



Notes for report

Site identification:

Through GIS- based technology, confirmed by on- site verification, high risk areas have been identified for rehabilitation in Brenton on Sea/ Brenton on Lake/ Belvidere/ Phantom pass. Knysna Heights - sites have been identified and are being considered for hydro- mulching. All environmental interventions are soft options with minimum/ no long term (negative) impact on the environment. Brenton includes a number of sites, which are in various stages of rehabilitation/ preparation for rehabilitation.

Interventions include:

- Felling and scaling down of dead brush and trees



CHAIN SAW WORK ON BRENTON SLOPES

- Stacking of biomass along contour lines

Purpose of the stack lines:

- To prevent/ limit further sheet erosion
 - Stacked lines provide a micro habitat, allowing faster plant regeneration/ re-growth
 - Opening of terrain for easy access (for herbicide application) to expected alien invasive plant control after plant regeneration.
- **Installing Bio-sausages/ Berms** to slow water velocity, and prevent/ reduce sediment flow along steep slopes



- Seeding of slopes above Berms/ Bio-sausages to fast track re-growth of ground cover
- Installing Bio-blankets to limit sediment flow, reduce water velocity, retain top soil, and boost re-growth potential



- Prepare terrain for hydro mulching
- Monitoring plant regeneration for invasive alien plant re-growth
- Development of capacity to address large-scale invasive alien plant re-growth



Prioritization:

- Prioritization in accordance with immediate threat to lives and infrastructure.
- At risk are houses and developments down-stream of catchments and ravines above Brenton and Belvidere (significant sediment flow has already occurred in Brenton on Lake).

Training

- Training of 40 people, (on erosion control measures) has been initiated.

Challenges

- Lack of equipment, including chain saws/ ablution facilities/ transport options (being addressed/ resolved)
- Restrictions in terms of availability of labour (being addressed)

Landowner engagement

- Landowner participation is excellent, and engagement is ongoing

Expected time frame

- Not possible to determine at this point in time.

Negatives:

- Impact of wind erosion through dust storms and gravity flow of sandy soil, along steep slopes, is visible in places.
- More sediment flow can be expected in the next 30 days following (heavy) rain in catchments above Brenton on Lake.
- Brenton catchments are completely exposed, with several erosion channels active.

Positives:

- Regeneration of plants and grass is rapid and on the increase, following light rain.
- An intricate and dense root network, on and below the soil, covering the entire dune landscape, is intact and healthy, with high levels of moisture retention millimetres from the sandy surface.
- The denuded landscape expose (historical) environmental damage, resultant from erosion and head-cuts (as a result of roads and infrastructure), which now have to be addressed.
- Landslides seems (unlikely) at this point in time, with no soil on top of exposed e.g. shale rock, and sandy formations seem intact.
- Invasive alien re-growth slow to emerge, in comparison to grass, plants and flowers

Progress report:

Rapid progress has been made. A labour force without training in rehabilitation methods and interventions have been skilled up, and are already, very effective.

Fifty (plus), soft (biodegradable) interventions, including: clearing/ stacking/ berms/blankets/hydro mulching are in various stages of implementation.

Positives:

- Indigenous re-growth/ little rain assisting the teams in getting work done/ lack of rain prevents erosion before intervention in place.
- Logistics are in place and working well.
- Good interaction between the FPA/ WoF/ SCLI, etc.

Negatives:

- Wattles/ very steep slopes/ denude landscape to shed more topsoil before growth recovery.
- Oversight in place: Productivity levels are high/ interventions of a high standard.
- Landowner engagement is satisfactory where work taking place on private land, or where access is required.

Equipment used:

- **Biodegradable sausages to prevent soil erosion**
This is a great product as it is a soft intervention with great results, which, once on site, can be installed in rapid time frames.
- **Bio- blankets**
A soft intervention which we use, with great effect, on steep gradients with strong evidence of soil sediment flow and little/ no ground cover.
Currently we are using the product in seep lines and critically effected riparian zones only.
- **Hydro seeding**
The Hydro seeder has arrived in Knysna, and the first tests / spray will take place on Friday 18 August in Brenton on Lake.

Visit to Stilbay/ Riversdale Fire Scar:

A field visit with Department of Agriculture to twenty two thousand hectare fire scar following extensive wild fires in January 2017.

- Re-growth is painfully slow following low rainfall.
- Growth of invasive aliens already visible in areas previously effected by invasive alien plants - Approx. 6000 hectares affected
- Landowners willing to treat all new growth if herbicide assistance could be provided.
- Areas suitable for aerial spray not yet identified.
- Mapping exercise and ground verification recommended

STILBAY STILL BARREN AFTER SIX MONTHS

