Photograph 2: 2015 *A. cyclops* die back: Note that there are no fine fuels to carry a fire

Voor

Photograph 3: 2003 Vegetation dominated by *A. cyclops:* Note the fine fuels.
Note the continuous fuels

na

Photograph 4: 2015 *A. cyclops* die back: Note that there are no fine fuels to carry a fire
And that there are no continuous fuels to carry a fire

Nemba regulations they will have to be removed in the near future. However a number of properties in the study area still have significant Rooikrans on their property exposing them to risk.

**4.2 Impact of the Bird Colony on Fuel Load Management and fire Risk**

**4.2.1 Vegetation Die Back Due to Guano**

Since 2003 a large portion of the vegetation in the current footprint of the bird colony has died back due to guano containing high levels of ammonia.

As can be seen from photograph 1 to 4 below the guano from the bird colony has caused die back of the Rooikrans as well as indigenous plants in the colony. All that remains is the heavier fuels with no finer fuels that carry fire.

Further instead of being a continuous well oxygenated crown of fine branches and leaves, with oils that is able to carry a fire in its crown. The fuel now consists of courser fuels that are flatter on the ground and broken up by penguin paths. Thus the fuel/vegetation has transformed from a high risk to an insignificant risk.

Voor

Photograph 1: 2012 Vegetation dominated by *A. cyclops:* Note the fine fuels

na!