Mining and ore processing inevitably causes an interference with multiple components and resources of the natural environment, which leads to the substantial changes to the functioning of the native ecosystems. In many ways, mining activities belong to the group of factors which can directly contribute to the irreversible changes in non-transformed areas due to modifications of the abiotic conditions such as relief form or by causing habitat fragmentation. However, many of the previously conducted studies on such areas show, that the long-term abandoned remnants of such activities can play a significant role in the process related to the regeneration of the destructed habitats and improvement of the biotic interactions within the local environment. For many living organisms they serve as a refugee area which protect them against the less favorable conditions from the outside and due to their unique chemical and physical characteristics of the soil, they can be inhabited by many distinctive groups of organisms which have a diverse range of habitat preferences, including these ones, which can be treated as rare or in danger of extinction. The aim of this work is to evaluate the role of the environmental conditions on the process regarding creation of the local centers of floristic diversity, as well as assessing their influence on the appearance of specific functional traits of plant species which can help to understand the range of variation among the various indicators relating to the functional diversity. In order to do this, the study plots were established among the 30 old remnants of the ore mining together with their surroundings which are located in two distinctive types of biotopes – forest and farmland areas (split into two halves). The floristic surveys, GPS coordinates and samples of soil were collected from few small plots which were scattered on the remnants and in the surrounding area (5 meters from the foot of the mound on each of its side). In summary, there were 129 surveys and 245 soil samples obtained from the sampling plots. Based on the image of digital elevation model which covered entire study area 7 indicators related to the local topographic and microclimate conditions were calculated, and their values were obtained for each cell based on the previously saved GPS coordinates of the plots. The PCA allowed for distinction of two individual groups of variables related to the plots located at the mounds and in the surrounding areas. The vegetation diversity was measured based on the indirect methods of ordination (DCA) and the influence of environmental parameters on the floristic composition of the remnants and their surroundings was measured using CCA. The joint structure between species traits from the post-mining residues and significant environmental variables was assessed based on the results of the RLQ analysis followed by the test of significance given by the fourth-corner. The total number of vascular plant species noted in the studied groups of plots was 202 and additionally, 10 species of moss were also noticed. 103 species were noted

on the old remnants of ore mining located in the farmland area and 89 species were noted on the residues, which are located in the forest biotope. The mean values of the indicators which describe species richness, diversity and evenness were all higher in groups of plots from the surrounding areas in both types of biotopes. The analysis of similarity (ANOSIM) alongside DCA which were based on the species composition of the residues and surrounding areas revealed, that there is a high level of similarity between residues and adjacent area in the forest biotope, but the mounds located in the farmlands had more distinctive species composition compared the plots which were located around them. Old remnants of ore excavation include a variety of species with unique habitat preferences. On the top of the mound, which is more closed by the canopy the group of typical forest species can be found (representing *Querco-Fagetea* class), on the other hand on the edge of the top there is a group of species which represent fringe communities (*Epilobietea angustifolii* and *Trifolio-Geranietea* classes). The slopes of the mounds located in farmlands are inhabited by meadow species (*Molinio-Arrhenatheretea* class) and these, which are associated with warm xerothermic grassland communities (*Festuco-Brometea* class). Additionally, the effect of disturbances related to the non-mining activities was also noted on the old residues which explains the occurrence of substantial group related to the ruderal vegetation (including species representing *Artemisietea* and *Agropyretea* classes). The results of the canonical correspondence analysis based on the environmental data from the farmland biotope showed that soil parameters such as electric conductivity (EC), content of the organic matter and magnesium, as well as topographic one - MRVBF index are all positively correlated with the first axis. This axis comprises plant species which are characteristic to the meadow and grassland communities. The second CCA axis positively correlates with content of potassium and has negative correlation with content of the phosphorus and parameter which describes altitude above ground level. Plant species which this axis comprises are typical forest, scrub and ruderal species. In case of habitats located in the forest biotope positive correlations with the first CCA axis were found with the environmental parameters such as: content of potassium, bioavailable content of zinc and cadmium and also with wind exposition index. This axis comprises plant species which form typical communities for dry meadows and grasslands, fringes and well-lighted forests. The second axis is related to the parameters which describe: total and bioavailable content of the lead in soil, as well as the level of the soil's wetness (TWI) and overall terrain rugedness (TRI). This axis corresponds with fringe and scrub communities and also comprises group of species which are typical for deciduous forests. Functional traits related to the type of life strategy were positively related to the

environmental factors (mainly content of bioavailable heavy metals) and traits which described competitive capabilities of plant species (SLA, age of first flowering, persistence of the soil seed bank) had negative relations with the environmental parameters. In both biotopes, the indices related to the functional diversity had higher mean values in the group of surrounding areas compared to the mounds which can indicate that plant species inhabiting non-transformed areas are more optimized for the utilization of the available resources.