

SPRINGERBAAI ECO ESTATE

ECOLOGICAL BURN PROCEDURE



BURN002

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1 Aim and Purpose

The aim of the burning procedure in the grass land is to remove any moribund (old grasses) material and ensure new palatable grass growth. The probability of a low heat burn will kill any unwanted endo & ecto parasites, larvae and eggs. This burn will provide more nutrient rich grazing lawns for the game.

The purpose of the burning procedure in the Rhenoster Thicket is to reduce fuel load in this area and to reduce overall fire risk in that area of the estate and secondly as ecological tool to enhance the germination of certain plant species that only grow in that habitat and that needs fire to grow.

To ensure that all the processes are in place and the safety of the Estate is priority.

2 Scope

This procedure is to enhance the condition of the game and veld.

3 Definitions & Abbreviations

Term	Definition/Explanation
Moribund	Old unpalatable grass
FDI	Fire Danger index
Bakkie Sakkie	Firefighting unit

4 Responsibilities

Trustee of Environment Portfolio: To ensure that all procedures are in place.

The Estate Manager: To ensure that the Estate is safe and no risk for the fire to spread from the area being burnt. To oversee the process.

Superintendent: To manage the procedure and to ensure that the process runs smoothly.

Trustee, Management, Botanist, and Fire Department Will be responsible jointly for the decision on when to burn (Fire Index and wind directions).

5 General

The Trustee of Environment together with Management need to determine every year whether a burn is necessary and decide on the area, size and timing.

The area to be burnt to be identified and prepped for the burn.

The following procedure should be followed:

- Apply for a permit from the Fire Department
- Cost of R 450 per permit to be paid at the Municipality – permit is valid for a month. The Fire Department issues permits for burning valid for a year for certain burns.
- The Fire Department needs to be contacted the day before the proposed burn takes place
- Depending on the FDI (Fire Danger Index) the Fire Department will give the go-ahead for the next day's veld burn.
- No burning will be permitted without the consent from the Fire Department.
- As an extra precaution contact Nautilus's Estate Manager informing him that burning will take place and in case of an emergency and to ensure their fire unit is available.
- Inform Fransmanshoek Conservancy to be present. They have a fire fighting unit and ensure they are available for the specific day.

- Sufficient fire first aid equipment to be present.
- All direct neighbours to be informed that burning will take place.
- Inform all Springerbaai members currently on the property that a burn will be taking place.

6 Detailed procedure for grassland burn

- Superintendent to ensure that the fire unit is in working order: that oil, fuel and water in order and that there is a hydrant hoses and extra fuel for the unit is on the fire unit trailer.
- Identify the areas that will be burned (500x500m). The area to be marked. It is important to rotate the proposed plots.
- Inspect proposed burn area and remove all animals / reptiles to safe area by walking with many people through the area.
- To ensure there is a container with 50% Diesel & 50% fuel mix, to ignite the sections of the veld.
- The diesel / fuel mix to be distributed strategically on the section of the veld.
- The wind strength and speed need to be considered at the moment before the burn as well as weather forecasts about wind. Management with the Fire Department need to make a decision that the wind is not too strong to attempt the burn.
- Depending on the wind direction the Superintendent will make the decision on which side the fire will be ignited (this is described as back burning – the opposite ends of the pile to be ignited to ensure that the two fires burn towards each other).
- Have a few wooden droppers with cloth attached and to be inserted in the fuel/diesel mix to be lit and walking along the section where the diesel/fuel mix was distributed. The ideal will be to have a drip torch.
- The fire is lit by the Superintendent as he is responsible for the process of the fire. He is not allowed to move from burning area until the mop up has been done.
- Ensure there are at least two fire fighters with the fire units at the site.
- Ensure that fire fighters rotate when the other is filling up at the closest fire hydrant.
- Depending on the section being burnt, the closest fire hydrant is at Bosbokrand at # 38.
- Sufficient equipment such as fire beaters, skoffels and hose pipes are present.
- No less than 8 individuals to be present at the fire process.
- This procedure to start first thing in the morning, while the temperature and moisture content is still high.
- Fire Units to be distributed strategically.
- This process takes approximately a day.

7 Detailed procedure for Gouritz valley bushveld / Rhenosterveld

- The Fire Management plan drawn up in 2007 proposed that Unit 1 be burnt to improve the diversity of the Rhenosterveld and reduce the risk of wildfires. These sections will be divided into blocks. Attached plan.
- The same precautions (heading 6) for the grassland burn should be considered when preparing for the burn.
- Allow for a botanist to do an inspection on the proposed section.
- A small section at a time will be considered for a burn and burns will start from the Nautilus. boundary where the risk of a fire crossing from the neighbour is greatest.
- Apply for a permit from DAFF for the clearing a around the designated area.
- Remove all flora around the 15ha area with a 5-meter break.
- Remove all animals to a safe area.
- Before burning check, the wind direction and FDI.
- Inform property owners about the burn. Houses 119, 117, 110, 97 & 98 should know about the burn as their houses will be affected the most by smoke.
- Divide the section into four blocks to reduce the amount of vegetation that needs to be burned. The blocks will also aid management to control/fight the fire.
- Allow the section to recover and measure the growth, speed of recovery etc. If needed area can be irrigated for quick recovery. Then decide only if more blocks need to be burnt.

- Post fire succession must be monitored regularly by management
- After three years, the plant species diversity before and after should be compared to understand the role fire plays on Springerbaai.

8 The following needs to be done before leaving the vicinity:

- After fire has cooled down, utilize the skoffels to loosen and separate the left-over ash, to allow the soil underneath the ash to cool down, this is to avoid unwanted flare ups and continues smoldering.
- Use the fire unit to spray over the smoldering heaps after opening the left-over piles with the skoffels of half burnt material,
- Continue until smoldering has faded completely
- After the fire has been killed, management need to walk through the area to ensure all areas are dead and would not start up again. Area should be sprayed by the fire department.
- Leave one responsible person behind to ensure there are no flare ups. A staff member need to watch the area for 24 hours after the fire, every hour to see if fires adjacent to the area is not starting.
- The Fire unit to be left at the burn area with the responsible person for 3 hours.
- Superintendent and Manager to inspect the area to make a call whether the vicinity can be left or more mop up to be done.

9 Appendix

The illustration below indicates proposed area for burn in 2019 if the test site is successful.



Yellow = Proposed area for ecological burn (Grassland 2019)

Blue = Proposed area for ecological burn (Rhenoster veld) Grid in black section will be done 200 x 200m blocks per burn. (To be decided with Botanist/Fire Consultant)

Green = Future proposed burn areas (2020 & 2021)

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