How EIA Positively Influences Project Design

The process of Environmental Impact Assessment (EIA), whether or not it results in a Statutory Environmental Statement, has traditionally been seen by some parts of the development sector as just another hoop to jump through in getting a project delivered. It was sometimes considered as the proverbial “spanner in the works” when the masterplan or design was close to completion, only to be complicated by the introduction of unexpected environmental mitigation measures which could compromise the intended design.

Even the term “environmental constraint” has negative connotations, implying that an environmental feature can only have a negative influence on the scheme design. The reality is that EIA needs to be considered as a key part of the evolution of a scheme, benefiting the design of a development. If done well, the process of identifying environmental mitigation requirements can improve the integrity, design, feasibility and even value of the final scheme design (Figure 1).

Figure 1: Ecological mitigation requirements can add to the aesthetic quality of a development for the end user.

Housing schemes are classic examples of how design informed by EIA is often an improvement on an original vision. In one case that we have worked on, a Local Planning Authority had allocated a site for a certain number of residential units in its Local Development Plan. The EIA process identified a number of environmental features on the site which meant that the allocated housing density was not possible. The incorporation of mitigation requirements in the masterplan, including ecological and flooding compensation areas and the retention of mature trees, reduced the number of houses able to be included. However, reduced housing density, more open space and a better connection with the natural world resulted in a more attractive development, driving values up, and, most importantly, allowed planning permission to be secured. By considering the environmental factors together in a structured way for the EIA it was easier to reach a design that integrated mitigation into the scheme and created a much more pleasant environment in which to live.

Key environmental features, identified through early surveys for a proposed business park provided the starting point for individual site selection and the subsequent masterplan. As a result, an area of high potential for important archaeology was avoided through choice of an alternative site for initial development. The retention and provision of a lighting and habitat buffer for a woodland bat foraging corridor was part of the design concept. This meant that mitigation was effectively built in to the design.

Good environmental design also has benefits for the developer in terms of stakeholder relationships and project approval. A highway improvement scheme had several road layout options. The flood modelling process, carried out as part of the EIA, identified that one of these options would have caused unacceptable flooding, as well as potentially be subject to flooding itself. Another option would have crossed a Site of Special Scientific Interest. Both of these options were subsequently dropped as being unfeasible due to environmental considerations, resulting in an alternative option that was more readily accepted by statutory bodies, local residents and the public.
This project also demonstrated how early identification of unfeasible design options can save the developer time, money and effort in trying to promote an unfeasible scheme.

Environmental considerations can often add to the end users’ enjoyment of a development. Retention and enhancement of existing landscape features such as hedgerows, woodland, or mature trees improves the character of a business park (Figure 2) or enhances the driver’s view from a highway. The preservation and restoration of a listed building or historic feature may add an interesting feature to a new railway station. The creation of wildlife habitat improves the quality of a housing development.

Figure 2: Good use of existing landscape features is integral to a well designed business park.

The identification of environmental features through the EIA process can therefore positively influence the design of a development, both for the developer and the end user by responding to local character and features. Each stage of the masterplanning or design process should be an improvement on the previous design, having incorporated changes identified through environmental impact assessment.

Clare du Heaume, Parsons Brinckerhoff, 2013.