

# **APPENDIX 3: IMPACT ASSESSMENT METHODOLOGY**

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## 1. DETERMINANTS OF IMPACT SIGNIFICANCE

The following criteria were used to determine the significance of an impact:

### IMPACT MITIGATION/OPTIMISATION

Mitigation seeks to find ways of minimising or eliminating negative impacts, whereas optimisation enhances project benefits. Under every impact a summary is given of management actions recommended for the purpose of preventing or reducing the negative effects, or enhancing the positive benefits of the development. Mitigating/optimising guidelines to be implemented during the construction phase should be formulated into clauses that are to be written into the respective construction contract documents. Additional clauses can be added as/if necessary in response to any additional impacts that may become apparent during the detailed design stage or even during the construction phase of the development.

### EXTENT

Considers whether the impact will occur:

- on site,
- **locally**: within 2 km of the site;
- **regionally**: within the region;
- nationally or internationally.

### DURATION

Considers whether the impact will be:

- **temporary**: <1 year;
- **short term**: 1 to 5 years;
- **medium term**: 5 to 10 years;
- **long term**: longer than 10 years; or
- permanent.

### INTENSITY

Consideration as to whether the impact is destructive, or benign. Determines whether it destroys the impacted environment in totality, significantly changes its functionality, or slightly alters it. These are rated as:

- **Low**: The impact alters the affected environment in such a way that the natural processes or functions are not affected.
- **Medium**: The affected environment is altered, but function and process continue, albeit in a modified way.
- **High**: Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

## PROBABILITY

This describes the likelihood of the impacts actually occurring.

- **Improbable:** The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
- **Probable:** There is a possibility that the impact will occur to the extent that provisions must be made therefore.
- **Highly probable:** It is most likely that the impacts will occur at some stage of the development.
- **Definite:** The impact will take place regardless of any prevention plans, and there can only be relied on mitigatory action to contain the effect.

## 2. ASSIGNING IMPACT SIGNIFICANCE

Significance is determined through the integration of impact characteristics in terms of the above-mentioned variables resulting in a rating of high, medium, or low impact. Furthermore, impact significance will be assigned with and without mitigation or to highlight the importance of mitigation or optimisation of impacts. Significance ratings were defined using the following guidelines:

### HIGH

Impacts will be of a high significance if the following impact profile applies:

- the extent is local to international;
- the duration is long term to permanent;
- the ecological or social system will be affected to the point of collapse.

### MEDIUM

Impacts will be of a moderate significance if the following impact profile applies:

- the extent is local to regional;
- the duration is medium- to long term;
- the ecological or social system will be effected but continue to function.

### LOW

Impacts will be of a low significance if the following impact profiles apply:

- the extent is local to site specific;
- the duration is temporary to permanent;
- the ecological or social system will not be affected.

## 3. ASSIGNING IMPACT PRIORITY

The priority for the management of an impact is the product of impact significance and existence of applicable legislation. Thus even insignificant impacts become high priorities if applicable legislation exists.