in their tour. This could include depot work, field flying support, boating/field work support, as well as direct science support tasks.

Each station runs its own bar facilities with a limited supply of alcoholic drinks. The particular system will be explained to you on arrival, but all operate on some variation of either the 'tick sheet' or pre-supply systems, with payment deducted from your personal account. You should not take personal supplies of alcohol onto the station. Please read and observe the Staff Notice giving BAS policy on alcohol and drugs.

Other purchases (such as postcards etc.) can also be made through your personal account. You will not require money on station.

All stations operate a policy of no smoking within station buildings.

All ships and stations supply UK-standard 230V 50Hz AC power through standard British three-pin sockets and are equipped with ample computers for personal or work-related use. All stations operate an energy conservation plan to reduce fuel use.

All your electrical equipment must be PAT tested before you use it on station. This can be done on arrival but it will save you time if you get it tested beforehand. The electrician will endeavour to get your equipment back to you as soon as possible but please don't expect an immediate turnaround. If you need to use anything straight away, get it tested before you arrive.

As on ships, there are washing machines and dryers at the stations. Washing powder is provided.



Morale and behaviour of staff

Maintaining morale depends on all team members being considerate, friendly and productive. It is recognised that stations and ships will not always be completely harmonious. When this does happen, work can suffer and grievances may lead to unpleasant confrontations and uncomfortable environments. Collectively we aim to prevent morale breaking down.

Relationships, both pre-existing or those that develop during service south, are not uncommon within our communities. Couples have a responsibility to their community to avoid indiscreet behaviour.

Staff in supervisory positions are required to exercise the highest level of integrity and confidentiality when dealing with information learnt about others during the course of their duties.



Recreation

There are many opportunities to learn and take part in recreational activities in Antarctica, particularly for those people staying on BAS stations. However, it is important that you understand that BAS has a 24-hours-a-day duty of care towards you whilst you are living in Antarctica. This applies whether you are a member of the BAS staff, a contractor or a visitor from another research centre. Therefore, it is necessary for BAS to take the same approach to recreational activities as it does to the work programme. You will not have the same freedom to go and do whatever you like in your 'time off' as you would in the UK.

We have established sets of regulations and undertaken risk assessments for recreational activities and those wishing to take part must follow these. Most of these are common sense and are no different to the precautions that you would take in the UK. If in any doubt, you should consult your Station Leader who will ensure that you have the advice, information and safety equipment that you require.

Images:Top: On the balcony of Bransfield House, Rothera Research Station.

Bottom: Some recreational snowboarding at Stork Bowl above Rothera Research Station.

 For more information, please visit: www.bas.ac.uk

Living in Antarctica *continued*

Living in the field

This section is primarily aimed at those personnel who will be living and working off station for extended periods. BAS employs field safety specialists (Field Guides) to ensure that off station activities are carried out safely and efficiently.

The majority of field work is undertaken using tents but small field huts are used at some locations. It may be necessary to share with a member of the opposite sex and if this is likely to cause problems it should be raised in advance.

Food comes in the form of expedition style rations and these provide around 3,500 kilocalories per person, per day.

Input into the field is usually by Twin Otter aircraft, but may be by ship for northern peninsula or island projects.

Poor weather can result in several days being spent in the tent, known as 'lie up'. Books, games and media storage devices with speakers/headphones help to pass the time. Charging will generally be using a solar panel or a small generator. Some projects may only be provided with a solar panel for charging comms equipment, so power requirements should be considered in advance of deployment.

Fieldwork advice

- Plans can change at short notice due to weather or operational constraints. The more flexible your approach, the more you will achieve
- Be prepared to use any time of day to get the project completed. Don't waste good weather
- Your Field Guide may rule that travel or work is unsafe at any time. The safety of personnel and equipment will take precedence over project completion
- You may not get on with your work colleagues all of the time. Patience and tolerance are just some of the essential qualities required for living and working in the Antarctic

Communication in the field

Field parties have a daily radio sched back to base using HF (high frequency) radio. Iridium satellite phones are used as a backup to HF radio and for data transfer. HF is the preferred method of communication.

The Iridium phone can be used for personal calls and these must be paid for by the individual. Iridium phone account cards are available from the station ICT Engineer and these should be acquired prior to deployment into the field.

Limited work and personal emails can be sent from the field but these should be kept to a minimum and limited to text only, it is not possible to send attachments to/from field email accounts. To ensure the correct equipment is available, any requests for data use in the field should be made well in advance of deployment in agreement with the Field Operations department. More information on comms matters will be given on station prior to deployment.

Time differences

During the Antarctic summer, Halley and Rothera are three hours behind GMT (as are the Falkland Islands), KEP and Signy are two hours behind and Bird Island is on GMT. Other conventions apply in winter months.

Communications

Airletters

We recognise that not all your contacts have access to computers and email. Therefore, there is a facility to send and receive messages by post. These can be emailed to Cambridge which will then be posted on to your contact, whose address must be included at the top of the page. Your contacts should post their message (clearly marked 'Personal Message' on the envelope) to Cambridge from where it will be scanned and emailed to you.

Post

Each station is able to receive and send normal post during the southern summer. Please note that the opportunities for doing so are infrequent and if you are going to Antarctica for a short time you may get home before the post arrives. Ships' personnel may send post when the ship is in port.

Stations use either British Antarctic Territory or South Georgia and South Sandwich Islands stamps, which are available on station. Post is taken out on the first available ship or aircraft and dispatched, normally through the Falkland Islands. Postal rates for letters, postcards and parcels are available on station.

Anyone with an interest in stamp collecting will have the opportunity to buy the wide selection of stamps and first day covers available at the stations and from the places through which you transit.

Your contacts will be sent ships' itineraries and contact addresses to enable them to send mail for personnel onboard or for transfer to stations. All letters and small packages should be sent via airmail. However, the route may be tortuous and post may be delivered out of sequence. Parcels will normally be treated as surface mail and may take many weeks to arrive. If you are deploying to Halley, your post should be sent to BAS Cambridge to be forwarded under BAS arrangements.

Family and Friends Liaison

BAS has a 24-hour responsibility for personnel in the Antarctic. Your contacts can call Human Resources at any time. Outside office hours there is always a member of Human Resources on call via BAS Reception (01223 221400). Both personnel in the Antarctic and their contacts will be dealt with sympathetically and confidentially at all times.

Your contacts' details are taken from your personal details form. Please ensure that you

complete all the information that is requested on this form and remember to tell Human Resources if any details change.

Personal accounts

There are no banking facilities on the ships or stations. Instead, Personal Accounts are provided for all personnel to cover any expenditure incurred whilst south. It is therefore important that you make sure that you have completed a Personal Account Undertaking before leaving.

Any purchases made at the station or on a ship will be put against this account. For BAS employees and AEP staff each month's expenditure will be deducted from your salary the following month. For visitors you are required to register card details with WorldPay in order for us to take payment of your account balance at the end of your time in the Antarctic. The WorldPay system is used to take all payments of personal account balances for those people not employed by BAS. All visitors and AEP staff are required to register card details with WorldPay prior to travelling to the Antarctic. For AEP staff these details will only be used should there be a remaining account balance at the end of your employment which cannot be deducted from your salary. Statements of your account are sent out before any payments are taken.

Health and safety and medical issues

Your health and safety

Your safety is our first priority. We are committed to providing you with a safe and healthy visit to Antarctica. But how do we achieve this? We can't make Antarctica a safe environment; that would be impossible. Our focus has to be 'safe people' with the right skills, experience and equipment, making the right decisions at the right time.

What do we need from you?

BAS needs you to take a positive and proactive attitude to your and your colleague's health and safety. We need you to understand your responsibilities and work professionally at all times. Please act in a manner that ensures the health and safety of yourself and others.

Please follow the safety information, instructions and any training you have received when you carry out your duties with BAS:

- Only use equipment and vehicles that you have been trained and authorised to use
- Question anything you are asked to do if you think it is unsafe. If it looks unsafe, it probably is
- Think before attempting to lift a heavy load, can you get help or a machine to assist with the lift?
- Follow the BAS Safe Operating Procedures when they apply
- Take responsibility for your personal health, e.g. wear sun cream, take regular exercise and use the recreational opportunities available, if drinking alcohol, drink responsibly and never whilst on duty
- Always wear the appropriate safety clothing and polar clothing, and equipment issued to you
- Report all accident, incidents, near misses or anything you feel is unsafe (AINME)

A few key terms and definitions in BAS Safety Management

Risk Assessment

A management tool and method of identifying hazards, quantifying risks, planning safety controls and setting actions for improvement.

Safe Operating Procedures (SOP)

A formally documented step-by-step guide to ensure more complex work activities are carried out safely and efficiently; often a SOP will be in place for higher risk activities.

Control of Substances Hazardous to Health (COSHH) Assessment

A method of assessing those workplace hazardous substances which pose a risk to your health. The assessment then implements the best controls to protect your health. The standard controls often seen at BAS are fume cabinets or dust extraction, safe storage, PPE, good hygiene and training and awareness.

Accident, Incident, Near Miss and Environment (AINME) Reporting

The BAS online reporting tool. All staff and visitors are required to report accidents, incidents and near misses. You will find the BAS AINME system via your local intranet.

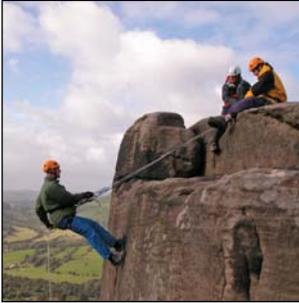
Health & Safety Intranet

An online resource where you will find current health and safety information. Health and safety documents are also kept locally.

Personal Protective Equipment (PPE)

Is a term used for all the equipment you generally wear or attach yourself to, to offer some form of safety control. Hard hats to sun hats, mukluks to steel toe caps all come under this category, including polar clothing.

Remember the best safety tool you have is your head, use it wisely!



Training

All personnel travelling south require training in order to work safely. You **MUST** attend the appropriate Antarctic Pre-deployment Training Course and first-aid training.

Job-specific training may also be required, and further training takes place on ships and stations.

Training is an ongoing process. We recognise that even people with extensive polar experience can refine their techniques through revision and refreshment. Hence, you may be required either to repeat courses at regular intervals or to undertake more advanced training.



Medical cover

In order to provide a high standard of medical care for personnel in the Antarctic, there are doctors and small surgeries onboard both BAS ships and at Rothera, Halley and KEP. Each doctor is supported through a telemedicine link and 24-hour medical cover with the BAS Medical Unit (BASMU). Signy and Bird Island have advanced first aid support.

The medical service in the Antarctic is limited by the availability of staff and facilities. The doctors undergo extensive special training before deployment, but there are no specialist hospital facilities or Intensive Care Units, and only limited surgical facilities. Circumstances may arise where conditions cannot be treated on station. Evacuation will be undertaken where possible, but this will be dependent upon the time of year, weather and logistic capability.

Personal health

Antarctica is, in general, a clean, healthy environment. However, the prevailing conditions do expose personnel to a number of hazards with which they may not be familiar. These can lead to medical problems, but are avoidable if proper precautions are taken. They include:

- Hypothermia
- Cold injury
- Sunburn and snow blindness
- Dehydration
- Carbon monoxide poisoning

Further information on all the above, and other conditions, is given in KURAFID, the BASMU first aid manual.

Images:Top: Abseiling is part of the BAS field training course, held in Derbyshire.

Bottom: Adjusting instruments high on a meteorology mast at Halley Research Station.

 For more information, please visit: www.bas.ac.uk

Environmental protection

It is a priority for BAS to minimise our effect on the environment. We aim to achieve the highest standards for our own environmental performance, set a good example to our peers and lead on Antarctic environmental policy issues.

All of our activities are assessed for their potential impact before they are allowed to proceed. There are many day-to-day measures that all personnel need to take to minimise their own impact on the environment of Antarctica and South Georgia.

Waste management

See Waste Management Handbook (Internal access via BAS Intranet: <https://ishare.apps.nerc.ac.uk/basintranet/PeopleAndTeams/environment/antarctica/waste-management-antarctica/Pages/default.aspx>).

Everybody is responsible for minimising the quantity of waste they produce, and for the proper disposal of their own waste. Before departing for Antarctica, remove as much packaging as possible (e.g. cardboard or plastic packaging from toiletries etc.). Where practicable, use rechargeable batteries.

Do not drop litter, including tea-bags and cigarette ends, on land or over the side of ships. Open burning or burying of waste is prohibited. Particular attention must be paid to the correct packaging and labelling of hazardous waste.

Soon after arriving on ship or station you will be given a tour of the facility and the waste management system will be explained in more detail. Details of waste disposal procedures are given in the BAS Waste Management Handbook and should be followed closely.

Protect Antarctic wildlife

- Do not feed, handle or disturb birds or seals, or approach too closely for photographs (stay at least 5m from wildlife). Walk slowly around them and remain quiet
- Do not use vehicles, boats, or aircraft in a way that will disturb wildlife
- Do not collect samples of plants, eggs, bones, rocks, meteorites, or fossils. No 'recreational' sampling
- Do not walk or drive over extensive areas of moss or lichen
- Do not bring non-native animals, plants or seeds to Antarctica
- Prevent light pollution – switch off external lights and close blinds

Respect protected areas

- Know the location of protected areas and any restrictions on entry into them
- If you are permitted to enter a protected area, carry the permit and management plan with you, and pay particular attention to the conditions of the permit
- Do not remove, destroy or damage Historic Sites or Monuments or the artefacts within them
- Do not build cairns

Prevent pollution

- If involved in refuelling activities, follow the established procedures. Never leave refuelling unattended. Report any spills immediately to the Station Leader
- Do not pollute lakes or water courses (this includes urinating!)
- Do not paint or engrave names or graffiti on rocks, buildings or other structures
- Do not collect souvenirs of biological (e.g. plants), geological (e.g. fossils) or human origin
- Do not flush anything (other than pee, poo and loo roll) down the toilets on stations or ships
- Take only environmentally benign toiletries – no microplastics in scrubs or toothpastes, avoid harsh chemicals



Reduce energy use

- Everybody on station can assist in minimising the quantity of fuel used and the related carbon emissions produced:
 - Switch off all lights, computers and other equipment when not in use
 - Unplug chargers when not in use and use USB chargers linked to computers wherever possible
 - Unplug laptop power packs when not in use
 - Do not bring non-essential energy-using equipment to stations
 - Use the radiators' valves (TRVs) to control the temperature of the room you are in. A recommended bedroom temperature would be at setting 2 (18°C) while a recommended living room temperature would be at setting 3 (20°C). Make sure the radiators and radiator valves are not blocked or covered by furniture or clothes.
 - Remember to turn down the radiator valve when leaving the room or turn it off completely when opening the window.
 - Special attention needs to be given to workshops with electric heaters. Do not leave electric heaters on when there is no need. Check fridge and freezer temperatures for overcooling
 - Only take brief showers (3-4 minutes) – don't leave taps running, only wash full loads of clothing and use tumble dryers only when necessary, i.e. when no drying space is available. Please report any leaks you see, no matter how small
 - Avoid unnecessary journeys in vehicles (skidoos and gators)
- Fresh water production, hot water generation and waste water treatment are a significant use of energy on stations.

These may seem like small measures, but with everyone working together these steps can soon add up to significantly large energy, carbon and cost savings.

Images: Top: Solar panels on Bransfield House at Rothera Research Station, Antarctica.

Bottom: Southern elephant seals at King Edward Point, South Georgia.

Communications and media

Recognising the crucial role that media play in shaping public attitudes to science, BAS runs a well-established media relations programme that includes visits to Antarctica. All media relations are co-ordinated through the Communications Team. If journalists contact you directly please refer them to the BAS Press Office in the first instance.

The Press Office will brief you and help you prepare for interviews. Your contacts are Linda Capper (*lmca@bas.ac.uk*), Athena Dinar (*amdi@bas.ac.uk*) and Sarah Vincent (*sarnce@bas.ac.uk*).

BAS has an educational programme which is co-ordinated through the Communications Team. We would encourage any support for schools or educational activities during your time with BAS and ask that you contact us with any details so we can offer our experience and support and keep an accurate record of BAS staff involvement. Contact: Kim Quince (*kyq@bas.ac.uk*).

Web diaries, blogs and social networking websites

The availability of 24-hour internet access has given Antarctic staff the opportunity to keep in touch with families and friends and to reach out to the global online community via social media. Whilst this is a great way to communicate what BAS does through the personal experiences of our staff, there can be pitfalls for 'authors'. Please seek advice from your Station Leader or the Press Office.

Sponsorship and endorsement

It is important to be aware that sponsorship and product endorsement is a potentially sensitive area. There are Government guidelines that must be strictly followed. Sponsorship comes in many forms – from the support of media or educational campaigns (either financial or 'in kind') to practical help from partnerships. For example, companies often offer free supplies or equipment in exchange for publicity. Suppliers of goods or equipment purchased by BAS often seek to publicise their products in the trade press. The Press Office must approve all text written by these companies to ensure propriety and avoid direct endorsement of products.

Individual members of staff must not seek sponsorship, product endorsement or offer public relations opportunities without first consulting their Line Manager and the Head of Communications.

Human Resources policies



BAS and NERC have a series of policies that apply to the conduct of its staff. Whilst they are aimed directly at NERC employees, they may also be taken in spirit to contractors and visitors. Any person in serious breach of regulations will be removed from the Antarctic at the first opportunity, regardless of their affiliation, and the particulars handed on to their own employers for consideration.

These policies are detailed in NERC Policy Notices on the NERC intranet and are available on all ships and stations or from Human Resources in Cambridge. Before leaving, you should make sure you familiarise yourself with policies on:

- BAS Alcohol and Drugs Policy
- Research Council Health Promotion Policy
- Disciplinary procedures
- Grievance procedures
- Research Council Equality and Diversity Policy

Station Leaders and Masters are sworn in as magistrates for British Antarctic Territory (BAT). They also have ultimate responsibility and authority for all activities within their facility and associated areas. All personnel should be aware that whilst they are territorially outside the UK, UK law applies unless a specific alternative BAT statute is in force. Personnel may be prosecuted for any breach of the law as if they were in the UK and either extradited or referred to a higher court for trial.



Images: Top: *Filming for BBC Horizon at Halley VI Research Station, Brunt Ice Shelf, Antarctica.*

Bottom: *RRS Ernest Shackleton at Rothera Research Station, Adelaide Island, Antarctica.*

Further information

The BAS public website offers a wide range of information on BAS activities and science – regular diaries from stations and ships are particularly popular. BAS staff both at Cambridge and on ships and stations have access to the internal intranet, which holds much practical guidance and links to the websites of BAS groups, services and resources.

Public site: www.bas.ac.uk

Intranet: <http://basweb.nerc-bas.ac.uk>

Details of BAS science can be found in the publication 'Polar Science for Planet Earth'. Copies are available on all ships and stations and on the BAS website and intranet.

BAS publications: www.bas.ac.uk/data/our-data/our-publications

The BAS Library provides access to the resources of the NERC Library Service and to online journals and web services. The BAS Library is a scientific library but also holds public interest items. Holdings are at Cambridge and on the ships and bases. Enquiries can be sent to: baslib@bas.ac.uk

The BAS Archive Service manages scientific, logistical and administrative records of all aspects of BAS's activities from the 1940s to the present day. These can be invaluable in helping staff to prepare for fieldwork by finding out what has been done in the past and can also provide recreational material.

The Archives database is not currently available online, but can be accessed in the Archives Office, rooms 206-207. Archives staff can also provide information from the database remotely. Enquiries can be sent to: basarchives@bas.ac.uk

The Archives Service is also responsible for records management within BAS, including implementing the NERC Records Management Policy, with the aim of ensuring effective storage, retrieval and disposal of both electronic and physical business records. The Archive Manager is the BAS Freedom of Information Officer.

The Polar Data Centre provides data management support for NERC-funded polar scientists; this includes data and information services for operational support, science delivery and long-term data management. BAS also holds collections of rocks, fossils, zoological specimens and a herbarium. Enquiries can be sent to polardatacentre@bas.ac.uk

Data and collections: www.bas.ac.uk/data/our-data

The Mapping and Geographic Information Centre (MAGIC) provides maps and other geographic information to workers at BAS; a map catalogue is available online. MAGIC also hosts the Antarctic Place-Names Secretary (of the Antarctic Place-Names Committee – APC) who maintains a gazetteer and place-names maps for all UK approved names within British Antarctic Territory.

MAGIC: www.bas.ac.uk/team/operational-teams/operational-support/mapping-and-geographic-information

APC: www.bas.ac.uk/about/antarctica/geography/antarctic-place-names

The Information, Communications and Technology (ICT) group provides the computing and communications infrastructure for BAS; their wiki site provides essential information for new starters.

ICT wiki: <http://basweb/its>

Contact information

This page can be cut out and given to family or friends.

Email

Email is the best and most reliable way to contact your friends and family working for BAS. All BAS staff will get a BAS email account. Your contact should be able to provide you with this once they arrive on station. Most people have their own personal email address and this will also work but we would encourage you to use their BAS email address. Please do not send large email files as this can clog up the network.

Non-BAS staff will not be given a BAS account, and will need to use a web-based personal email account.

Phone

Your friends and family will be able to call you from the station or vessel they are working on, this will be a Cambridge number and they will be charged at a local call rate.

Mail

Mail for the Antarctic stations (Rothera, Halley, Bird Island and Signy) is only delivered during the Antarctic summer; between November and April. King Edward Point (KEP) can have mail delivered throughout the year but in the Antarctic winter deliveries will be very sporadic.

Ship itineraries will let you know when the ships are due to leave ports or call en route to the stations. Links to the latest itineraries can be found on the ship pages of the BAS website: www.bas.ac.uk/polar-operations/sites-and-facilities/facility/lrrs-james-clark-ross and www.bas.ac.uk/polar-operations/sites-and-facilities/facility/lrrs-ernest-shackleton.

BAS recommends that you direct all mail to the Antarctic through the Falkland Islands using the address below:

Name and Station/Vessel

British Antarctic Survey

Port Stanley

Falkland Islands

FIQQ IZZ

South Atlantic

Human Resources Support

At whatever hour in any situation of domestic crisis or other emergency, do not hesitate to contact any member of the Human Resources team.

This can be done both during office hours and outside of office hours by dialling via British Antarctic Survey Reception on 01223 221400. A member of the HR team is on call 24/7, 365 days a year. Arrangements can be made for messages to be passed quickly over our communication systems with the stations and ships.



**British
Antarctic Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

BAS offices and research stations

NERC Ny Ålesund Research Station

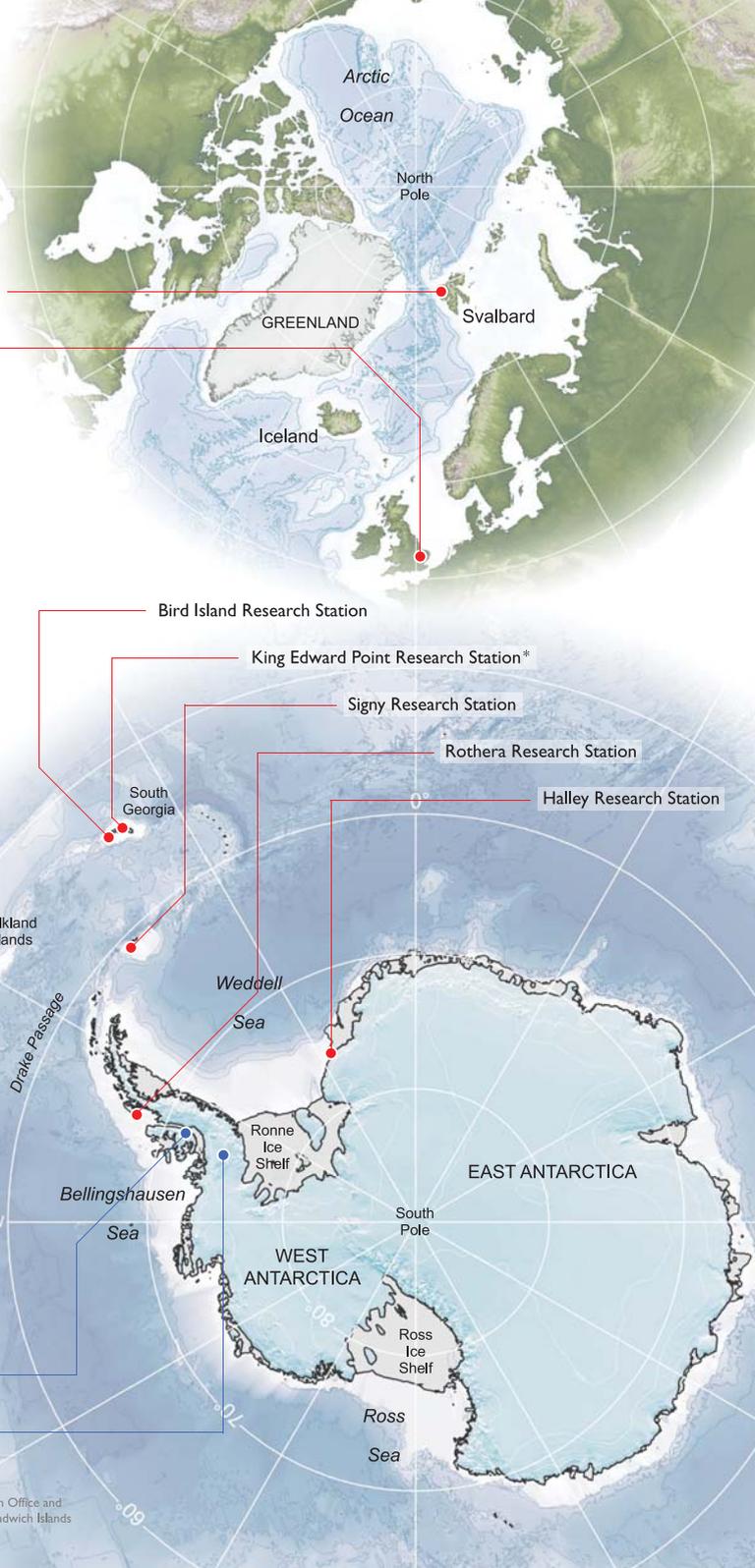
BAS Cambridge

BAS Stanley Office

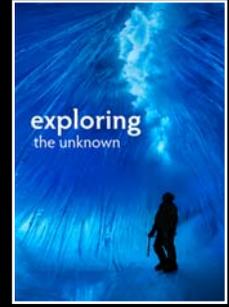
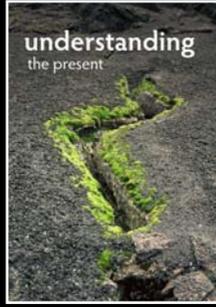
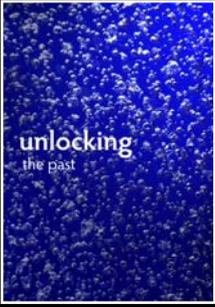
Punta Arenas

Fossil Bluff Field Station

Sky-Blu Field Station



* Run on behalf of the UK Foreign and Commonwealth Office and the Government of South Georgia and the South Sandwich Islands



British Antarctic Survey (BAS), an institute of the Natural Environment Research Council (NERC), delivers and enables world-leading interdisciplinary research in the Polar Regions. Its skilled science and support staff based in Cambridge, Antarctica and the Arctic, work together to deliver research that uses the Polar Regions to advance our understanding of Earth as a sustainable planet. Through its extensive logistic capability and know-how BAS facilitates access for the British and international science community to the UK polar research operation. Numerous national and international collaborations, combined with an excellent infrastructure help sustain a world-leading position for the UK in Antarctic affairs.

NERC is part of UK Research and Innovation www.ukri.org

www.bas.ac.uk



**British
Antarctic Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

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