

Name of Method: Land use partitioning analysis (LUPA)

Summary of Method: The method is used to assess the effect of habitat fragmentation resulting from infrastructure developments. It involves the identification, assessment and recording of the effect of such partitioning on the size and quality of non-fragmented areas. It also enables the identification of non-fragmented areas and areas of high biodiversity value through overlaying different maps, grades the areas of no-fragmentation according to size and quality and represents the grades on a map. As such, the method requires the use of GIS. By using GIS techniques to undertake the assessment, comparisons of effect pre and post development can be made, including gradings to demonstrate the degree of impact. The method also enables cumulative impacts to be identified and assessed.

Advantages of Method: It deals with a topic not usually addressed, with good visual representation. The approach used provides a good opportunity for additional interpretation of the data through GIS.

Limitations of Method: It is expensive, time consuming and limited to a few topics. As such, it can be seen as a support tool to other techniques and not a definitive method.

References: Anon, 1999. Spatial and Ecological Assessment of the TEN - Demonstration of Indicators and GIS Methods. Environmental issue report No 11. South West Ecological Surveys, Levett-Therivel sustainability consultants and Oxford Brookes University, 2004. Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners. Report to CCW, EN, EA and RSPB.