



# SOUTH EASTERN REGIONAL COLLEGE PROJECT INFORMATION PACK



## Waterberg Biomonitoring Programme



**GLOBAL** reach. **ADVENTURE** for all. **PROJECTS** to inspire.

# TRIP OVERVIEW

AFRICA

## South Eastern Regional College– Booking Reference 4791

### Travel Dates:

7<sup>th</sup> June 2026 – 21<sup>st</sup> June 2026

### Flights:

Flight No	Flight Date	Dept.	Dept. Time	Arr.	Arr. Time
BA1395	07/06/2026	Belfast (BHD)	13:00	London Heathrow (LHR)	14:30
BA55	07/06/2026	London Heathrow (LHR)	19:05	Johannesburg (JNB)	07:00 + 1 Day
BA54	21/06/2026	Johannesburg (JNB)	21:15	London Heathrow (LHR)	07:30 + 1 Day
BA1394	22/06/2026	London Heathrow (LHR)	10:15	Belfast (BHD)	11:30

\*Always check the flight timings on your final documents

**Baggage Allowance** – 1 piece checked baggage @ 23kgs, 1 piece hand baggage max dimensions 56x45x25cm

### Project:

Waterberg Biomonitoring Programme



**AFRICA**

# PROJECT LOCATION

The Waterberg  
overview

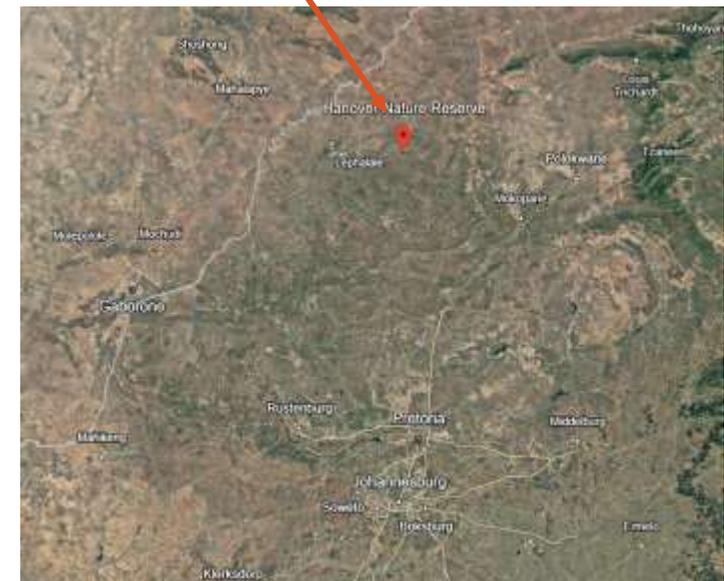
# ABOUT THE WATERBERG

AFRICA

## Location

The Waterberg conservation research programme is based in the Waterberg region of South Africa, which is a pleasant 4.5-hour drive from Johannesburg making this project one of the most accessible premier **malaria free** wilderness areas in the country. It borders the Waterberg Biosphere Reserve which was officially declared by UNESCO in 2001 and currently covers an area, in excess of, 4000 km<sup>2</sup>.

The Waterberg region is famed for its mountainous terrain that is dissected by deep valleys and kloofs while flat plateaus characterise most hilltops.



# ABOUT WELGEVONDEN

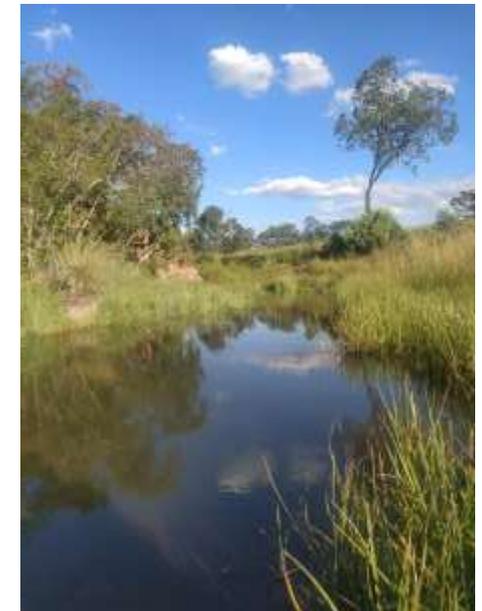
AFRICA

## Welgevonden Game Reserve

Welgevonden is home to over 50 different recorded mammals, including the Big Five. There are rare and cryptic species too, such as brown hyena, aardwolf and aardvark.

The savanna bushveld abounds with antelope from the largest eland to the diminutive duiker with large herds of plains zebra and blue wildebeest as the most abundant herbivores. Apex predators including lion, hyena and cheetah as well as small carnivores like the black-backed jackal are never far. Megaherbivores; both rhino species and elephant thrive and have important roles in the ecosystem. It is the diversity of habitat on the reserve that encourages such a wide range of wildlife including over 300 bird species and rare reptiles.

At 36,000ha in size, Welgevonden Game Reserve lies in the Waterberg plateau, about 250km north of Johannesburg. Welgevonden protects a unique and special environment and the reserve's management is deeply committed to ongoing conservation research and development.



# ABOUT THE WATERBERG

AFRICA

## Hanover & SwebeSwebe Nature Reserve

### A Hub for Research, Conservation and Education

Nestled in the heart of the Waterberg region, the Waterberg conservation research programme is a pioneering conservation initiative dedicated to preserving South Africa's rich biodiversity while fostering ecological research and community engagement. Covering over 2,000 acres of pristine wilderness, this collaborative project works in unison with the neighbouring SwebeSwebe Wildlife Reserve. Together, these areas form a unified conservation space of 15,000 acres, removing barriers to wildlife movement and creating an uninterrupted haven for flora and fauna.

Our mission extends beyond preservation. We believe in taking direct action to safeguard natural ecosystems, which is why we've invested in integrating cutting-edge conservation technologies, enhancing infrastructure and building strong partnerships with local and international stakeholders. The reserve is a hub for international academic research and student engagement, offering participants the opportunity to contribute meaningfully to conservation while gaining hands-on experience in a diverse ecological setting.



A large rhinoceros and its calf are the central focus of the image, standing in a lush green savanna. The rhinoceros is on the right, and the calf is on the left, both facing towards the left. In the background, there are several tents with green roofs and a dirt path, suggesting a conservation camp or research station. The overall scene is bright and sunny, with a clear sky and vibrant green grass.

**AFRICA**

## **ABOUT THE PROJECT**

Our conservation work  
in more detail

# ABOUT THE PROJECT

AFRICA

## Your Two Project Locations

Your Waterberg conservation research programme is split between two locations, both in the Limpopo province of the Waterberg, in South Africa.

You will first spent time at Welgevonden Game Reserve to participate in Research and Ecological Biomonitoring before before travelling North to SwebeSwebe to get involved in conservation and research activities.

Project locations and duration are as follows:

### Itinerary

#### **7 Nights**

Welgevonden Research and Ecological Biomonitoring, Welgevonden Game Reserve

#### **7 Nights**

SwebeSwebe Conservation Research, Hanover Nature Reserve, SwebeSwebe Game Reserve



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# **ABOUT THE PROJECT: WELGEVONDEN GAME RESERVE**

Our conservation work  
in more detail

## Welgevonden Biomonitoring Overview (7 Nights)

Welgevonden Game Reserve's conservation management practices are arguably some of the best in the world. This is largely due to management's continued efforts in obtaining robust data on the ecological functioning of the Reserve, ensuring a thorough understanding of ecosystem dynamics within the protected wilderness area. This is where the Biomonitoring Programme comes in. The programme was established in 2015 and has since been responsible for the collection of research data and dedicated monitoring of fauna and flora on the reserve. From monitoring herd dynamics and animal condition, to assessing the state and ongoing changes in the ecosystem, the programme offers participants a truly hands-on experience in the management of a world-class, Big Five reserve. All this data is then analysed and processed by the Research Ecologist and used to inform management decisions.

If you are looking to gain some experience in ecological monitoring or are simply looking for a way to get out into the bush in a useful and meaningful way, becoming a participant in the Welgevonden Biomonitoring Programme is the way to go!



# ABOUT THE PROJECT

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## Your Conservation Programme – Biomonitoring Research Team

As part of your project, you will be heavily involved with the day-to-day field work conducted by the biomonitoring team. Activities include, but are not limited to:

- Game transects – estimates of numbers, body condition and herd structure
- Telemetry tracking of collared animals
- White Rhino monitoring and condition scoring
- Camera Trap Surveys (Black Rhino and other cryptic animals)
- Nocturnal species ID and night game drive
- Predator monitoring
- Mortality/kill recording
- Visit temporary holding bomas (enclosures)
- Animal tracking
- Waterberg Wild Dog Project
- Collecting faecal samples for research
- Local wildlife auction (Only on certain weekends)
- Alien plant species eradication
- Vegetation Condition Assessment
- Waterberg Biodiversity Project Data Collection with experts in their fields

**It's important to remember that wildlife does not work to an agenda, therefore activities may change at short notice!**

# ABOUT THE PROJECT

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## Research and Ecological Biomonitoring

**Rhino monitoring** – participants identify uniquely marked individual rhinos in the field using an identikit. Data is captured electronically in the field and later automatically downloaded to a secure database. Information recorded includes animal ID, location, social groupings, body condition, etc. The data is analysed by the research ecologists and used to make informed management decisions regarding the rhino population.

**Predator monitoring** – this includes all the large predators: lion, cheetah, leopard and spotted and brown hyaena. Individuals are occasionally collared for research and/or management purposes. Participants monitor these collared individuals using telemetry or GPS tracking technology. Camera trap surveys, in conjunction with Panthera, are conducted annually to determine the range and population dynamics of the resident leopard population as part of the larger Waterberg population. These camera traps are tailored for leopards, but capture photographs of the smaller, meso-predator population of the reserve – this is useful as these cryptic species are seldom seen otherwise.



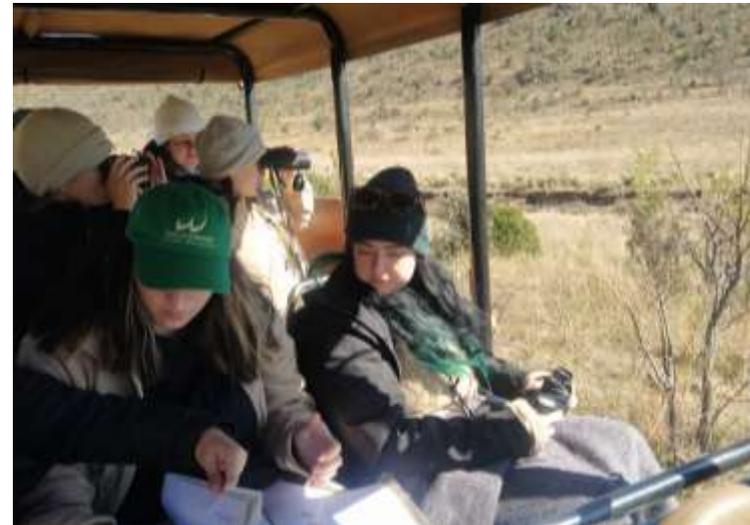
# ABOUT THE PROJECT

AFRICA

## Research and Ecological Biomonitoring

**Game transects** – pre-determined routes are driven along which game is counted. Transects are driven monthly during which the team collects data pertaining to animal species, body condition, herd structure and herd location. Analysis of this data provides an in depth understanding of the reserve's prey base and the population dynamics of the more important/common species.

**Vegetation surveys** – Grass species composition and biomass are determined on an annual basis. This information is used to understand the quality and quantity of available food for grazing species as well as helping to decide where best to establish fire breaks (an obstacle to the spread of fire). Woody (tree) monitoring occurs every five years and is used to determine: species composition, recruitment and growth rates and the impact of fire, elephant, browser and invertebrates on the woody plant layer.



# ABOUT THE PROJECT

AFRICA

## Research and Ecological Biomonitoring

**Plains monitoring** – Welgevonden Game Reserve was not always a protected wilderness area with its early history rooted in agriculture. Upon conversion into a game reserve, many old agricultural fields were rehabilitated into grazing lawns. These fields, as well as the animals that make use of them, are monitored on a monthly basis to evaluate the effectiveness of this long-term programme.

**Special Interventions** – As these interventions occur sporadically, where possible, participants and volunteers will be given the opportunity to join and witness these special veterinary interventions which could include elephant collaring, rhino notching, predator captures and animal releases.



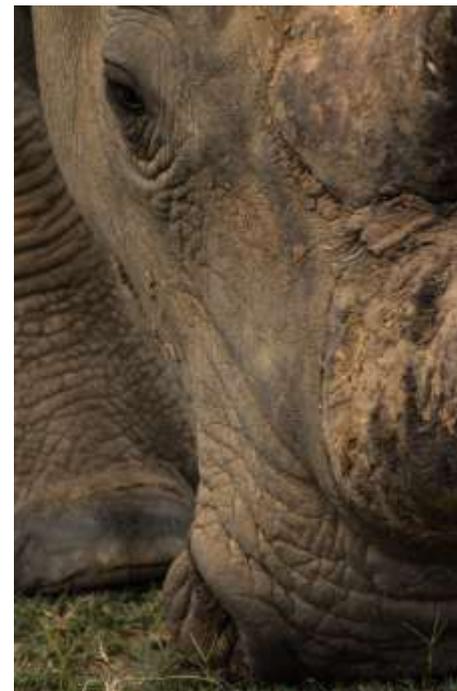
## Rhino Monitoring Focused

Welgevonden Game Reserve is a significant sanctuary for two rhino species. The reserve is home to an important population of southern white rhinoceros (*Ceratotherium simum*) with its conservation status of Near Threatened as well as Critically Endangered black rhinoceros (*Diceros bicornis*).

Welgevonden has a reputation for its strong, high-tech approach to anti-poaching; preventing criminals from entering even near the Reserve.

The Biomonitoring department has the very essential function of closely monitoring the rhino populations and participants have an active role in this. Modern technology is utilised and the team is supported by experienced scientists and managers. A rhino's life expectancy can reach over 40 years so the same college/institution or individual participant that returns regularly can see the same rhino through its life stages over all the years.

An extraordinary opportunity considering the current plight of the species.



A large rhinoceros and its calf are the central focus of the image, standing in a lush green savanna. The rhinoceros is on the right, and the calf is on the left, both facing towards the left. In the background, there are several tents with green and grey roofs, suggesting a camp or lodge. The overall scene is bright and sunny, with a clear sky and a mix of green grass and brown earth.

**AFRICA**

# **ABOUT THE PROJECT: SWEBESWEBE NATURE RESERVE**

Our conservation work  
in more detail

## Project Overview – SwebeSwebe Nature Reserve (7 Nights)

The Waterberg conservation research programme serves as a living laboratory for ecological research, offering students and researchers a chance to work alongside experts in the field.

Participants will play an active role in a variety of immersive conservation and research activities. Through activities like wildlife monitoring, vegetation surveys and data analysis, students gain practical experience using tools such as GPS devices and biomass sampling equipment. Each project offers a unique opportunity to contribute meaningfully to the reserve's ecological goals while developing valuable skills in fieldwork and conservation management.

Beyond research, the programme fosters community empowerment and sustainable conservation practices, inspiring future generations to protect this remarkable landscape while equipping participants with valuable skills for careers in conservation.



## Flora: Vegetation Surveys and Ecological Studies – SwebeSwebe Nature Reserve

### Objective:

To assess, monitor and enhance the ecological health of flora in the Northern Waterberg region, ensuring sustainable biodiversity conservation and habitat management.

### Activity Descriptions:

#### 1. Grasses Survey and Full Collection (Annual):

- Collect and identify grass species using field guides and sample collection techniques
- Establish baseline data on grass species composition and distribution
- Use findings to assess food availability for grazers and inform firebreak planning

#### 2. Plant Plots (Baseline Study):

- Set up and monitor vegetation plots in various ecosystems and floral zones
- Record species diversity and analyse habitat differences and similarities



## Flora: Vegetation Surveys and Ecological Studies – SwebeSwebe Nature Reserve

### 3. Woody Plant Density Report:

- Conduct surveys to determine tree species density and diversity
- Identify ecological nodes and assess recruitment, growth and impacts of fire and herbivores on woody plants

### 4. Identification of Ecological Nodes:

- Map and analyse differences and similarities across floral zones, focusing on critical ecological nodes that influence biodiversity

### 5. Photo ID of Waterberg Trees:

- Create a photographic database of tree species for educational and research purposes

### 6. Herbology of the Northern Waterberg:

- Collect and sample indigenous plants to study their ecological and medicinal properties
- Investigate herbivory patterns and their role in shaping ecosystems



## Flora: Vegetation Surveys and Ecological Studies SwebeSwebe Nature Reserve

### 7. Alien Plant Control – Queen-of-the-Night (Ongoing):

- Identify, monitor and remove invasive Queen-of-the-Night plants to protect native vegetation
- Implement sustainable methods of controlling alien plant species

### 8. Seed Dispersal Study:

- Investigate how baboons, birds and cattle disperse seeds within the reserve
- Assess their role in maintaining ecosystem balance and aiding reforestation efforts

### Learning Outcomes:

- Gain expertise in plant identification and ecological survey methods
- Understand the role of vegetation in supporting diverse ecosystems
- Learn sustainable practices for alien plant control and seed dispersal monitoring



## Fauna: Wildlife and Ecological Projects SwebeSwebe Nature Reserve

### Objective:

To monitor and protect animal populations and their habitats, contributing to a deeper understanding of species behaviour, ecological roles and conservation needs.

### Activity Descriptions:

#### 1. Known Animal Group Counts (Monthly):

- Conduct surveys to monitor population dynamics of key wildlife species
- Use GPS devices and observation techniques to collect data on herd sizes, locations and behaviours

#### 2. Leopard Project (Collaboration with Ingwe Foundation):

- Develop ID kits to monitor individual leopards
- Cast and identify leopard spoor to map territorial boundaries
- Collect and analyse prey base data and faecal samples to study diet and ecological impacts



## Fauna: Wildlife and Ecological Projects SwebeSwebe Nature Reserve

### 3. Small Mammal Project (Collaboration with Prof. Mark Keith):

- Humanely capture, photograph and identify small mammals
- Assess ecological niches and predator-prey relationships

### 4. Fish Project (Collaboration with Prof. Darragh Woodford):

- Capture and photograph fish species to establish a database
- Study ecological roles and predator-prey dynamics of aquatic systems

### 5. Fence Immigration and Emigration Project:

- Monitor animal movement across fences to evaluate the impact of barriers on wildlife connectivity
- Use this data to inform decisions about fence removal or modifications



## Fauna: Wildlife and Ecological Projects SwebeSwebe Nature Reserve

### 6. Reptile Pitfall Trap Study

- Install and monitor pitfall traps in predefined locations to safely capture small reptiles
- Identify species using field guides and photographic records
- Record environmental conditions to assess habitat preferences and seasonal activity

### 7. Bird Ringing and Ornithology:

- Set up mist nets in various habitats to capture birds for ringing and data collection
- Record physical measurements, health indicators and unique identification details before safely releasing birds

### 8. Camera Trap Study and Surveys:

- Deploy camera traps in strategic locations to capture images and videos of wildlife
- Analyse data to identify species, document behaviours, and estimate population densities



## Fauna: Wildlife and Ecological Projects SwebeSwebe Nature Reserve

### 9. Wild Dog Project (Collaboration with WWDI):

- Track wild dogs using GPS and VHS technology
- Collect faecal samples to study diet and ecological roles
- Develop strategies for predator-human conflict mitigation

### 10. Dung Beetle and Butterfly Collections:

- Collect, identify and catalogue dung beetles and butterflies to assess their roles in nutrient cycling and pollination
- Focus on species unique to the Northern Waterberg region

### Learning Outcomes:

- Develop skills in animal identification, data collection and ecological analysis
- Understand the complexities of predator-prey relationships and species-specific conservation needs
- Participate in community-focused conflict mitigation strategies for wildlife conservation



## Eco System: Practical Management – SwebeSwebe Nature Reserve

### Objective:

To develop essential skills for reserve management, focusing on infrastructure maintenance and sustainable living practices.

### Activity Descriptions:

#### 1. Road Building:

- Construct and maintain roads to improve accessibility within the reserve
- Use environmentally friendly materials and methods to minimize habitat disruption

#### 2. Fence Maintenance:

- Repair and maintain fences to ensure effective wildlife management
- Identify and address issues related to animal immigration and emigration



## Eco System: Practical Management – SwebeSwebe Nature Reserve

### 3. Water System Maintenance:

- Inspect and repair water systems, ensuring a reliable supply for wildlife and reserve operations
- Develop strategies to reduce water waste and optimize usage

### 4. Gardening (Vegetable Garden and Orchard):

- Cultivate and maintain vegetable gardens and orchards to support sustainable food production
- Learn organic farming techniques and composting practices

### Learning Outcomes:

- Acquire practical skills in infrastructure and resource management
- Learn sustainable agricultural practices and their ecological benefits
- Contribute to maintaining essential reserve operations



## Community: Rural Development and Support – SwebeSwebe Nature Reserve

### Objective:

To explore the intersection of conservation, culture and community, fostering social awareness and empowering local populations.

### Activity Descriptions:

#### 1. Herbology in Local Communities:

- Study the use of local plants for medicinal and cultural purposes
- Assess community preferences and practices related to herbology

#### 2. Rural Youth and Education:

- Investigate the social status and aspirations of rural youth in local villages
- Examine the impact of social media on perceptions of manual labor and rural lifestyles



## Community: Rural Development and Support SwebeSwebe Nature Reserve

### 3. Education and "Back to Nature" Initiatives:

- Design and implement programmes to reconnect local communities with nature
- Provide experiential learning opportunities that emphasise sustainable living

### 4. Natural Resource Exploitation Studies:

- Assess the social and environmental implications of natural resource exploitation
- Develop strategies to promote responsible resource use within communities

### Learning Outcomes:

- Gain insights into the cultural dimensions of conservation
- Develop strategies for community engagement and education
- Understand the social challenges and opportunities in rural development



## Other Possible Activities: Non-Research

Beyond research, students will have the opportunity to immerse themselves in unique and enriching experiences:

### San Rock Art Talk and Trail:

Learn about the fascinating history and cultural significance of ancient San rock art, followed by a guided trail to a rock painting site for an up-close exploration.

### Stargazing:

Experience the breathtaking clarity of the southern hemisphere's night sky, free from light pollution and discover the stories and science behind its constellations.

### Fresh Water Swimming:

Enjoy the serenity of our 20 km stretch of pristine riverine habitat, with scenic swimming spots perfect for relaxation and connection with nature.

### Potjie Cooking Competition:

Embrace South African tradition with a lively potjie (cast-iron pot stew) cooking competition. Students will team up to prepare their own creations over open fires.



# ABOUT THE PROJECT

AFRICA

## Possible Lectures – SwebeSwebe Nature Reserve

### Conservation Ecology and Ecosystem Dynamics

- Overview of ecosystem structures and functions
- How species interactions (predator-prey dynamics, competition) shape ecosystems
- The role of keystone species in maintaining biodiversity

### Vegetation Ecology and Fire Management

- Grass and tree identification techniques
- The impact of fire on savanna ecosystems and its role in vegetation dynamics
- Strategies for firebreak design and implementation

### Sustainable Grazing and Herd Management

- Rotational grazing practices and their ecological benefits
- Water usage efficiency in grazing systems
- The socio-economic implications of sustainable livestock management

### Wildlife Population Monitoring Techniques

- Methods for conducting game transects, spoor tracking, and population surveys
- Use of GPS and remote sensing tools in wildlife studies.
- Data collection, entry and visualisation for informed decision-making

### Biodiversity and Invasive Species Management

- Understanding the ecological impact of invasive species (e.g., *Queen-of-the-Night*)
- Strategies for control and eradication
- Importance of maintaining native biodiversity

### Human-Wildlife Conflict Mitigation

- Understanding the causes and consequences of human-wildlife conflicts
- Techniques for conflict resolution (e.g., predator tracking and prey management)
- Conservation tools like fencing and compensation schemes

### Animal Behaviour and Ecological Niches

- Study of animal behaviour to determine ecological roles
- Special focus on species like leopards, wild dogs and small mammals
- Understanding territoriality, prey selection, and habitat use

### Water Systems and Aquatic Ecology

- The role of freshwater ecosystems in biodiversity conservation
- Methods for fish identification and sampling



**AFRICA**

# **ACCOMMODATION & LIFESTYLE**

Life in the African Bush

# ACCOMMODATION & LIFESTYLE

AFRICA

## Welgevonden Accommodation

The student centre and camp is based on the reserve and boasts ten tents that sleep two people per tent in single beds, each tent also has lighting and electricity supply.

There are communal hot and cold showers and regular flushing toilets. There are communal facilities including a lecture room, canteen, lounge, entertainment area and storage fridge.

The centre also has access to Wi-Fi.

The camp is fenced off inside the boundaries of the reserve.



## SwebeSwebe – Hanover Nature Reserve Accommodation

Students and academic groups will be accommodated at our purpose-built camp on Hanover Nature Reserve, designed to provide comfort and foster community living. The camp features shared twin and triple rooms with communal ablution facilities. At the heart of the camp is a spacious communal area, equipped with a shared kitchen and dining space, which also serves as a hub for relaxation, lectures, and group activities.

For evening gatherings, there's a cozy firepit/boma area where students can unwind and cook meals over the fire under the stars. On weekends, groups are welcome to enjoy the main farmhouse and pool area for some well-deserved relaxation. Ingredients for meals are provided, and students cook together, creating a vibrant and social camp atmosphere.



## Meals

At both Welgevonden and SwebeSwebe, ingredients for three meals a day are provided, on a self cook basis. Students will take part in communal cooking and keeping the kitchen tidy. This creates a vibrant and social camp atmosphere.

All meals are provided in the communal dining room, there is an outside area for dining as well.

Meals will either be served at the facility or in the field 'picnic' style, this depends on activities either planned or unscheduled.

The research team often work 6 days a week so time off is often limited to Sundays only.

Most evenings are spent at leisure around the camp.



A large rhinoceros and a smaller rhinoceros are the central focus of the image, standing in a grassy savanna. The larger rhino is on the right, and the smaller one is on the left, both facing towards the left. In the background, there are several tents with green and grey roofs, suggesting a campsite. The overall scene is set in a natural, outdoor environment with trees and a clear sky.

**AFRICA**

# **USEFUL INFORMATION**

Inclusions/Exclusions &  
Recommended Kit List

# WHAT'S INCLUDED

AFRICA

## What is included?

- Flights
- Transfers to/from project
- Accommodation
- Three meals per day (self prepared)
- All activities as part of the project
- Airport meet/greet
- 24/7 In country support



## NOT Included

- Personal Travel Insurance \*
- Meals on travel days – before arriving & after departing from project
- Any activities not specified as part of the project
- Visas/travel documents

\* This is provided by the college. Please confirm with your college the details of what is and isn't covered.

## Suggested kit list

To allow for ease of transfer to the project a soft holdall/ soft suitcase is preferred.

- Short and long sleeve t-shirts
- Long work trousers and shorts (or work/zip-off trousers)
- Hiking boots/comfortable walking shoes to work in every day
- Waterproof jacket
- Sweatshirt/Fleece (Winter months pack plenty)
- Padded jacket/windbreaker (Winter months) although it can get very cold on an open vehicle even in summer
- Socks
- Underwear
- Change of casual clothes for evenings
- Sandals / comfy shoes to wear after work hours
- Warm hat (Winter only) / Hat for sun protection (all year)
- Gloves for warmth (Winter only)
- Working gloves
- Daypack rucksack
- Sunscreen and Sunglasses
- Personal medical items
- First aid kit
- Toiletries
- Tick / Insect repellent
- Water bottle
- Good torch

### Other useful items:

- Binoculars
- Camera
- Power bank

\* All work clothes should be neutral or earth tones for working in the bush. No skimpy or bright-coloured clothing to be worn



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