

### How can you help?

1. Raise the issue with your councillors
2. Talk to neighbours and friends
3. Join BERG Mt Martha and become actively involved in restoring and preserving the estuary and reserves.

**and maybe together we can bring back the swans**



Balcombe Estuary Reserves Group  
Caring for the Balcombe Estuary Reserves

Website: [www.berg.org.au](http://www.berg.org.au)  
Email: [info@berg.org.au](mailto:info@berg.org.au)  
Mobile: 0447 160 288  
A0034645Y

## Our Estuary under threat!

**Sedimentation of Balcombe Creek is  
strangling the estuary**



**and spoiling our beaches**



Photo Sue Brabender

For more information about BERG MT Martha go to our website:

[www.berg.org.au](http://www.berg.org.au)



### What are the concerns of BERG Mt Martha?

BERG Mt Martha is concerned with the level of sedimentation in Balcombe Estuary.



Photo Sue Brabender

This is resulting in changes to the estuarine environment and subsequent loss of habitat/food sources for both aquatic animals and birdlife. The food source for black swans, such as aquatic plants, appears to have disappeared ... and so have the swans!

### What are the causes of increased sedimentation of Balcombe Creek and Estuary?

#### The major factor:

- **Erosion of unmade roads & private driveways** bordering the Balcombe Estuary Reserves

#### Contributing factors:

- Destruction of the creek bed and banks by animals such as upstream stock and off-lead dogs in the Reserves.
- Increased erosion at the head of Harrap Creek, a tributary of Balcombe Creek,
- Restrictions to flow volume caused by roads crossing the creek ( e.g. Craigie, Bentons, Tyabb, Bungower Roads and the Moorooduc Highway.)



Erosion caused by cattle (Balcombe Creek, Bungower Rd)

### How do unmade roads contribute to sedimentation?

- Regular scouring of road surfaces and swale drains (eg. Augusta, Ailsa and Byron streets) sends crushed rock and other material down stormwater drain inlets and into the creek – and can also block culverts.
- Heavier, courser material is deposited at or below the stormwater outlet, impeding the natural flow of Balcombe Creek.
- Finer particles are swept down to the estuary, where water salinity causes them to settle out and build up on the estuary floor.

### Here are the results!



Even moderate rain can result in a severe blockage caused by silt and road material



Unmade roads are eroded



Scoured road material spreads over sealed roads abutting unmade roads, and then heads into the stormwater system.



Silt washes down stormwater outlets and into the Estuary



The estuary becomes silted



The silt washes into our bay and is then deposited onto our beaches

### What is the impact of sedimentation on the ecology of the estuarine environment?

- Increased shallowness
- Destruction of once thriving seagrass and saline herb fields.
- Reduced water quality in both the sea and estuary from the plumes of silt
- A significant decline in black swan numbers. Their visits are now a rare occurrence.
- Increased likelihood of harmful pollutants (herbicides, pesticides, heavy metals) entering the creek as it flows past two old landfill sites at Mt Eliza and opposite the Briars.



Site of old Mornington tip, near corner of Craigie Rd and Nepean Hwy Mt Martha

### What needs to be done?

BERG Mt Martha first flagged the problem of sedimentation with the Shire more than eight years ago. Since then, various solutions have been tried - different grading and cambering, gravel removal, and a trial sedimentation pond - with varying success. BERG Mt Martha believes that it is now critical to develop a long term strategy for the creek and estuary which will preserve the ecology of this unique area for future generations. To get things started, BERG Mt Martha has formed a sub group to work with the Shire on the issue.

### What is the strategy proposed by BERG Mt Martha?

- Develop a long term, overall strategy for the Creek, involving MP Shire, Melbourne Water, and all stakeholders.
- Raise awareness of this issue within the Mt Martha community.
- Urge appropriate authorities to undertake the following key actions, which require wide support and resources:
  - \* **Cost analysis**
  - \* **Community consultation/engagement**
  - \* **Research** and analysis of core samples from the estuary floor to determine the composition and history of the sedimentation layer, and thus the source!
  - \* **Monitoring/measurement** of storm water output from selected residences and stormwater drain outlets, recording estuary behaviour using photo points, surveys, scaled measurement posts and regular estuary bird surveys
  - \* **Establishment of trial sites**
  - \* **Literature search** to establish previous studies on estuarine systems, effects of stormwater on waterways and stormwater treatment options.
- Explore possible solutions such as:
  - \* **Minimising and managing erosion by:**
    - a) Reducing stormwater through diversion into tanks, rainwater gardens and irrigation systems.
    - b) Better road management and maintenance such as construction of swales, correct grading, use of road surface sealant and the collection or eroded material in retarding basins.
  - \* **Constructing an underground stormwater drainage network** of cement pipes along unmade roads.
  - \* **Considering sealing the unmade roads (using sensitive and aesthetic design)** – higher cost, but good long term solution.