SAND MINING WITHIN eTHEKWINI MUNICIPALITY

What is eThekwini Municipality doing?
The Minerals and Petroleum Resources Development Act, Act 28 of 2002 provides the regulatory framework for access to, and management of, mineral resources. It is the responsibility of the Department of Mineral Resources to ensure the equitable and efficient development of mineral resources within eThekwini Municipality, in accordance with the provisions of the Act.

The Mining Act, Act 2002, requires the Department of Mineral Resources to register mining rights, issue mining permits and conduct inspections to ensure the proper management of mining activities. The Department of Environmental Affairs has the responsibility to ensure that mining activities do not have a negative impact on the environment.

SAND MINING WITHIN eTHEKWINI MUNICIPALITY

Approval Required

- Mining permit
- Water Use License
- Environmental Impact Assessment
- Environmental Management Plan
- Environmental Protection and Development

Preferred areas for sand mining
- Areas with a high demand for sand and gravel
- Areas with a low demand for sand and gravel
- Areas with a high water table
- Areas with a low water table

Approvals required for Sand Mining within the eThekwini Municipal Area
- A letter of approval from a land owner, council or tribal authority
- A letter of approval from the Department of Mineral Resources
- A letter of approval from the Department of Environmental Affairs
- A letter of approval from the Department of Agriculture, Environment and Rural Development

How can we help?
- Provide guidance on the requirements for mining operation
- Assist with the preparation of mining plans and environmental impact assessments
- Conduct site inspections to ensure compliance with the requirements

DMoss
Live Active for Biodiversity

References:
SAND MINING WITHIN DETHERWINI MUNICIPALITY

Introduction

Illegal sand mining within the eThekwini Municipal Area (EMA) has been identified as one of the most serious causes of biodiversity loss within Durban. Large areas of marine habitats as well as habitats of high biodiversity value are damaged by uncontrolled and unmonitored sand mining activities. The most affected areas are beaches, estuaries, intertidal flats, and no attempt to rehabilitate them. Frequently illegal sand mining operations are targeted in areas which require access roads to be constructed. This opens up previously uncharted areas, creating opportunities for environmental degradation from illegal dumping, invasive alien vegetation and illegal developments.

The purpose of this sand mining information sheet is to create awareness among users and new sand mining areas as well as amongst the general public about the environmental impacts of sand mining. It also highlights the approximately required for the mining of sand. It is hoped that by providing insights into the impacts of the sand mining process, it will be possible to regulate and manage the use of the materials in a manner that is not detrimental to the environment.

SAND MINING WITHIN DETHERWINI MUNICIPALITY

Sand Mining: How big is the problem?

The Sand Deterioration Report (September 2008), prepared by the Council for Scientific and Industrial Research (CSIR) and commissioned by eThekwini Municipality’s Environmental Planning and Climate Protection Department, confirmed the magnitude of the problem. The report focused on the:

- Estimates of sediment yield for all 31 rivers within the eThekwini Municipality’s jurisdiction: Tongaat River to Umgeni River.
- An assessment of the impacts of sand and sediment mining on sand yield.
- A description of the macro-geological dynamics within and beyond Durban Bay.
- A resource economic analysis of the costs and benefits of sand mining.

The study showed that a critical sediment supply deficiency exists within the rivers of the EMA. The shortages of sand are attributed to:

- legal and illegal sand mining operations (removal of the bed).
- mining that reduces the sediment load by a further 5% thus reducing the flow of sediment to the beaches to only a few.

This sand starvation of beaches has in turn contributed to beach erosion and associated damage to the coastal area with a high impact on the tourism industry.

The total value of Durban’s sand beaches is roughly R15.15 billion per annum (2008 values, assuming 7.5% per year due to slump past values in 2008 values). We therefore assume conservatively that at least 50% part of the others 50% of revenues is currently reduced of the value for sand mining in the study area (roughly R15.15 billion) would be lost in the long run if sand mining continued in dissolution of Durban’s beaches.

CSIR Reports, September 2008

The sand transport from Durban’s rivers would normally contribute to maintaining the sand budget of beach/dune systems, sand dunes are essential for overall protection as the natural coastal zone from storms. With the threat of climate change and the potential for impacts such as higher sea levels and increased stormmstorms, a beach starved of sand may experience the impacts much more severely and much quicker than a beach that has its sand budget intact.

Impacts on the Natural Environment:

- Destruction of indigenous vegetation within the riparian zone.
- The destruction of animal habitat (e.g., feeding, roosting and nesting sites).
- The fragmentation of ecological corridors and systems.
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,
- Sediment mining not rehabilitated: Erosion processes are so high that sand cannot drain into adjacent water bodies,