Mitigation Through Design and EIA - Designing out Risk and Designing in Mitigation

The dictionary definition of mitigation is to reduce the severity of something (Oxford Dictionary). Planning Practice Guidance states that mitigation is ‘designed to limit or remove any significant adverse environmental effects of a development’. Schedule 4, Part 1 of the EIA Regulations (2011), requires an Environmental Statement (ES) to include ‘a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.’

In Environmental Impact Assessment (EIA), mitigation is generally defined as meaning the measures taken to avoid, reduce, remedy/compensate or enhance the adverse impacts of a project. These are the four most common methods of mitigation, with the priority being to avoid, and where this is not possible, to reduce, and then to compensate or enhance. A project often includes a mix of all four types of mitigation, depending on the nature and severity of impacts. Avoidance is to avoid or prevent the impact in the first place, through for example, alternative options or scheme design. Reduction is through implementing suitable mitigation to reduce the impact of the project. To remedy or compensate is to offset the impact, or replace what will be lost. Enhancement leads to net benefit or a new benefit, to improve existing conditions.

Effective mitigation should be considered throughout the process, starting from project inception, and be iterative and continuous. It should not be an afterthought or done right at the end of a project. Consideration needs to be given to its effectiveness, reliability and certainty of both being able to mitigate the impact, and being able to be implemented at an appropriate time. It is also important that the mitigation proposed is considered as a whole, so that proposals to mitigate one environmental impact do not cause other impacts and that it is provided at the right time and is effective.

For example, the incorporation of a noise barrier which has to be continuous to be effective, can create issues of segregation, loss of amenity, loss of connectivity for both ecology and humans, visual impacts, safety concerns and implications for drainage. For ecological habitats, the location and timescales for establishing new habitat need to be fully considered. An ES-Coordinator is therefore important to ensure there is an overview of the process, and co-ordination of the design evolution, assessment and mitigation.

The process in EIA is to initially establish the project, the baseline and the likely significant impacts, then assess the proposals using the EIA methodology adopted to predict the significance of effects before mitigation is incorporated. From this, suitable mitigation should be identified and described within the ES. The proposals should then be amended as required, and the significance of effect re-assessed to ascertain the residual significance of effect. The mitigation measures should be clearly identified within the ES and incorporated into the parameters for the scheme where appropriate. On submission, the competent authority must weigh the significance of the likely harm of the project on the environment, taking into consideration the mitigation proposed. Where this is considered acceptable and planning permission granted, the mitigation measures, whilst guaranteed, should also be controlled through the implementation of planning conditions or through a legal agreement to ensure they are implemented as part of the proposals, at an appropriate time and in an appropriate manner. This is because without the mitigation proposed, the effects could be greater than assessed, or the project could be environmentally unacceptable.

It is therefore the case that much of the mitigation for a project is designed into the scheme at an early stage.
This is based on professional experience and judgement as to what mitigation is required and how this is best achieved, such as drainage schemes to reduce flood risk, landscape screening and protection of ecological habitats. This is beneficial as it ensures the mitigation is established early within the proposals so consideration by the whole team, identification of any conflicts or issues and discussions with the competent authority, consultees and the public takes place at an early stage in the process. This can help manage risk, costs and expectations of developers; make for effective EIA and assessment; and can also reduce requests for further information once the ES is submitted. However, this also means that mitigation is often established ahead of scheme testing, but the EIA assessment can then still ensure the mitigation proposed is appropriate to address environmental impacts, allowing refinement and additional mitigation to be incorporated as necessary.

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