

Chapter 8: Effect Interactions

INTRODUCTION

- 8.1 This chapter of the ES summarises the likelihood for intra-project effects or 'effect interactions'. Effect interactions occur as a result of interactions between multiple individual effects associated with just one project on a particular receptor i.e. the combination of individual effects, for example effects in relation to noise, airborne dust and traffic on a receptor. Note that inter-project i.e. effects in combination with other developments or 'cumulative schemes' have been discussed separately throughout this ES (in **ES Volume 1, Chapters 6 and 7**) as appropriate and have not been re-iterated within this ES chapter to avoid repetition.
- 8.2 There is no established EIA methodology for assessing the nature and scale of effect interactions on a receptor. However, the European Commission¹ (EC) has produced guidelines to assist EIA practitioners in developing an approach which is appropriate to a project. These guidelines have been used to develop an approach which uses the defined residual effects of the Proposed Development to determine the potential for effect interactions. These residual effects are reliant on mitigation measures (as identified throughout this ES), which have been assumed to be undertaken/adopted.
- 8.3 The approach to defining effect interactions, involves tabulating the residual effects of the Proposed Development against receptors or, where more appropriate, receptor groups to identify the potential for effect interactions. Residual effects that are beneficial or adverse in nature and that are minor, moderate or major in scale have been considered. Residual effects that are negligible in scale and neutral in nature have been omitted, as these effects are, by definition, imperceptible and insignificant. It is not considered that there would be a scenario where multiple negligible effects could lead to a significant effect interaction.
- 8.4 A quantitative approach has not been undertaken to the assessment of effect interactions. Instead, the potential for an effect interaction is discussed qualitatively using professional judgement to determine whether the potential effect interactions (i.e. combination of individual effects) results in an inter-project cumulative effect on the receptor in question.
- 8.5 Intra project cumulative effects or effect interactions arising from the demolition and construction works and the completed and occupied Proposed Development are discussed in the following sections of this ES chapter.

DEMOLITION AND CONSTRUCTION

- 8.6 There are no effect interactions associated with the demolition and construction works of the Proposed Development.

COMPLETED DEVELOPMENT

- 8.7 The Proposed Development will generate increased levels of nitrogen dioxide, whilst these effects are not considered significant they have the potential to interact with greenhouse gas (GHG) emissions. All GHG emissions are to be determined as **significant**, IEMA guidance² states that '*effects of potential future climate change...are likely to be interrelated to other key EIA topics*'. Mitigation measures are identified to minimise emissions as far as possible.

¹ European Community (1999); Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions.

² IEMA, 2017, 'Assessing Greenhouse Gas Emission and Evaluating their Significance' (<https://www.iema.net/assets/newbuild/documents/IEMA%20GHG%20in%20EIA%20Guidance%20Document%20V4.pdf>)