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LORD DERBY ELAND VETERINARY TEST PROTOCOL

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1. **TERMINOLOGY**

Abbreviations and Definitions:

CBPP	–	Contagious Bovine Pleuro Pneumonia
CFT	–	Compliment Fixation Test
BB	-	Bovine Brucellosis
BTB	–	Bovine Tuberculosis
ELISA	–	Enzyme Linked Immunosorbent Assay
FMD	–	Foot and Mouth Disease
FMDV	–	Foot and Mouth Disease Virus
IU	–	International Units
NSP	–	Non Structural Proteins
OIE	–	<i>Office International des Epizooties</i>
PPR	–	Peste des Petits Ruminants
RVF	–	Rift Valley Fever

The *Terrestrial Animal Health Code 2012* - The Terrestrial Animal Health Code 2012 version of the OIE

The *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2012* - The Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2012 version of the OIE

2. **EXECUTIVE SUMMARY**

2.1 Dr AD De Swardt of Derbianus Game Breeders intends to apply for the issuing of an import permit authorising him *inter alia*, in terms of section 6(1) of the Animal Diseases Act, Act 34 of 1984 to import 120 Lord Derby Eland antelope (*Tragelaphus Derbianus Gigas*) from the Republic of Cameroon in Central Africa.

2.2 This DRAFT Lord Derby Eland Veterinary Test Protocol has been drafted, in compliance with the sanitary standards determined by the OIE, *Terrestrial Animal Health Code 2012* and the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2012*, in order to prevent the possible introduction and spreading of animal diseases, in particular Foot and Mouth Disease (FMD), Bovine

Tuberculosis (BTB), Bovine Brucellosis (BB), Theilerioses, Contagious Bovine Pleuro-Pneumonia (CBPP) and Peste des Petits Ruminants (PPR).

- 2.3 It will be expected of the State Veterinary Services in the Department of Agriculture to indicate their satisfaction with this protocol and to add or amend any aspects and/or tests contained herein in order that the officially approved protocol can be utilised, in the interests of transparency and proper compliance.
- 2.4 The Lord Derby Eland Veterinary Test Protocol will be applied stringently under the direct supervision of the State Veterinary Services, both in Cameroon as well as South Africa.

3. **GENERAL PRINCIPLES AND CONDITIONS**

- 3.1 This protocol will be further developed, subsequent to the completion of the Risk Analysis, as provided for in Chapter 2 of the *Terrestrial Animal Health Code 2012*, clearly identifying all relevant potential hazards, and utilizing OIE approved sanitary standards for disease determination, disease testing and certification to determine whether the import can be conducted, or not.
- 3.2 The OIE approved standards as specified in the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2012* will be utilised testing EACH INDIVIDUAL IDENTIFIED ANIMAL to ensure that no known disease is introduced or spread through the import of the animals.
- 3.3 Derbianus Game Breeders will utilize the OIE approved Quarantine principles, adapted to be appropriate for large game antelope which will ensure the best possible scientific processes to:
- (i) Identify any potential known diseases in the subject animals
 - (ii) Treat (where appropriate) and prevent the introduction of any known animal diseases and/or vectors which might be disease hosts and/or carriers
 - (ii) Ensure that every animal to be translocated will be free from:
 - FMD
 - BB
 - BTB

- Theileriosis
- CBPP
- PPR

3.4 Apply best practice international standards of animal welfare ensuring that all animals will at all times:

- (i) Be stressed in the least possible manner
- (ii) Be provided with appropriate shelter, food and water.
- (iii) Be provided with all necessary veterinary care including the use of sedatives, tranquilizers and eating stimuli.

3.5 QUARANTINE FACILITY

In the *Terrestrial Animal Health Code 2012* a quarantine facility is defined as:

"... an establishment under the control of the Veterinary Authority where animals are maintained in isolation with no direct or indirect contact with other animals, to ensure that there is no transmission of specified pathogen(s) outside the establishment while the animals are undergoing observation for a specified length of time and, if appropriate, testing and treatment. The presence of disease or infection in animals in the quarantine station does not affect the animal health status of the country or zone".

The principles contained in this definition will be strictly complied with in both the Pre-Export and Post-Import Quarantine Facilities. Any conditions imposed by the Department of Agriculture, Forestry and Fisheries with regard to:

- Stocking density
- Number of pens
- 24 hour surveillance and access control
- No escape (inner / outer perimeter fence)
- Disease free zone for 10 kilometres from important trans-boundary diseases

will be strictly complied with.

3.6 ANIMAL QUARANTINE

All animals will be subject to disease testing, vaccinations, treatments and daily health checks. Detailed daily records will be kept on all animals individually with regards to health, animal welfare, disease status, vaccinations and treatments by a qualified Veterinarian / Animal health Technician.

State and Private Veterinary Services will be provided and utilized at both importing and exporting countries at the expense of Derbianus Game Breeders, to ensure transparency and the presence of suitably qualified and experienced officials.

The responsibility of the Private Veterinarian: Certification of disease status in animals being imported, testing procedures, vaccinations and treatments.

The responsibility of the State Veterinarian: Certification of disease status of animals in Cameroon and South Africa respectively and counter signing the duties of the private veterinarian.

The following will be applied routinely:

- Daily, individual health checks on all animals. Diseased animals will be isolated and eliminated or treated (if indicated);
- Diseases to be tested in accordance with the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*;
- Quarantine periods of at least 45 days will be undertaken in order to ensure the sero conversion and/or expression of sub-clinical diseases and to conform to all biological risk agents and vectors;
- All animals will be vaccinated against Anthrax, Botulism, Black Quarter, Rift Valley Fever, Rabies;
- Will use a multi-antigen clostridial vaccine (administering Ultra 7);
- Pooled and individual faecal flotations and sedimentations will be performed on all animal groups before and after deworming;

- All animals will receive broad spectrum anthelmintics specifically effective against nematodes, trematodes and tapeworms.

3.7 ANIMAL HANDLING AND TRANSPORT

Each animal will receive a long acting tranquilizer, required vaccinations, ectoparasitics, anthelmintics as well as additional veterinary treatment if required. Surgical principals will apply in all parenteral therapeutics and procedures to prevent the risk of hematogenous spread of pathogens or contamination.

Should an animal test positive to a disease that pose an import risk or become critically ill or injured; the animal will be eliminated under the supervision / recommendation of the Cameroon State Veterinary Services. The animal will be eliminated by using principals of humane euthanasia and carcass disposal that is efficient and effective in eliminating the causative pathogen.

Animal welfare will at all times be of utmost importance with strict devotion to achieve the highest degree of animal welfare with regards to:

- freedom from hunger;
- thirst and malnutrition;
- minimizing fear and distress;
- minimizing physical and thermal discomfort;
- minimizing pain, injury and disease; and
- minimizing limitations to express normal patterns of behaviour.

An advance notice along with the required documentation and permits will be communicated to the applicable authorities (border posts, points of entry and exit); stating the animal species, number and method of transport to prevent unnecessary delay. Arrangements will be made for the military assistance and convoy during transportation from the National Park where the capture will be undertaken to the International Airport at Garoua, Cameroon.

4. **SOURCING OF ANIMALS**

- 4.1 It is acknowledged that the animals will be sourced from the Republic of Cameroon which is a Foot and Mouth Disease country without vaccination for purposes of OIE certification.
- 4.2 The animals will be sourced from the North Region, in close proximity to the city of Garoua where the Laboratoire National Vétérinaire (LANAVET), an OIE recognized laboratory and testing facility is operational.
- 4.3 The national parks where the animals will be sourced from, being Faro National Park and/or Bouba Ndiya National Park have substantial areas where no domestic / livestock cattle is present in view of the geographical layout of the two national parks. The capture will be planned to ensure that the pre-export quarantine facility as well as the capture boma will be erected at least 10 kilometres within the national park boundaries in order to prevent any possible exposure of the eland antelope to potentially Foot and Mouth Disease domestic / livestock.

5. **RISK ANALYSIS**

- 5.1 The *Terrestrial Animal Health Code 2012* determines that should an importing country decide to permit the importation of animals using the appropriate sanitary standards recommended in the *Terrestrial Animal Health Code 2012* it eliminates the need for a risk assessment. In spite hereof, a comprehensive Risk Analysis will still be undertaken.
- 5.2 Derbianus Game Breeders is obliged to strictly adhere to this protocol in order to eliminate any risk of the introduction or spread of animal diseases.
- 5.3 Complete and strict compliance with this protocol including all veterinary testing to be undertaken during the Pre-Quarantine Testing, Pre-Export Quarantine Testing in Cameroon and the Post-Import Quarantine Testing in South Africa, associated with the necessary treatment if applicable, will result in negligible risk related to the import of the eland to South Africa.

6. CAPTURE OF ANIMALS

- 6.1 The capture of the animals will be undertaken by both mass capture as well as chemical immobilisation.
- 6.2 Proper animal welfare principles will be applied at all times, the capture to be undertaken under the supervision of the specialist wildlife veterinary surgeons and in the presence of the officially nominated and authorised State Veterinary surgeon of Cameroon.

7. INDIVIDUAL IDENTIFICATION OF ANIMALS

- 7.1 A comprehensive record and database will be compiled relating to each individual animal and the entire herd.
- 7.2 At the first available opportunity that an animal is chemically immobilised it will be individually ear-tagged with a tag specifically burned and numbered with permanent ink.
- 7.3 Each animal will also be individually identified with subcutaneous microchip.
- 7.4 Accurate records will be maintained of the ear-tag and subcutaneous microchip data of each individual animal.
- 7.5 All records of veterinary testing, treatments etcetera will be linked to the ear-tag of each individual animal throughout the Pre-Quarantine Testing, Pre-Export Quarantine Period, as well as the Post-Import Quarantine Period.
- 7.6 Any other clearly identifiable characteristics will be noted on the individual card of each animal in the comprehensive record and database, which will be kept both electronically and manually.
- 7.7 Sero and hair samples of each individual animal will be taken enabling the compilation of a comprehensive DNA based data bank, linked to ear-tags and subcutaneous microchip.

8. PRE-QUARANTINE TESTING IN CAMEROON

- 8.1 A temporary pre-quarantine facility will be erected, at the cost of Derbianus Game Breeders inside the national park in Cameroon where the capture will be undertaken.
- 8.2 This pre-quarantine facility will provide for at least the following conditions:
 - 8.2.1 An exterior perimeter fence preventing animals outside the facility to come into contact with animals inside the facility.
 - 8.2.2 At least 10 internal individual camps where the animals can be safely held, appropriately fenced off with capture sails to prevent animals from seeing through the individual camps to reduce any potential stress in the interest of good animal welfare.
 - 8.2.3 Each individual camp will be supplied with appropriate water and feeding facilities.
 - 8.2.4 Access to the facility will be strictly controlled at all times.
 - 8.2.5 All testing to be conducted will be done by the private veterinarians under direct supervision of the Cameroon, as well as South African State Veterinary Services, all at the cost of Derbianus Game Breeders.
 - 8.2.6 Strict bio-security will be applied.
- 8.3 The captured animals will be held in the pre-quarantine facility for 10 days, allowing them to adapt to feeding of breeding muesli and water and to reduce any stress to the minimum.

- 8.4 From day 11 to 14 each individual animal will be chemically immobilized, individually identified and ear-tagged and the necessary *sero* sampling to be taken in order to conduct tests, both in Cameroon, as well as at Onderstepoort, South Africa for the particular diseases identified following finalization of the Risk Analysis, but at least for FMD, BB, BTB, Theileriosis, CBPP, CA and PPR.
- 8.5 Once the test results are available, only animals serologically cleared free from FMD, BB, BTB, Theileriosis, CBPP, CA and PPR will enter the quarantine facility where quarantine will commence as soon as the last animal is included.
- 8.6 Due to the nature of the testing to be undertaken, both in Cameroon and in South Africa, it is anticipated that this Pre-Quarantine Testing phase will last, from capture not less than 28 days. This will allow an excellent opportunity for the *sero* conversion and/or expression of potential sub-clinical diseases and therefore increase the sensitivity of the serological testing.

9. **PRE-EXPORT QUARANTINE PERIOD IN CAMEROON**

- 9.1 A temporary quarantine facility, other than the Pre-Quarantine facility will be erected, at the cost of Derbianus Game Breeders inside the national park in Cameroon where the capture will be undertaken.
- 9.2 This quarantine facility will provide for at least the following conditions:
 - 9.2.1 An exterior perimeter fence preventing animals outside the facility to come into contact with animals inside the facility.
 - 9.2.2 At least 10 internal individual camps where the animals can be safely quarantined, appropriately fenced off with capture sails to prevent animals from seeing through the individual camps to reduce any potential stress in the interest of good animal welfare.
 - 9.2.3 Each individual camp will be supplied with appropriate water and feeding facilities.

- 9.2.4 Access to the facility will be strictly controlled at all times.
- 9.2.5 All testing to be conducted will be done by the private veterinarians under direct supervision of the Cameroon State Veterinary Services.
- 9.2.6 Strict bio-security will be applied.
- 9.3 Once the animals have been moved into the Pre-Export Quarantine facility, the second phase of testing can commence.
- 9.4 Should an animal test positive to a disease that pose an import risk or become critically ill or injured; the animal will be eliminated under the supervision / recommendation of the Cameroon State Veterinary Services.
- 9.5 All records and results obtained during the Pre-Export Quarantine period will be communicated to the South African Veterinary Authority for import clearance. After obtaining permission from the *National Directorate of Animal Health* in South Africa, the animals will be transported to Derbianus Game Breeders and enter the Post-Import Quarantine period.

10. **SEQUENCE OF VETERINARY TESTING**

10.1 **FOOT-AND-MOUTH DISEASE (FMD)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of FMD prior to, or on the day of shipment;
- A strict “stamping-out-policy” will be in effect in the exporting and importing country for a minimum period of 30 days and will include any animal that present with clinical signs of FMD or serologically confirmed as a carrier;
- All animals in isolation will be subjected to diagnostic tests (probang and serology) performed by an FMD approved laboratory for evidence of FMD infection with negative results at the end of that period. The Enzyme Linked Immunosorbent Assay (ELISA) on serum samples; to non-structural proteins (NSP) will be utilized for this purpose to screen for all possible serotypes;

- In conjunction with State Veterinary Services; disease surveillance (specifically for FMD) for a minimum period of 30 days will be applied in a 10 kilometer radius of the establishment and quarantine facility;
- All precautionary measures shall be taken so that no animal will be exposed to any source of FMD during transportation;
- All animals will be transported under the supervision of the Veterinary Authority in containers on a vehicle, which was cleansed and disinfected before loading, directly from the establishment of origin without coming into contact with other susceptible animals.

10.2 **BOVINE TUBERCULOSIS (BTB)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of BTB prior to, or on the day of shipment;
- All animals in isolation will be subjected to diagnostic tests with negative results at the end of the quarantine period utilizing the gamma-interferon test serologically.

10.3 **BOVINE BRUCELLOSIS (BB)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of BB prior to, or on the day of shipment;
- All animals in isolation will be subjected to diagnostic tests with negative results, on two occasions, at the end of the quarantine period utilizing a serological test for BB. The former test will involve testing for *Brucella* antigen with a complement fixation test (CFT). These tests will not be considered for female animals which have calved during the previous 14 days.

10.4 **THEILERIOSES**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of Theilerioses prior to, or on the day of shipment;

- All animals will be subjected to microscopic blood smear examination which showed negative results;
- All animals will be treated with an acaricide prior to shipment and must be completely free of ticks.

10.5 **CONTAGIOUS BOVINE PLEURO PNEUMONIA (CBPP)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of CBPP prior to, or on the day of shipment;
- All animals in isolation will be subjected to a serological test for CBPP with negative results during the 30 days prior to shipment;
- All animals will be transported under the supervision of the Veterinary Authority in a container on a vehicle, which was cleansed and disinfected before loading, directly from the establishment of origin without coming into contact with other susceptible animals.

10.6 **JOHNE'S DISEASE (PARATUBERCULOSIS)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of Johne's Disease prior to, or on the day of shipment;
- All animals in isolation will be subjected to a serological test for Johne's Disease with negative results during the 30 days prior to shipment;

10.7 **PESTE DES PETITS RUMINANTS (PPR)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of PPR prior to, or on the day of shipment;
- A strict "stamping-out-policy" will be in effect in the exporting and importing country for a minimum period of 30 days and will include any animal that present with clinical signs of PPR or serologically confirmed as a carrier;
- All animals in isolation will be subjected to a serological test for PPR with negative results during the 30 days prior to shipment

10.8 **RABIES**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of Rabies prior to, or on the day of shipment;
- All animals will be vaccinated against rabies during the Pre-Export Quarantine period.

10.9 **RIFT VALLEY FEVER (RVF)**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of RVF prior to, or on the day of shipment;
- All animals will be vaccinated with a modified live virus vaccine at least 30 days prior to shipment;
- The animals will not be transported through a RVF zone with disease.

10.10 **TRYPANOSOMIASIS**

The following protocol will be in place to minimize this particular hazard:

- No animal will be transported that show any clinical signs of Trypanosomiasis prior to, or on the day of shipment;
- All animals will be subjected to microscopic blood smear examination which showed negative results;
- Strict fly and other vector control will be standard at the quarantine facilities.

11. **TRANSLOCATION**

11.1 Only once all the required veterinary testing has been completed confirming the complete absence of Foot and Mouth Disease, Bovine Tuberculosis, Theileriosis, Contagious Bovine Pleuro Pneumonia and Bovine Brucellosis will translocation commence.

11.2 The required veterinary certification will be obtained from Cameroon Veterinary Services and will accompany the animals when translocation commences.

11.3 Sound principles of animal welfare will be executed with strict devotion.

11.4 The animals will be translocated in specially adapted containers to be loaded directly onto an Antonov 225 or 124-100 aircraft and transported by air from Garoua International Airport to Polokwane International Airport from where they will be transported by road directly to the quarantine facility of Derbianus Game Breeders in Bela-Bela.

12. POST-IMPORT QUARANTINE PERIOD IN SOUTH AFRICA

12.1 The animals will be introduced directly from the specially adapted containers as loaded in Cameroon into the quarantine facility of Derbianus Game Breeders in Bela-Bela.

12.2 In compliance with South African veterinary standards the complete African Buffalo testing protocol relating to Foot and Mouth Disease, Bovine Tuberculosis, Theileriosis, Contagious Bovine Pleuro Pneumonia, Bovine Brucellosis and Peste des Petits Ruminants will be repeated while the animals are held in quarantine and only animals serologically negative for each of these diseases will be considered for release into the specially constructed camp where they will be held in semi-captivity.

12.3 Since the capture will be undertaken during February of the applicable year and the Pre-Quarantine testing, Pre-Export Quarantine and Translocation is likely to endure for at least 8 to 9 weeks, it is unlikely that weather conditions in South Africa at the end of the Post-Import Quarantine period will allow release into semi-captivity without provision for adaptation at that stage and it is thus anticipated that the animals will be kept in the local quarantine facilities until substantially later than what is required.

13. REQUIREMENTS FOR RELEASE

13.1 Strict quarantine will apply until the South African Veterinary Authorities certifies that all animals are free of Foot and Mouth Disease, Bovine Tuberculosis, Theileriosis, Contagious Bovine Pleuro Pneumonia, Bovine Brucellosis and Peste des Petits Ruminants.

13.2 Subject to final veterinary certification the animals will be released into the specially prepared camp where the breeding with the eland antelope will proceed.

13.3 Complete records will be maintained at all times.

APPROVED

DATE : _____

DESIGNATION : _____

CHIEF DIRECTOR

CHIEF DIRECTORATE ANIMAL PRODUCTION AND HEALTH

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES