Geophysical research has a long tradition in Czech and Slovak archeology. Based on the results of geophysical measurements we can create an idea of the extent of individual sites, monitor the shape and physical properties of individual archaeological features, as well as indicate the state of site disturbance, which is a significant contribution to their further research and protection. The research is focused mainly on the Central Danube region, but we also do not ignore overlook neighboring areas. The following three main components of the early medieval period are important for us: settlements, fortified sites and burial grounds. In the area of rural settlements, the study focuses on the reconstruction of their original appearance. In particular, the issues related to the structure of development, layout and size of rural settlements are discussed. In questions related to early medieval strongholds, the work focuses on the results of large-scale geophysical prospections and analyzes, focusing on the type of identified archaeological structures, the size of occupied areas and types of fortifications. The possibilities of grave detection are discussed in the chapter about burial sites. Particular attention is paid to the barrows. Based on the comparison of archaeological sources and results of geophysical measurements, the potential of archaeogeophysics in the study of medieval populations in our territory is demonstrated. At the end the outline of a possible future development of archaeogeophysics in early medieval archaeology is presented.