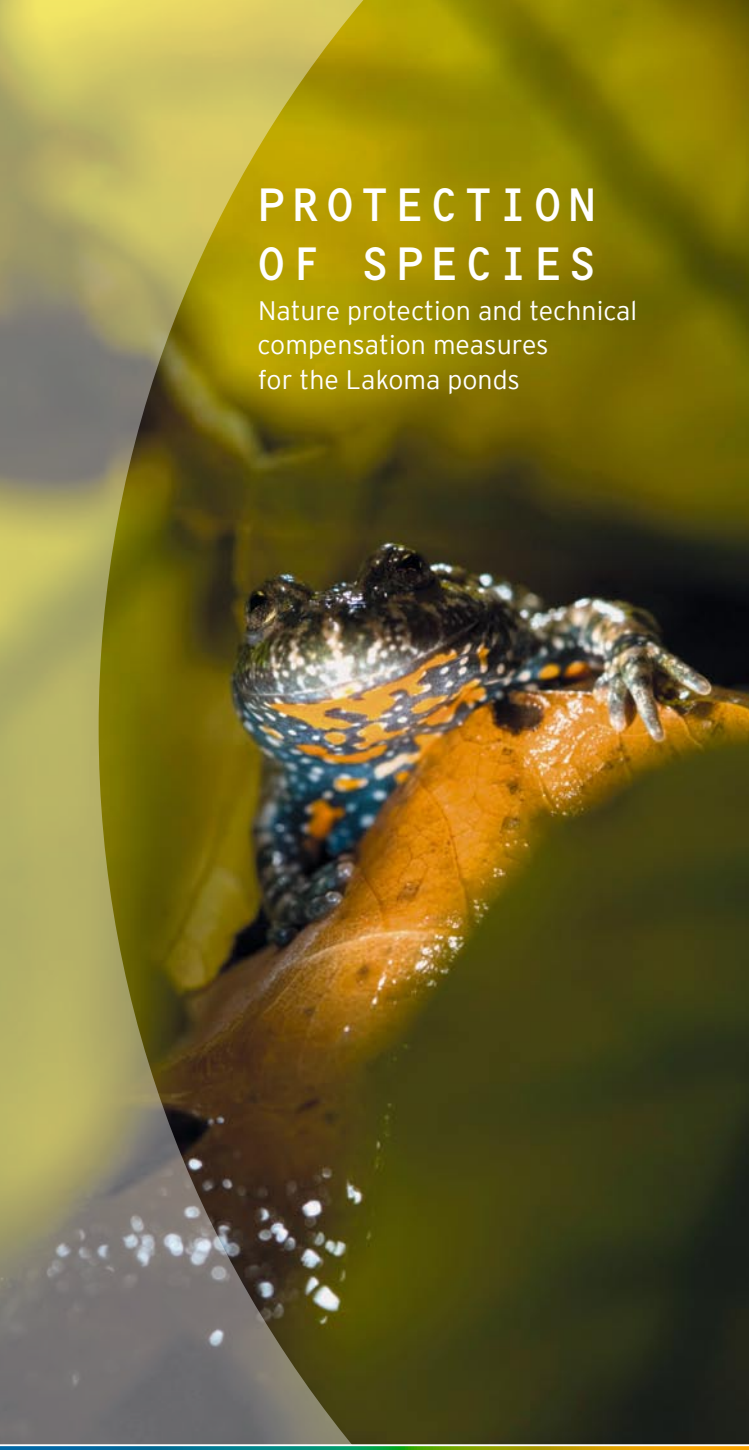


PROTECTION OF SPECIES

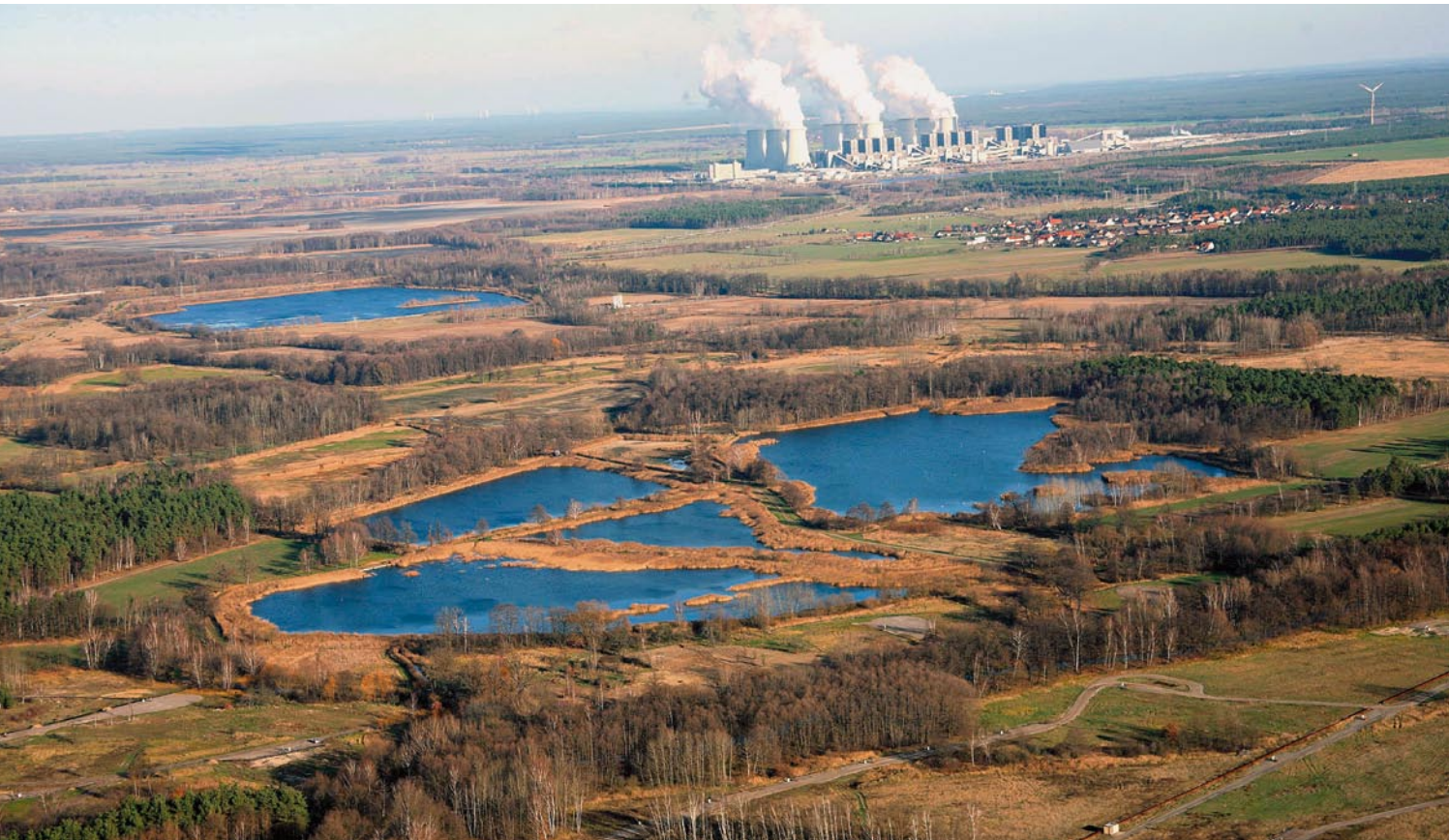
Nature protection and technical compensation measures for the Lakoma ponds

VATTENFALL

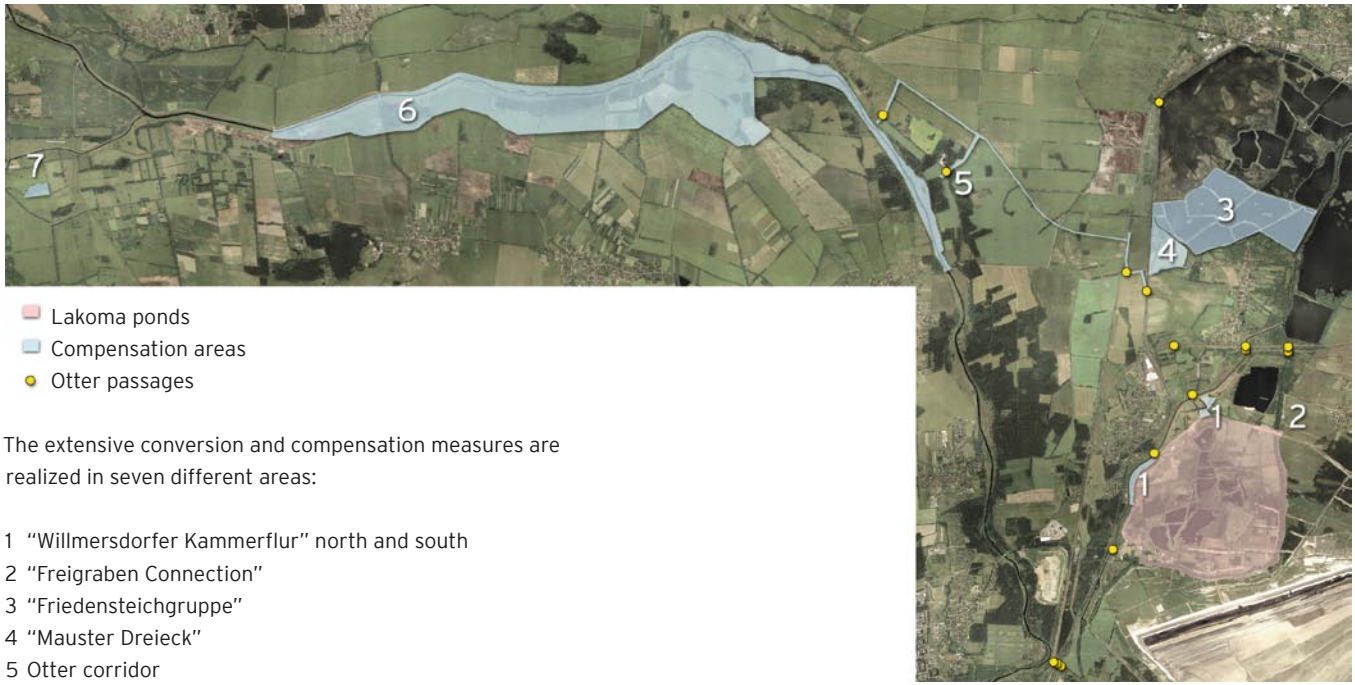
CAUSE

In the year 2007 it was decided that the FFH Lakoma ponds area would be drained in order to provide the regular continuation of mining activities planned for the "Cottbus - North" area. These ponds covered a water surface area of 62 hectares and were used for raising carp. Over the centuries, management of the ponds led to a variety of structures. Animal species such as otters, bats, birds and amphibians profited from the management of the fish ponds. In and around the ponds various water and land vegetation could develop which in turn served as food and habitat for numerous animal species.

The mining impact on this natural landscape connected with the draining of the ponds, will be balanced by multiple compensation measures by Vattenfall Europe Mining AG. The removal of the fish ponds was permissible only after several years of extensive licensing procedures with the European Environment General Directive and after considering public interest. This was possible however only under guidelines for protecting the valuable plants and animals of the pond's group.



COMPENSATION AREAS



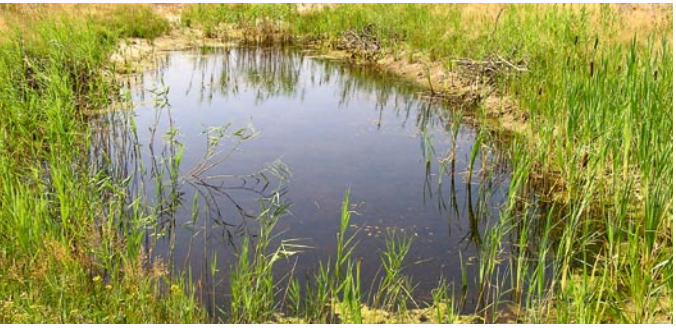
Lakoma ponds
Compensation areas
Otter passages

The extensive conversion and compensation measures are realized in seven different areas:

1 "Willmersdorfer Kammerflur" north and south
2 "Freigraben Connection"
3 "Friedensteichgruppe"
4 "Mauster Dreieck"
5 Otter corridor
6 Re-naturalization of the Spree flood plane
7 "Grosse Zossna"

All compensation areas are close to the Lakoma ponds and cover a total area of over 530 hectares. The wide area of the compensation measures represents, apart from the protection of species, an increase of the local habitat connectivity. Thus a substantial contribution to the ecological network of valuable damp biotopes in Brandenburg is being created. The individual compensation areas supports the European protected areas network known as Natura 2000 through multiple conversion measures.

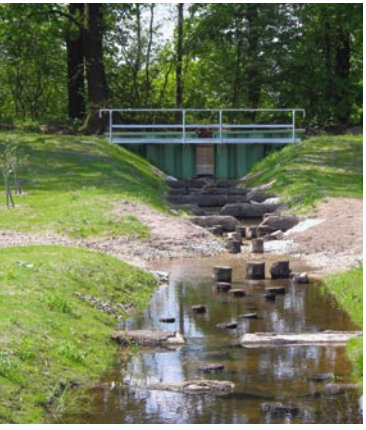
The largest compensation measure is represented by the re-naturalization of the Spree flood plane north of Cottbus. Along with the re-naturalization of the Spree flood plane complex structures will be created similar to the Lakoma pond area. However, contrary to the Lakoma pond area's dependence on management, the Spree and its flood plane will be more self-dynamic in structure. With the realization of the compensation measures the Spree and its flood plane will return this area to a more natural condition.



1 — "WILLMERSDORFER KAMMERFLUR" NORTH AND SOUTH

Close to the impact area is the "Willmersdorfer Kammerflur" where groundwater troughs were constructed. Thus the fire-bellied toad and other amphibians in this area can settle into the new habitats near the Lakoma pond area. Altogether 13 troughs were created, which form the habitat of the fire-bellied toad. Additionally, hollows for amphibian winter quarters were created.

2 — "FREIGRABEN CONNECTION"



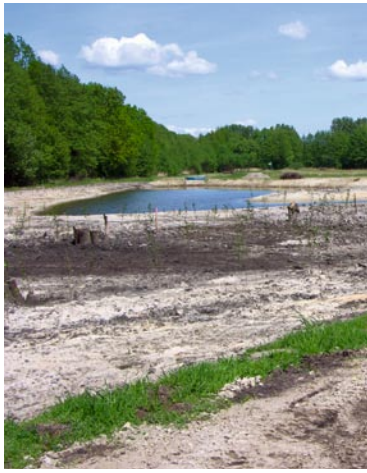
A dry channel in the fields surrounding the Lakoma ponds is being filled with water again. The connection between the "Freigraben" to the old Hammergraben contributes to the improvement of the landscape water regime.

3 — "FRIEDENSTEICHGRUPPE"

The "Friedensteichgruppe" with eight ponds and a total water surface of 101 hectares is part of the FFH area Peitz ponds. As compensation measures the fish farming has been changed in favor of one-year carp and the structural variety implementing shallow water zones, reed areas and islands has been increased. These measures improve the development of the fire-bellied toad, otter, different species of the FFH standard data sheet as well as different kinds of birds such as Western Marsh-Harrier, Common Golden-eye, Eurasian pochard and Little bittern.

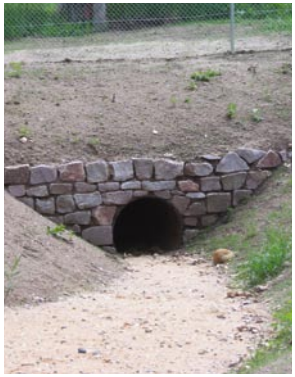
4 — MAUSTER DREIECK

South of the "Friedensteichgruppe" a new habitat and breeding ground for fish otters has been established known as the Mauster Dreieck. It includes an area of approximately 20 hectares. Small bodies of water, swamp forest, reed areas and winter habitat for amphibians were built. Fences were installed to protect amphibians and otters.



5 — OTTER CORRIDOR

A safe otter corridor was created between the Spree flood plane and the Peitz ponds. The otter corridor extends nearly 5 km where ditches and riparian forests were installed. Additionally, 16 new otter passages were built and / or converted at dangerous crossings. Thus the risk to otters at roads and trails is lowered and more distant natural areas for the otter are safely accessible.



6 — RE-NATURALIZATION OF THE SPREE FLOOD PLANE

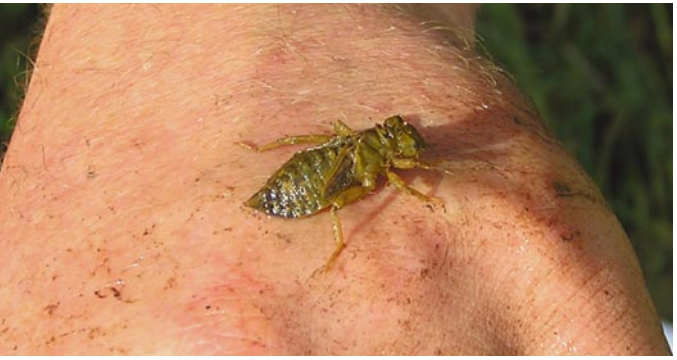
North of Cottbus on a surface of 400 hectares and a length of 11 km the Spree and its flood plane are brought back to a near natural condition. For the re-naturalization many different construction types like groyns and islands have been installed to increase the structural variety of the river. Existing ground ramps are converted, so that fish can reach upriver again. Cut-off meanders have been connected with the Spree again and new streams will be built. The Spree bank will be lowered and cultivated with appropriate flood plane trees. New flooding areas will be created by the removal of a flood protection dike. Further reconciliation of the Lakoma ponds is a new 8-pond group with a water surface area of 21 hectares. The newly created pond group functions among other things as a breeding area for otters and numerous birds as well as a hunting ground for bats. Furthermore the extensive management of the Spree flood plane ponds will promote the establishment of a stable red-bellied toad population. The re-naturalization of the Spree flood plane provides multiple habitats for a variety of plants and animals in the region.

7 — "GROSSE ZOSSNA"

The "Grosse Zossna" is a pedunculate oak - hornbeam - grove (approximately 2.3 hectares) with numerous mature timber ranges and high dead wood. It offers an ideal habitat for the Eremit (Osmoderma eremita), an endangered beetle restricted to hollow trees. Inhabited hollow trees from the Lakoma ponds area were transferred to the Grosse Zossna and set up in order to protect the beetle population.

MEASURES FOR SPECIES PROTECTION

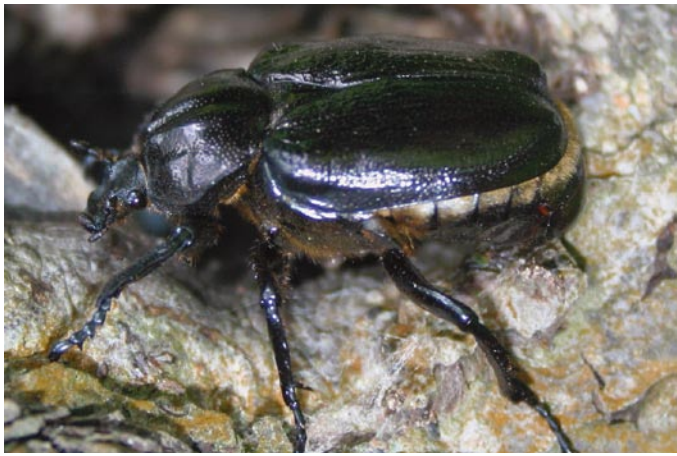
To compensate the impact of the removal of the Lakoma ponds multiple measures have been implemented for animals and plants. Vattenfall Europe Mining AG makes large contributions to maintain the regional variety of Federal and European legally protected plant and animal species.



GREEN CLUB-TAILED DRAGONFLY (OPHIOGOMPHUS CECILIA)

The Green club-tailed dragon fly (Ophiogomphus cecilia) is a kind of large dragon fly which lives exclusively near running waters which has fine gravel or fine sand sediment and natural bank forest. The green club-tailed dragon fly larvae live in and on the inorganic substrate of the running waters, which they leave after three to four years of development.

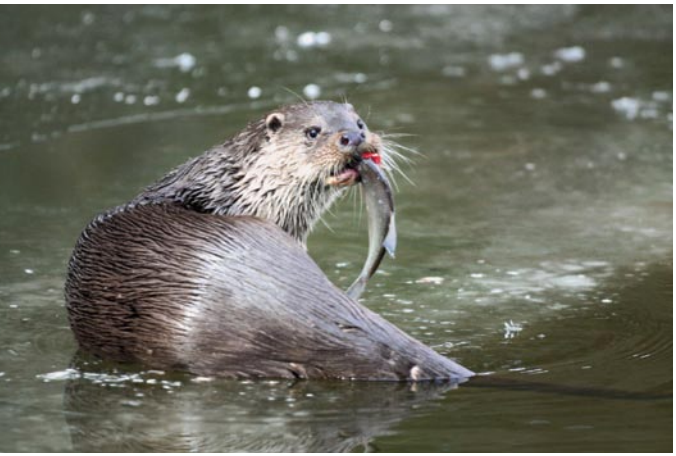
The Lakoma pond area hosts a small population of green club-tailed dragon fly where 333 larvae from their host waters were saved and resettled to the new Hammergraben. An additional 4,000 dragonfly larvae as well as various muscles, crabs, water insects and fish were also resettled.



EREMIT (OSMODERMA EREMITA)

The Eremit (Osmoderma eremita) belongs to the family of Scarabaeoidea and is an inhabitant of old excavate-rich deciduous trees. The larvae of the beetle live in the wood mold of old hollow trees, until they developed for 3 to 4 years into a finished beetle.

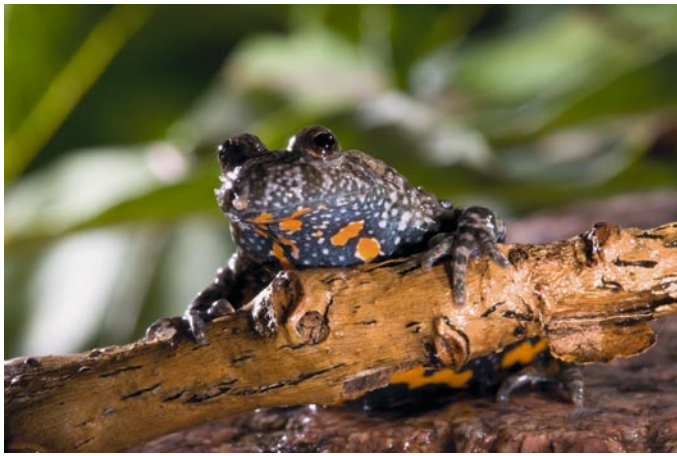
In the year 2007, 14 hollow trees from the Lakoma pond area were relocated to the "Grosse Zossna", because it was thought that they function as breeding trees for the rare Eremit. In addition these breeding trees with a diameter of up to a meter were sawed into lengths of 6 to 8 meters, without damaging the tree's hollow with the wood mold. At the new location the trunks were set up in 3 pyramid forms.



OTTER (LUTRA LUTRA)

The otter (Lutra lutra), an aquatic form of marten, is one of the best swimming carnivores. The otter feeds during the day on 1.0-1.5 kg fish. The Lakoma pond area was an optimal habitat, whose loss is completely compensated by the new pond group in the Spree flood plane and the habitats in the "Mauster Dreieck", as new areas for raising young.

In addition to the otter habitat a corridor was created including 16 otter passages. This ensures a safe migration for the otters from the Spree flood plane to the Peitz pond area.



FIRE-BELLIED TOAD (BOMBINA BOMBINA)

The fire-bellied toad (Bombina bombina) is identified by the typical fire-red patchwork on its lower belly surface thus giving it the name fire-bellied toad. The late spawning (May/June) amphibians live primarily in sun-exposed flat waters with thick water vegetation.

In the summer of 2007 the first 52,000 amphibian larvae and juveniles in the Lakoma ponds were caught and resettled into the Spree flood plane. All animals were examined, counted and placed into suitable ponds in the Spree flood plane.
In September 2007 the resettlement of adult and juvenile amphibians took place. In addition 500 catch buckets and 6.5 km fence were used to collect amphibians. This measure was repeated in the spring 2008 at Lakoma.

By May 2008 nearly 82,000 amphibians were resettled into the Spree flood plane including 56,000 fire-bellied toads. This represents one of the largest resettlement activities ever accomplished. The resettlement of the amphibians will continue to the year 2010.

POND BAT (MYOTIS DASYCNEME)

The pond bat (Myotis dasycneme) lives in waters-rich, half-open landscapes in flat country. Their food consists primarily of water insects, which it captures briefly in a fast straight-line flight over the water surface. It is considered a pure "building bat", which finds its summer accommodation preferably in attics or in walls of old buildings. At the end of summer they leave the flat country and travel up to 300 km to their hibernation areas at the edge of low mountain ranges.

The re-naturalization of the Spree as well as the creation of the new pond area provide richly structured landscapes and water which is preferred by the pond bat and other kinds of bat. Also, two bat box districts were established in the Spree flood plane project area. Each district was equipped with in 25 bat boxes with different designs in order to provide habitat for many kinds of bat.

AVIFAUNA

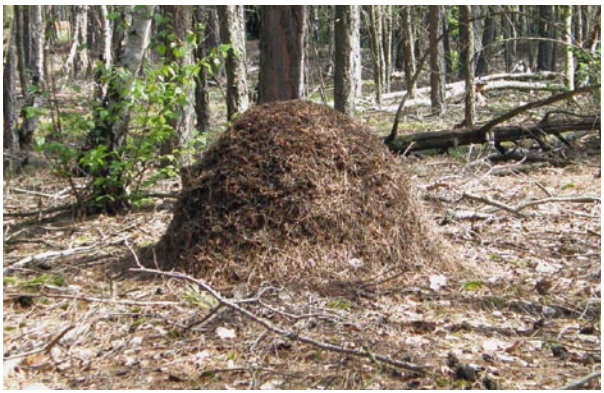
The Lakoma pond area was a valuable habitat for many kinds of birds because of its variety of structures. The Lakoma pond area was also a valuable habitat for migratory birds which used the area during winter months along with water birds and other kinds of birds (e.g. little bittern, western marsh-harrier, little grebe).

Equivalent habitat and landscaping measures were created in the individual compensation areas. The "Friedensteichgruppe" in Peitz was also modified using shallow water areas and islands to provide an attractive breeding area for many water birds. The "Friedensteichgruppe" also set up 15 nesting boxes for birds which normally breed in hollow trees in order to secure a healthy population of the common golden-eye (Bucephala clangula).

FOREST ANTS

Forest ants, for example the red ant (Formica rufa), are particularly noticeable because of their salient building of nests. The ant hills, which are usually by clearings or edges of forest, can be several meters in size. Forest ants are an important component of the ecological system since they eat many forest parasites and help seed dispersal as well as being a food source for many other animals for example the green woodpecker (Picus viridis).

In 2007, 118 ant hills (Formica rufa, F. polyctena, F. pratensis) were transplanted from the forest surrounding the Lakoma ponds area to forests outside the open mining zone.



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