

## 5. Appraisal Methodology

### 5.1 EIA Legislation and Guidelines

Regard was had to the Environmental Protection Agency (EPA) publications 'Guidelines on the Information to be contained in Environmental Impact Statement's 2002'<sup>(1)</sup> and 'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) 1995'<sup>(2)</sup> in the preparation of this EIS.

The following categories which are based on the headings of Article 14 of SI 93 of 1999 EIA (Amendment) Regulations<sup>(3)</sup> were used to examine and assess the likely effects and impacts of the proposed road development on the environment:

- Traffic
- Community
- Noise and Vibration
- Air Quality
- Landscape and Visual
- Terrestrial Ecology
- Aquatic Ecology and Hydrology
- Soils, Geology, and Hydrogeology
- Climate
- Material Assets (Agricultural and Non-Agricultural)
- Archaeology and Cultural Heritage
- Architectural Heritage

### 5.2 The Significance of Environmental Effect

The EPA guidelines present a glossary of impacts. These have been adapted to provide the basis for deriving the significance criteria used in the EIS. The EPA Guidelines note that the significance of an impact is determined by a combination of objective (scientific) and subjective (social) concerns. Examining each of these, the draft guidelines indicate that topics should be included in an assessment if a development could cause, '*...significant impacts on an aspect of the environment which has been formally or systematically designated as being of importance*', or if the potential exists for the development to '*...significantly alter the existing character of some aspects of the environment*'.

Four objective criteria can be used to determine whether an impact is of significance, as follows:

- **Magnitude and Intensity** - Any development which can cause effects over a wide area, to a large number of receptors, or effects which are of an intensity which is significantly in excess of those normally experienced.
- **Integrity** - The degree to which the character or attributes of the baseline environmental topic is continued, enhanced or reduced.
- **Duration** - Any development which can cause impacts over a long period of time (more than one generation) or which will cause permanent changes to any aspect of the environment.
- **Probability / Certainty** - Where the magnitude, intensity, duration or consequences of any change cannot be anticipated with a reasonable level of certainty.

In defining the significance criteria the EPA draft guidelines have been refined and five levels of importance have been employed, namely:

- Severe
- Major
- Moderate
- Minor
- Not significant

The term severe is reserved for negative impacts only. Each of these levels is accompanied by a definition of an assumed relationship to the decision making process as presented in Table 5.1. For cross-referencing purposes the relationship between the terms used in the EPA guidelines and the significance levels used in this EIS are also shown.

### 5.3 References

- (1) Environmental Protection Agency (2002). Guidelines on the Information to be contained in Environmental Impact Statements. Environmental Protection Agency, Wexford
- (2) Environmental Protection Agency (2002). Advice Notes on Current Practice (in preparation of Environmental Impact Statements). Environmental Protection Agency, Wexford.

- (3) Statutory Instrument, SI No. 93 of 1999  
Section 14 (b). European Communities  
(Environmental Impact Assessment)  
(Amendment) Regulations.
- (4) Roads Act, Section 50 (1993). The  
Stationary Office, Dublin

**Table 5.1 Significance Criteria for the Proposed Road Development**

<b>EPA Glossary of Impacts</b>	<b>Significance Level</b>	<b>Criteria</b>
Profound or Significant Impact (Negative only)	Severe	Only adverse effects are assigned this level of importance as they represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. A change in a regional or district scale site or feature may also enter this category. Typically, mitigation measures are unlikely to remove such effects.
Significant Impact (Positive or Negative)	Major	These effects are likely to be important considerations at a local or district scale but, if adverse, are potential concerns to the project, which may become key factors in the decision-making process. Mitigation measures and detailed design work are unlikely to remove all of the effects upon the affected communities or interests.
	Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a resource. They represent issues where effects will be experienced, but mitigation measures and detailed design work may ameliorate/enhance some of the consequences upon affected communities or interests. Some residual effects will still arise.
	Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision making process. Nevertheless, they are of relevance in enhancing the subsequent design of the road development and consideration of mitigation or compensation measures.
Neutral, Imperceptible or Slight Impact	Not Significant	No effects or those, which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Specific significance criteria developed for other assessment topics are presented in subsequent chapters of the EIS, as appropriate, with reference to the broader criteria outlined in Table 5.1 above.