GUIDELINES EMAS AND BIODIVERSITY – POSITIVE EXAMPLE OF BIODIVERSITY MANAGEMENT

The company: Meichle + Mohr GmbH & Co. KG, Germany

The medium-sized company Meichle + Mohr GmbH located in Immenstaad am Bodensee is a prestigious company in the field of regional mineral extraction. It is run by the fourth generation of the same family. Starting from the wet extraction of gravel and the operation of transport barges on Lake Constance, it has always been an aim of the management to develop the company in terms of expertise and technology. Many years of experience provide a solid basis for the current challenges of the exploration and further processing of raw materials.

Today, the company employs more than 300 people. Meichle + Mohr has developed continuously from a regional commodity provider to a service provider for its customers. Its services include resource processing, logistics and quality assurance, and it also offers a range of products.

Aspects of biodiversity of special importance for the company

Gravel extraction impacts on nature and the landscape and significantly affects the performance and functioning of the ecosystem. From a nature protection perspective, gravel pits are of potential importance for endangered species of animals and plants after or already during extraction. In literature, gravel extraction sites are alternately described as 'wounds in the landscape' or as a 'treasure trove for nature conservation'.

In the project, such lump-sum value assignments were ignored. Here the pure monitoring of the evolution of mining areas and of extraction areas released from extraction stood in the foreground. From 1997 to 2013 two studies were undertaken in two gravel extraction areas in the Hegau natural area west of Lake Constance. In addition, base studies from 1992 could be used. This means that over twenty years of monitoring of gravel pits was possible, which is an extremely long period of time. The locations of Meichle + Mohr GmbH are the longest-examined and best-evaluated extraction sites in Baden-Württemberg and probably in the whole of Germany.

Pivotal questions are:

- How do differently treated surfaces develop in the area in terms of their colonisation by species?
- How long does colonisation by typical forest species with different habitat requirements take?
- Are vulnerable species safe? At least for relevant periods?
- Do the observed changes match the priority nature conservation objectives for the project area?

Aims and measures regarding biodiversity

Resource extraction is inevitably associated with interventions in nature and landscape. The intervention is reduced to the minimum necessary (during extensions to the gravel extraction sites). Environmental impact studies and species protection mapping show where the intervention has the smallest impact and how this can be compensated.

The creation of special habitat structures over decades of extraction has positive effects for numerous animal and plant species deserving protection.

As part of the reclamation, natural and forestry skills are included in the planning. So an important basis for technical and biological reclamation was drawn up in the gravel pits and is now essential for the whole of Baden-Württemberg.

The transfer of knowledge about the biodiversity of extraction sites is an important part of the communication of Meichle + Mohr. There are tours for school groups, political bodies, associations, etc. in the extraction sites, explaining the meaning of 'special sites' such as gravel pits or quarries for the conservation of biodiversity.

Monitoring of biodiversity

Meichle + Mohr undertook monitoring in several gravel pits over the very long period from 1992 to 2013 and in 2016 published the findings in a book. TRAUTNER, JÜRGEN (Hrsg.), 2016: Entwicklung einer Kiesabbaulandschaft im Hegau am westlichen Bodensee. ISBN 978-3-943599-47-3.

The gravel mining area Stadtwald Radolfzell has been investigated since 1992 and since 2002 in addition the nearby gravel mining area of Steisslingen. Birds, amphibians, beetles, diurnal creatures and other animal groups were examined annually along with vegetation and flora in three- to five-year intervals. The species are mapped according to established methods.

Results and experiences

The potential function of gravel extraction areas for conservation, especially for endangered species of wildlife, is investigated in two gravel extraction areas. Relatively ephemeral habitats of very high importance for a large number of rare and endangered species are formed while extraction progresses. Both catchment areas are very important for conservation (for example, high number of rare breeding birds and ground beetle species, high number and density of amphibians and reptiles). Such potentials shall increasingly be used and developed in the future.

Forestry reclamation required by the Forest Law of the state of Baden-Württemberg reduces the conservation value of these areas. Space for conservation can always be found if extraction sites are large enough.

Further measures are planned

After the first major phase of monitoring had been completed, care measures were conducted on subareas in winter 2013/2014 (withdrawal of succession trees, pushing off of topsoil, development of new areas of shallow water). These have so far targeted primarily the amphibian fauna. The potentials of gravel extraction for nature conservation should also be used and developed for other species groups in the future. The monitoring shall be continued at least until 2024.

More information:

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