



Operation  
Wallacea

Conservation research through academic partnerships

Information for Local Education Authorities on the  
Health & Safety measures taken to safeguard the  
Operation Wallacea expeditions to  
South Africa and Mozambique 2011

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## **1. Introduction**

The aim of this document is to highlight the procedures and protocols in place for school groups who are involved with Operation Wallacea research expeditions in South Africa. It is intended to fulfill the criteria set by the local education authorities with regard to overseas expeditions and is based on the information requirements set out in *Guidelines for Educational Visits and Outdoor Education Activities 2004*, produced by Surrey County Council. The Surrey CC document in turn is based on the Department for Education and Employment *Health & Safety of Pupils on Educational Visits (1998)* and on the August 2002 document produced by the Department for Education and Skills entitled *Standards for LEA's in Overseeing Educational Visits*. As with all these documents the aim is to ensure that there are adequate preparations and safety systems in position to ensure that best practice with regard to Health & Safety issues is being used in the planning and implementation of the expeditions.

## **2. Structure of the expeditions**

Operation Wallacea are co-ordinating a biodiversity research programme in the Mdluli Concession in Kruger National Park, South Africa and a similar biodiversity research programme in the Manyeleti Game Reserve adjacent to the Kruger National Park. In addition there is a dive training and reef monitoring programme for the East Africa reefs in Sodwana Bay, South Africa, and Malongane Camp at Ponto do Ouro, Mozambique. Our partners in South Africa (Wildlife and Ecological Investments) organise the skills training for the surveyors and the logistics for the surveys, which are completed by university academics with help from university students and the school sixth form groups. Similarly, our partners in Mozambique are South Africa based (Reef Divers), and they organise the skills training for surveyors and the logistics for the surveys at the Malongane site.

The school groups arrive at Johannesburg airport on all the expedition options. If they arrive the day before their expeditions starts they are recommended to use the Airport Lodge. This Lodge is entirely self-contained with walled grounds and gardens and is a safe location for the students to spend a day or so before the expeditions start or whilst waiting for return flights. On booking the school can arrange for the Lodge to pick up the group direct from airport arrivals in small coaches.

On the Friday before the expedition start date the groups are picked up by Atlas Coaches and transferred to either the Nzikazi Wilderness Camp at Pretoriuskop for the expeditions in the Mdluli Concession or the Manyeleti Main Camp for the Manyeleti expeditions. Accommodation at the Nzikazi Camp is in twin bedded dome safari tents with shared ablution blocks, and in dormitory style accommodation, again with shared ablution blocks in Manyeleti. The Nzikazi camp is inside the Kruger

Park, which contains a high density of game species including lion, rhino, elephant, buffalo and leopard. The camp grounds are fenced (3m electric fencing) and the students stay in 2 person dome safari tents.

For the schools we will be dividing their time into 6 half day field sessions and 6 half days in the camp. We will be employing a lecturer to give the groups the class training and at any one time there will be half the group in the field. The six field practicals will comprise 3 bush training skills (trekking, dangerous game encounters x 2, 1 in a vehicle and 1 on foot), bird diversity surveys by point counts (on foot with a vehicle close by), invertebrate pitfall trapping (on foot with a vehicle close by) and elephant habitat damage surveys (on foot with a vehicle close by).

At the end of this first week the school groups are moved in small coaches to Sodwana Bay (10 hours from Mdluli, 12 hours from Manyeleti) or the Mozambique border to transfer to the Malongane site (11 hours from Mdluli, 13 hours from Manyeleti). At Sodwana the students stay in 2 man dome safari tents and there is a shared toilet and shower block nearby. Accommodation is similar at Malongane, where students are in tents with separate ablutions blocks. The students at the marine sites spend a week completing a PADI Open Water dive training course or doing a reef ecology course where they will have daily lectures and in-water tuition on how to identify reef organisms. At the end of this week they are transferred by coach back to Johannesburg airport.

### **3. Risk assessments**

A thorough assessment of all camps and activities are completed before the start of the season and reviewed throughout using on-site audit forms designed to check that the suggested remediation measures to reduce risk are being fully implemented. Risk assessments are completed for each site as well as generic risk assessments for each activity. These risk assessments are published on the website and are available by hard copy if requested.

### **4. Training before the expedition**

Operation Wallacea staff work closely with teachers to ensure that pupils are ready and prepared for the expedition abroad. Various joint meetings take place with our schools team and the teachers regarding facilities on site and skills required. A training session is arranged with each of the schools to explain in detail what the students will be doing on the expeditions and how to prepare for their expedition.

Operation Wallacea have a detailed web site containing full details of the facilities at each site, the equipment that students will require, and information that teachers or students may find useful in preparing for travel to South Africa. The Operation

Wallacea staff are always available to talk to any student, parent, or teacher, who have questions about aspects of the expeditions and the preparation required.

## **5. Designated leaders and competencies**

### ***Role of the teachers***

The teachers accompanying the students are responsible for ensuring the pupils' travel arrangements from the school until the expedition start time at the camps. Once the expedition starts the teachers will be travelling with the group and responsible for pastoral care issues and checking that the safety procedures run by Operation Wallacea are working in full. At the end of the expeditions the teachers and the group are transferred to Johannesburg airport by 7pm on the Friday and they are responsible for accompanying the group back to the UK.

### ***Role of Operation Wallacea staff***

#### *Senior Operations Manager*

The Senior Operations Manager is responsible for the overall running of the expeditions and for the safety of the volunteers and staff working on the project. He has various staff assisting in different aspects of the project. For the 2011 field season Kathryn Knights will be fulfilling this role. Kathryn is a Research and Operations Manager for Operation Wallacea, she has worked in remote parts of Africa for many years and oversaw the running of the KwaZulu Natal projects for the 2010 OpWall season. It is the responsibility of the Operations Manager to ensure that the correct level of leadership is provided for each of the groups and to check that the designated leaders have the requisite qualifications and/or experience. The Emergency Incident Coordinator will be Tom Avent from WEI. Tom has been working with volunteer groups in Africa for the last 2 years and will be travelling around the various sites throughout the season.

#### *Leadership during transfers from the airport to the Game Lodge at the start of the expedition*

The group will be met at the airport by a representative from Atlas Coaches who will take the group to a central holding area in the retail section of Johannesburg International Airport. The representative will then give the group a brief health and safety orientation whilst waiting for any other volunteers to arrive (until approximately 1030 hrs). The group will then be led to their bus, which will take them from Johannesburg to their first night accommodation in Nzikazi and Manyeleti.

The transfers will be run by Atlas Coaches, a reputable coach company. Drivers have at least 3 years professional driving experience, are qualified as "Professional Passenger Couriers", with the appropriate licences and permits, and each perform

annual medical tests to ensure health and safety regulations are met. They are registered members of SATSA (South African Tour Operators Association) and ASACO (Association of South African Coach Operators), and have comprehensive insurance (covering passenger, general, and motor 3<sup>rd</sup> party liability) of 100 million Euros.

#### *Leadership at Manyeleti*

The OpWall representative at Intibane who will meet the incoming groups is Dr Stewart Thompson from Oxford Brookes University. Dr Thompson has led student groups on field courses for over 10 years. Carys Edwards who has spent 2 research seasons with OWall in South Africa will be responsible for completing all the training in the operating and safety procedures at the camps. In addition she will be auditing the safety procedures for the camps and the various activities.

#### *Leadership at Mdluli*

The Op Wall representative at Mdluli will be Javier Marin from the US OpWall office. Javier has been leading groups of school and university students at various OpWall sites over the last 2 years. He will be responsible for meeting the incoming groups and completing all the training in the operating and safety procedures at the camp. In addition she will be auditing the safety procedures for the camp and the various activities. Tom Avent will also be at the Mdluli camp from time to time to provide additional support.

#### *Leadership at Sodwana Bay*

The OpWall representative at the Sodwana marine site will be Gwen Roberts, from the OpWall UK office. Gwen has been working for OpWall for 3 years and oversaw the running of the Sodwana programme in 2010. She will be responsible for meeting the incoming groups and completing all the training in the operating and safety procedures at the Camp. In addition she will be auditing the safety procedures for the camp and the in-water activities.

#### *Leadership at Malongane*

Leadership at the Malongane site will be provided by Peter Herbst who has run dive based expeditions in southern Africa for over 20 years.

#### *Leadership on transfers between bush and marine sites*

The coaches transferring groups from Manyeleti and Mdluli Camps will be led by Carys Edwards. Carys will accompany the groups down from Manyeleti and the coaches from Mdluli will rendezvous with the Manyeleti coaches at Nelspruit. The coaches will then travel in convoy with Carys in the lead coach to Sodwana Bay and she will carry on with the group heading for Mozambique and stay overnight with the group in a lodge near the Mozambique border where they will be met by Peter Herbst and take over the border first thing in the morning. Carys will return to Manyeleti with the returning coaches.

#### *Leadership for trekking and foot based surveys*

Every group leaving a camp must be accompanied by at least one FGASA (Field Guide

Association Field Guide) qualified guide with rifle handling competency. There is one Field Guide for every group of 8 students when vehicle based, and 2 for foot based activities.

## **7. Medical procedures**

### *Information and records*

All school staff and pupils are required to complete an Operation Wallacea medical questionnaire prior to their departure and those participants who are diving during the expedition will be required to also complete a PADI medical questionnaire according to the rules and regulations set out by PADI. All volunteers are required to get their GP to sign the declaration on the reverse of the form if they have answered yes to any of the questions. These forms are required to be completed and returned to the Operation Wallacea Medical Coordinator at least 3 months in advance of the expedition. At a meeting with a consultant expedition doctor prior to the start of the expeditions all the medical forms are reviewed and any potential medical issues that could restrict sites or activities for individual pupils or staff are identified.

On site medical information about each pupil and teacher is provided to the nominated First Aider at the first camp at which they arrive. All medical problems, illnesses, injuries and near misses are recorded at each of the sites. At the end of the season, these data are collated and a health and safety report is completed and published on the website. This report classifies incidents into 7 categories and allows comparison between the expeditions and other activities. The policy of publication of the accidents and illnesses recorded on the expedition is a unique aspect of the Operation Wallacea expeditions and helps ensure the procedures on site are followed fully.

### *Medical staffing*

For details see the Medical and Evacuation Procedures report on the web site. In cases where there is a high quality private hospital in close proximity of the expedition location then a FGASA qualified First Aider will be nominated as the Medical Officer at each of the sites. Each group of 8 students will be working with a qualified FGASA guide who has First Aid training so there is plenty of additional medical support at each of the sites.

There is a doctor and clinic close to the Sodwana site throughout the expeditions to deal with non-emergencies. Qualified medics will be on site for the whole season in Mozambique to provide medical care and emergency care in preparation for evacuation in cases where this is necessary.

### *Medical facilities*

Medical kits are provided by WEI at each of the sites and for each of the groups leaving camp for field activities. The contents of these kits are based on the Royal

Geographical Society recommended kit lists, and are approved by a consultant doctor with extensive expedition medicine experience prior to the expedition. They are designed taking into account the level of medical care available and ease of transfer to a high quality private hospital.

## **8. Operating procedures**

There are detailed operating procedures for all aspects of expedition management. The main measures used to minimise risk are included in the risk assessments which are published on the web site, and are summarised here if they are not included in other sections of this report:

### *Groups leaving camps*

At all camps there is a timetable system operating, where all groups leaving camp are recorded. The group leader has to take a radio so they can communicate with the main base, a First Aid kit and ensure all of the group have appropriate attire (eg hats, boots) and have enough water for the trip. Each group has to be accompanied by a FGASA qualified armed guard. No school group members (pupils or teachers) are allowed to leave any of the camps unless this procedure is followed.

### *Trekking*

The armed guard takes the front of the trek line with the slowest group member immediately behind and the fittest group member at the end of the line followed by the group leader. A vehicle remains on standby close to the group at all times. When a vehicle is not used and the group walk from the camp then an additional armed guide takes the rear position on the walk.

### *Diving*

All diving follows protocols that are more conservative than PADI procedures. All training dives are completed with a ratio of 1 Dive Instructor plus 1 Dive Master to a group of no more than 8 students. All qualified divers are accompanied by a Dive Master at a ratio of 1:6. Maximum diving depth is 18m, maximum dive time is 50 minutes and all divers have to perform a 5 minute safety stop at 5m on the way up. Minimum surface interval time is 3 hours. No night diving is allowed for school group members unless they are already a qualified Advanced Open Water diver. If one or more of the group wish to undertake the Advanced Open Water dive training course they will need to do one dive to no deeper than 30m as apart of the course. This dive would need to be completed as the first dive of the day and only one additional dive would be permitted that day. These restrictions mean that all divers are well within the limits allowed for no-decompression recreational diving by PADI.

### *Snorkelling and swimming*

No snorkelling or swimming is allowed unless accompanied by a Dive Master and carrying an inflated SMB. The Dive Master will ensure the group stop every 2 minutes and look around them for boats.

### *Alcohol*

Alcohol is available at all sites. However, whilst the school group is under the care of Operation Wallacea no school group member under 18 (the legal age for drinking alcohol in South Africa) is permitted to consume alcohol. As camps are in a dangerous game environment, a no-alcohol policy is advised to groups.

## **9. Emergency procedures**

This section summarises the emergency procedures report which is a much more detailed description of the procedures used at each of the sites.

### *Training of staff*

Carefully planned evacuation protocols are in place in all of the sites in South Africa and are designed with the worse case senario in mind. All staff have training on evacuation procedures, and protocols are rehearsed prior to the expeditions starting.

### *Emergency levels*

Operation Wallacea has 3 levels of evacuation as follows: **Emergency** (requiring the fastest possible transfer, usually by air, from the various sites to the Bay hospital or recompression facilities in Richards Bay for the marine projects and Nelspruit hospital for the Kruger projects), **High Priority** (requiring the patient to be moved at the fastest speed possible by land and/or sea to the relevant hospital facilities) or **Medium Priority** (requiring the patient to be moved as quickly as possible without the need to hire special vehicles or boats to the nearest appropriate medical facilities). Details of the evacuation procedures are included in a separate report on Medical and Evacuation Procedures for South Africa.

In all Emergency or High Priority cases where a patient is being transferred to medical facilities they are accompanied by a relevant First Aider or someone appointed by the medical officer as fit to accompany the patients. In the case of a Medium Priority evacuation (e.g. transfer to a hospital for a confirmatory X-ray) another suitable staff member other than a First Aider may be nominated to accompany the patient.

## **10. Insurance**

Operation Wallacea has bought medical and evacuation insurance for all participants to a value of £1 million and the evacuation support is provided by CEGA. CEGA have been provided with maps of all the sites at which the students will be working, details of the evacuation routes and air ambulance and the hospitals that the patients would be taken to from different sites. This is so that the insurers can make prior agreements with the air ambulance and hospital so that in the unlikely event that they will be needed that the evacuation can proceed promptly with no delay.

In addition to this Operation Wallacea have comprehensive combined liability insurance with up to £10,000,000 for public/product liability.

## **11. Child Protection procedures**

We endeavour to ensure that all school students participating in our activities are safe in accordance with the Protection of Children's act 1999. This is done a number of ways:

### *Supervision and accompanying adults.*

Operation Wallacea offer a free teacher place with every 10 students thus giving an automatic ratio of at least 1 to 10 (in line with the DfES). For each activity provided by Operation Wallacea in the field the following ratios apply:

- 1 to 6 ratio for participating in other biodiversity survey activities (plus at least one guide)
- 1 to 8 ratio for field survey work (plus at least one scientist)
- 1 to 6 ratio for training dives (plus a Dive Master)
- 1 to 6 ratio for dives with qualified divers

These ratios do not include other supervisory staff such as guides, medics or the schoolteachers. Overall there is an approximately 1 to 2 ratio of adult staff to students on site providing a very high level of supervision. Teachers are asked to accompany students on as many activities as possible.

### *Minimum number of students*

No school pupil is allowed to participate in any activity without at least one other pupil from the school or a teacher being present.

### *Criminal Records Bureau Checks*

There are over 100 staff working on the survey expeditions as well as a further 100 university students. Many of these staff and some of the students are from countries where no CRB check facilities exist or spend a significant part of each year

outside the UK, so CRB checks for all on-site personnel are not possible. The strategy used by Operation Wallacea therefore is to ensure that at all UK-based employees of Operation Wallacea have enhanced CRB checks, and that in all locations where pupils are sleeping that there is a CRB checked staff member in attendance. The accompanying teachers are already CRB checked and there will always be an accompanying teacher at any overnight location.

### *Codes of Practice*

All Operation Wallacea staff in the field are required to sign a code of conduct before they are employed. The Code of Conduct commits each staff member to not entering into relationships with school volunteers as well as conformity to restrictions on alcohol use and a complete ban on drug abuse. Operation Wallacea will dismiss staff that do not follow the code of conduct.

### *Complaints procedure*

Any complaint by a school pupil about inappropriate behaviour from any staff member or other student will be treated as a formal complaint and documented. The accompanying teacher will be informed immediately and together with the senior Operation Wallacea staff member on site will investigate the complaint. If the complaint is upheld then any individuals involved will be dismissed from the expedition and a police file created if the incident was serious enough.

## **12. Communications**

There is mobile phone or radio coverage throughout the parks and so communication difficulties are limited. All teams in the bush will have a mobile phone or radio and will be able to have direct contact with the main base at all time. Additionally most vehicles in the bush are equipped with radios again with direct contact to the main base and other vehicles in the vicinity.

Boats at marine sites are in radio communication with the main base.

There is a 24-hour emergency officer based in the UK office in the event of an emergency message needing to be passed on to the field. The direct numbers for the key staff in South Africa during the expeditions are published on the web site shortly before the start of the expeditions.

## **13. Transport**

All transport arrangements conducted by Operation Wallacea in the field are organised and reviewed by our partners WEI and are subject to stringent protocols.

Transport used to move pupils from various sites have been assessed by the Senior Operations Manager and the team in South Africa and only reputable companies with an excellent safety record are used.

### *Buses*

Bus transport will be organised through WEI, who are described earlier in this document. All buses are checked before use in compliance with national legislation for meeting health and safety standards, and have drivers with the full set of required qualifications (e.g. "Professional Passenger Courier" qualifications).

### *4x4 trucks*

All vehicles are subject to pre-departure checks for each journey. 4x4 vehicles will only be used for driving within the reserves and parks, and so the risks faced by driving on public roads will not be present.

### *Dive and research boats at the Marine Sites*

There is a whiteboard system operating at both sites, so that all boats leaving the centres have to sign out and complete various safety checks (presence of life jackets, oxygen, First Aid kits, radio test etc). The whiteboard contains details of where each boat has gone and the estimated return time. The Centre is in radio contact with each of the boats.

## **14. Accommodation and camp security**

### *Mdluli*

The volunteers at Mdluli will be based at the Inzikazi Wilderness Camp inside the Concession and will be staying in safari tents. The dome tents sleep 2 people comfortably and have teacher accommodation located nearby. There are communal washing toilet blocks with hot water. There is a central dining area where all meals are taken. All students are made aware of where each staff member is located including medical staff in case of the event of an emergency during the night. Added security includes an armed guard ranger at the camp 24 hours a day. Note the camp is inside a fenced reserve containing the big 5 dangerous game species and with numerous armed guards patrolling the reserve.

### *Manyeleti*

The volunteers at Manyeleti will be based at the main accommodation centre inside the reserve and will be staying in dormitory blocks. The dorms sleep 20 people comfortably with teacher accommodation located in an adjoining room. There are

communal washing toilet blocks with hot water. There is a central dining area where all meals are taken. All students are made aware of where each staff member is located including medical staff in case of the event of an emergency during the night. Note the camp is fenced in a reserve containing the big 5 dangerous game species. There are armed guards patrolling the camp.

#### *Sodwana Bay*

The volunteers at Sodwana Bay will be based at the Day in Africa Lodge inside the Isimangaliso Wetland Park reserve and will be staying in tents. The teachers stay in cabins adjacent to the camp site. There are communal washing toilet blocks with hot water. There is a central dining area where all meals are taken. All students are made aware of where each staff member is located including medical staff in case of the event of an emergency during the night. The accommodation is surrounded by a secure fence.

#### *Malongane*

The volunteers at Malongane will be staying in tents. There are communal washing toilet blocks with hot water. There is a central dining area where all meals are taken. All students are made aware of where each staff member is located including medical staff in case of the event of an emergency during the night.