

# Guidelines for burning Critically Endangered Renosterveld in the Overberg



Compiled for FPAs in the Western Cape by the Overberg Renosterveld Conservation Trust

Dr Odette Curtis ([info@overbergrenosterveld.org.za](mailto:info@overbergrenosterveld.org.za)) & Keir Lynch ([keir@overbergrenosterveld.org.za](mailto:keir@overbergrenosterveld.org.za))

[www.overbergrenosterveld.org.za](http://www.overbergrenosterveld.org.za)



## What is renosterveld?

Renosterveld forms part of the Fynbos Biome in which there are many (>120) different fynbos, strandveld and renosterveld veld types. The Overberg contains four different renosterveld types and these would have covered the entire area of today's Overberg wheat-belt—i.e. renosterveld occurs on the low-lying fertile, clay-based soils of the region. Renosterveld can be a very variable habitat, ranging from a grassy habitat rich in bulbs (Caledon/Napier) to a more shrubby and succulent (vygie)-dominated habitat (Bredasdorp/Swellendam).



## Why is fire management important in renosterveld?

Renosterveld is one of the richest but most threatened habitats on Earth. With only 4% renosterveld remaining in the Overberg, it is at a very high risk of extinction. Therefore, the management of these remaining patches of veld is critical if we are to save this ecosystem from being lost forever. Landowners have the power to control the most significant threats facing renosterveld: incorrect burning and over-grazing. The Overberg Renosterveld Conservation Trust works with farmers to assist them with understanding their veld better and providing management guidelines for these special habitats.



## Golden rules for ecological prescribed burns in renosterveld

- \* Do not burn too frequently (we currently recommend every 10-15 years) and bear in mind that burning frequencies will vary depending on the type of veld and annual rainfall.
- \* Optimal burning time for renosterveld is late summer / early autumn (i.e. February/March). In some cases, where veld is very old it is acceptable to burn in April. However, during autumn the bulbs are pushing out their leaves and burning them at this critical time is likely to kill the entire bulb. Thus always aim to burn at a time when the bulbs are mostly dormant and before the onset of autumn/winter rains. NEVER burn in winter or spring—this will irreversibly damage the bulbs.
- \* NEVER graze immediately after a fire – rest the veld for a minimum of two years before grazing (and then do so only in the late summer months for a short period). Grazing before this will put favourable (palatable) species at a disadvantage when recovering after a fire and they will not be able to compete with less-favourable (unpalatable) species, such as Renosterbos. Resting allows all species an equal opportunity to rejuvenate after a fire and therefore, promotes the 'wanted' species, such as Rooigras (*Themeda*), Blougras (*Ehrharta*) and a host of bulbs, palatable shrubs and vygies. Grazing too soon after a fire will promote unfavourable species (i.e. Renosterbos), at the expense of favourable ones, thus causing the veld to be dominated by less favourable plants. Correct management promotes the more favourable species, so that in the long term, grazing *quality* is higher.
- \* Avoid forcing a fire through a thicket or very rocky / exposed areas. These 'microhabitats' are unlikely to be fire-adapted and would probably only burn natural under very extreme conditions.





## ***Critical considerations when planning a burn in renosterveld***

Ecological burns need to be carefully and meticulously planned if you are to achieve your goal for maximising biodiversity with burning. Here are some points to take into account when planning your burn:

### ***What firebreaks exist? How will your firebreaks be prepared?***

Because renosterveld is already so severely transformed and because wildfires in renosterveld are considered relatively low risk, we do not recommend that permanent firebreaks are put in place. However, sometimes natural firebreaks exist in the form of a road or a ploughed land. If however you need to protect fences or stop the fire spreading into adjacent veld, it will be necessary to prepare firebreaks in time for specifically-planned burns. These should be at least 5 m in width, but bear in mind that on steep slopes flames can burn more intensely and a wider break should be considered under advice of the fire protection officer or relevant fire expert. Breaks can be made with a brush-cutter where possible, followed by hand-clearing (using manual labour or weed-eaters) for those areas which are not accessible with a brush-cutter.

*What we have learned regarding firebreaks:* clearing firebreaks with a brush-cutter can increase the amount of dead material available for burning inside the break (not ideal) as well as the grassy component in the firebreak, resulting in some fire-breaks burning more vigorously than the adjacent veld. We therefore recommend that all brush-cut material is removed from the firebreak and spread in the veld to be burned.



Clearing breaks with a brush-



Clearing breaks by hand / weed



Firebreaks can burn too!

### ***What manpower do you have available?***

The amount of manpower required will depend on the size of your burn and the risk of runaway fires, but essentially you will need a driver and an operator for the bakkie-sakkie, plus several experienced people (6–10 individuals) on the ground to ignite / direct / beat fires.

### ***What equipment do have for undertaking a burn?***

You will need the following: bakkie sakkie (water tank on the back of your vehicle), drip torches with diesel/petrol mix (ratio= 5L petrol:15 diesel), spray back-packs, beaters. You should also have food, drink and first-aid kits available for your fire team.



Drip torches



Fire fighter



Bakkie sakkie

### ***Where are your water points for refilling?***

Consider the location of your dams and water tanks for routine filling of bakkie-sakkies, but also for emergencies. Ensure that you have access to water points in such a way that you can guarantee a safe rotation of bakkie sakkies, thereby ensuring the fire line is never without back-up from water tankers.

### ***What is your ignition point and what wind direction will you need to carry out the burn?***

You will need to be burning into the wind, so have a look at your veld and consider where you would start your burn and consequently what wind direction you will require to enable you to burn into the wind. When considering your ignition point, think about where your 'danger areas' are and how you will burn these to be 'safe' first before undertaking the rest of the burn.



### ***Do you have the necessary permits?***

You will need a permit from your local Fire Protection Association (we strongly recommend joining your local FPA). This includes a map or photograph of the area you plan to burn.

### ***Have you communicated your plans to your neighbours and are they able to assist with manpower / equipment?***

This is also part of the permitting process, but is considered an important part of good neighbourly relations. Never underestimate the importance of having support from your local community when undertaking a burn - this can be an unpredictable exercise and you may need help.



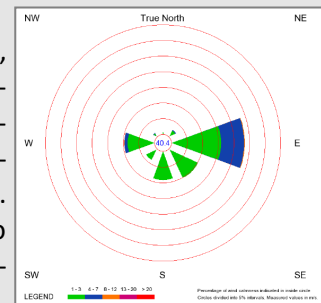
### ***Are you eligible for any assistance from a Working on Fire (FPA or CapeNature) team?***

If your farm / veld is part of a Protected Area, or is a Stewardship site, or you are working closely with the Overberg Renosterveld Conservation Trust, you may be able to acquire assistance with the implementation of your controlled burn. Feel free to discuss this with the ORCT or other relevant organisation.

### ***Have you prepared the necessary background to inform your Burning Plan?***

It is important to develop a detailed understanding of the relevant fire intensity required for the prescribed burn and to implement the burn effectively by taking all the environmental factors (required wind direction, slope and aspect) into consideration and coupling the planning with proper protection from a human and infrastructure safety perspective.

The planning for an ecological burn should be conducted with organisations such as CapeNature, GO FPA or the Overberg Renosterveld Conservation Trust to ensure that the management objectives for the burn are met and effective monitoring projects may be implemented where necessary. Organisations with a strong ecological background can indicate the preferred wind directions for the burn as well as the required intensity and frequency for the fire management plan. Sourcing of climate data such as wind rose's for properties also provides detailed information to ensure the burns are scheduled and carried out in the correct conditions to ensure the best ecological outcome for the prescribed / controlled burn.



Burning renosterveld at the ecologically appropriate time of year (i.e. late summer / early autumn) results in a flush of green growth and flowering in the following spring, as demonstrated in the photograph here (the 'grey' renosterveld in the background has not burned for over 20 years).