## **Table 3.3 Descriptions of Effects**

#### **Quality of Effects**

It is important to inform the nonspecialist reader whether an effect is positive, negative or neutral

#### **Positive Effects**

A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).

#### **Neutral Effects**

No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.

#### **Negative/adverse Effects**

A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).

## Describing the Significance of Effects

"Significance" is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see *Determining Significance* below.).

### **Imperceptible**

An effect capable of measurement but without significant consequences.

#### Not significant

An effect which causes noticeable<sup>2</sup> changes in the character of the environment but without significant consequences.

#### **Slight Effects**

An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.

#### **Moderate Effects**

An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.

#### **Significant Effects**

An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.

### **Very Significant**

An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.

#### **Profound Effects**

An effect which obliterates sensitive characteristics

# Describing the Extent and Context of Effects

Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.

## Extent

Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.

### Context

Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)

## Describing the Probability of Effects

Descriptions of effects should establish how likely it is that the predicted effects will occur – so that the CA can take a view of the balance of risk over advantage when making a decision.

# Describing the Duration and Frequency of Effects

'Duration' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.

## **Likely Effects**

The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.

#### **Unlikely Effects**

The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

## **Momentary Effects**

Effects lasting from seconds to minutes

#### **Brief Effects**

Effects lasting less than a day

## **Temporary Effects**

Effects lasting less than a year

## **Short-term Effects**

Effects lasting one to seven years.

#### **Medium-term Effects**

Effects lasting seven to fifteen years.

## **Long-term Effects**

Effects lasting fifteen to sixty years.

## **Permanent Effects**

Effects lasting over sixty years

#### **Reversible Effects**

Effects that can be undone, for example through remediation or restoration

## **Frequency of Effects**

Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

## **Describing the Types of Effects**

## Indirect Effects (a.k.a. Secondary Effects)

Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.

#### **Cumulative Effects**

The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.

## 'Do-Nothing Effects'

The environment as it would be in the future should the subject project not be carried out.

## **'Worst case' Effects**

The effects arising from a project in the case where mitigation measures substantially fail.

#### **Indeterminable Effects**

When the full consequences of a change in the environment cannot be described.

#### **Irreversible Effects**

When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.

#### **Residual Effects**

The degree of environmental change that will occur after the proposed mitigation measures have taken effect.

## **Synergistic Effects**

Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SOx and NOx to produce smog).