ECOLOGICAL EXPERTISE, EVOLVED

Loddon Garden Village

Technical Appendix 11.2 – Ecological Impact Assessment Methodology

Prepared on behalf of

University of Reading

Final Report

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Loddon Garden Village

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Contents

Loddon Garden Village

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1. OVERVIEW

1.1 The approach to Ecological Impact Assessment (EcIA) taken in this report takes account of guidance in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland v1.3 (CIEEM, 2018). The Preface of the CIEEM EcIA Guidelines states:

> *"Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013) cites the CIEEM EcIA Guidelines as the acknowledged reference on ecological impact assessment. The Guidelines are consistent with the British Standard on Biodiversity, which provides recommendations on topics such as professional practice, proportionality, pre-application discussions, ecological surveys, adequacy of ecological information, reporting and monitoring."*

1.2 In accordance with the above guidance, EPR takes the following step-wise approach to EcIA:

- Prediction of the activities associated with a proposed scheme that are likely to generate biophysical changes which may lead to significant effects (either positive or negative) upon Important Ecological Features (IEFs);
- Identification of the likely Zone of Influence (ZoI) of those activities;
- Scoping to select the ecological features (habitats, species, ecosystems and their functions/processes) that are likely to fall within the predicted ZoIs and be affected by the activities;
- Evaluation of IEFs likely to be affected – both negatively and positively;
- Identification of likely impacts (positive and negative) on IEFs, together with an assessment of the geographic level at which effects are likely to be significant;
- Application of the mitigation hierarchy - refinement of the proposed scheme to incorporate impact avoidance and/or mitigation measures for negative effects on IEFs, and enhancements in order to deliver net gains;
- Assessment of the significance of residual effects and identification of any policy drivers for additional mitigation or compensation in the event of residual significant negative effects; and
- Advice on conformance with policy and legislation.

2. ECOLOGICAL EVALUATION METHOD

2.1 The evaluation method used in this EcIA uses the following geographic scale of importance for ecological features:

- International/European;
- National;
- Regional;
- County (or Metropolitan or Local Authority-wide area);
- District/Borough;
- Local; and
- Within the Zone of Influence.

2.2 With this in mind, features taken forward for detailed impact assessment are those which:

- Are evaluated as being of at least 'Local' ecological importance or have the potential to be so; and
- Are likely to be affected, positively or negatively, by the proposals.

2.3 Ecological features deemed to be of less than 'Local' importance are considered throughout the EcIA process in the context of the national and local planning policy requirement for 'Biodiversity Net Gain'. The implications for those features that are protected by legislation are also discussed separately at the end of the EcIA report.

2.4 'Ecological Importance' in EcIA terms is judged with reference to the following factors:

- Statutory requirements and policy objectives (e.g. site designations or the country lists of habitats and species of principal importance for the conservation of biodiversity); and
- Biodiversity value (e.g. diversity, rarity, scarcity, function within ecosystem, population trends).

3. IMPACT ASSESSMENT METHOD

3.1 The ecological features selected to be included in the assessment are those which both meet the importance threshold and are likely to be affected by the proposed scheme.

3.2 The first stage of the assessment is to determine the potential impacts upon each important ecological feature, with reference to the likely biophysical changes arising from the proposals. Impacts can be characterised according to their extent, magnitude, duration, timing, frequency, reversibility, and whether they are positive or negative. The likelihood of cumulative impacts with other planned or consented projects is also taken into account at this stage.

3.3 An assessment is then made of whether the effect(s) of an impact upon an important ecological feature is likely to be considered 'significant' in EcIA terms.

Significant Effects

3.4 The EcIA Guidelines state that:

> "*Significance is a concept related to the weight that should be attached to effects when decisions are made. For the purpose of EcIA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general […]*
>
> *In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)."*

3.5 Put simply, an effect is considered significant if it is likely to change the structure and function of defined sites and ecosystems, or the conservation status of habitats and species.

3.6 Professional judgement about significance is informed by conservation objectives for the affected feature, where available (for example conservation objectives set by Natural England for European designated sites, or in habitat and species action plans). The 'conservation status' (habitats and species) or the degree to which a feature is exhibiting 'integrity' in terms of structure, function and condition (defined sites or ecosystems) is also considered. The predicted effect of natural and man-made trends in the absence of development is also taken into account in determining the conservation status or integrity of a feature and in considering whether otherwise insignificant effects may contribute to a significant cumulative effect.

3.7 The CIEEM Guidelines state:

> *"The evaluation of significant effects should always be based on the best available scientific evidence proportionate to the severity of those effects. If sufficient information is not available further survey or additional research may be required. In cases of reasonable doubt, where it is not possible to robustly justify a conclusion of no significant effects, mitigation/compensation measures should be applied in accordance with the precautionary principle. Where uncertainty exists, it must be acknowledged in the EcIA."*

Opportunities for Biodiversity Net Gain

3.8 EPR will advise the applicant's team about how a scheme may be refined, in accordance with the mitigation hierarchy, to achieve net gains in biodiversity. Once the biodiversity measures are agreed, EPR will assess any residual effects and advise on the degree of compliance with national and local policy and nature conservation legislation. This process may evolve with the design of the development. In some instances, it may not be possible to avoid all the significant adverse effects or to deliver biodiversity net gain within the development site. In that case, EPR will advise of any opportunities to contribute to wider (offsite) biodiversity strategies which would deliver the appropriate mitigation, compensation and/or enhancement.

3.9 The final agreed measures will be set out clearly, so that the LPA can readily understand what planning conditions or legal agreements are required to achieve the necessary level of policy and legal compliance

4. REFERENCES

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 updated September 2024.* Chartered Institute of Ecology and Environmental Management, Ampfield.