

Midland Metro

3.3 Environmental Effects

Defining the Significance of

Schedule 1 of the Applications Rules requires an ES to report on those environmental effects that are likely to be significant. However, there is no statutory definition of significance.

Environmental effects may range from the almost undetectable to the obviously intolerable. Somewhere in this range there will be a threshold dividing significance and insignificance. The primary purpose of identifying significant environmental effects is to inform the decision-making process. On this basis, a significant effect has been defined for the purpose of this project as an effect that, either in isolation or in combination with others, should – in the opinion of the EIA team - be taken into account in the decision-making process. This definition of significance is consistent with what has been adopted for EIAs of other light rail schemes in the UK.

This definition has provided a common framework within which to predict significant effects for all environmental topics during both the construction and operational phases of the proposed scheme. The criteria used to predict the significance of environmental effects arising from the scheme are set out in the methodology sections for each of the environmental topics addressed in Sections 6 and 7 of this ES.

In assessing the significance of effects, specific account is taken of their nature and duration and whether they are:

- **permanent or long term effects** – effects which result from an irreversible change to the baseline environment (eg landtake) or which persist for the foreseeable future (eg noise from tram operations);
- **positive effects** – effects that have a beneficial influence on receptors or resources (eg a modal shift from private car to public transport giving rise to improvements in local air quality);
- **negative effects** – effects that have an adverse influence on receptors or resources (eg an increase in noise levels);
- **direct effects** – effects arising from the impact of activities that form an integral part of the project (eg impacts arising from new infrastructure);
- **indirect effects** – effects that arise from the impact of activities not explicitly forming part of the project (eg an increase in road traffic generated by a new housing or business development);
- **secondary effects** – effects which arise as a result of an initial effect of the scheme (eg reduced amenity value of a community facility such a park or public garden as a result of construction noise); or
- **cumulative effects** – effects which arise from the combination of different effects at a specific location, the recurrence of effects of the same type at different locations or the interaction of different effects over time.

A set of criteria for each topic has been used in order to identify any significant effects arising from the scheme. In many cases, such as for noise, there are accepted methods for quantifying effects and determining the threshold of significance. In others, such as visual impact, the effects are not quantifiable and there is no established practice that offers a consensus on the significance of effects. In these cases it is necessary to define more subjective criteria and thresholds based upon a case-by-case use of professional judgement.

In general, most significant effects arising from the introduction of transport infrastructure will tend to be site-specific. However, in some cases, the effects of new infrastructure may be more widely spread (particularly those impacts that are positive or beneficial) and where this is the case scheme-wide impacts have been reported. The distinction between the two types of effects is described below.

Site-specific effects comprise:

- effects which result from a geographically localised impact and which are significant primarily at a neighbourhood or district level; and
- cumulatively significant effects which result from the combination of individually non-significant effects between different topics at a specific location.

Scheme-wide effects comprise:

- effects which are individually significant at a scheme-wide or regional level, but which are unlikely to be significant locally;
- effects which are cumulatively significant at a project-wide or regional level because of the aggregation of significant site-specific effects within an individual topic; and
- site-specific effects, or combination of effects of particular importance.