MACCAFERRI

CASE HISTORY

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BADGAT ASBESTOS MINE

BADPLAAS, MPUMALANGA, SOUTH AFRICA

Weirs, Culverts and Transverse Structures

Problem

Asbestos contamination of the environment has become an environmental health hazard. Large numbers of people die each year from asbestosis, mesothelioma and lung cancer, as a result of asbestos washing into rivers from dumps which are either on the banks or in the watercourses themselves. The dumps are sometimes so large that it is impossible to move them above the floodline of some watercourses.

Eko Rehab has been commissioned by the Department of Minerals and Energy on a three year contract to rehabilitate asbestos sites in South Africa. This case study explains remedial works carried out at Badgat Asbestos Mine, Badplaas, Mpumulanga.

Client: DEPARTMENT OF MINERALS & ENERGY
Designer / Consultant: EKO REHAB
Contractor: EKO REHAB
Products used (Qty.)
- Gabion unknown

Date of construction: 01/2001 - 12/2001

Solution

The rehabilitation work was aimed at increasing the size of the water course to provide protection against high flow velocities. It was decided that the use of gabions structures was the best solution. Maccaferri/African Gabions proposed a low level longitudinal river training wall with transverse groyne structures. This system is designed to shift the main flow channel away from the bank area, which is critical as it is prone to erosion and to prevent further pollution by asbestos fibres by means of a geotextile.

Benefits With the toe of the dump protected, further erosion of asbestos-carrying material was prevented by capping the dump with topsoil and vegetation and providing stormwater runoff control structures.

After construction

During construction

After construction

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