

DRAFT ENVIRONMENTAL IMPACT METHODOLOGY AND ASSESSMENT MATRICES

PROPOSED GOLELA SUBSTATION AND 132kv POWER LINE TURN-IN LINES

Report No : 12722-Environmental Impact
Assessment Report

Submitted as part of the Basic Assessment Report

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31 July 2013

12722

1. ASSESSMENT METHODOLOGY

The potential significance of every environmental impact identified was determined by using a ranking scale, based on the following (DEAT Guideline document on EIA Regulations, April 1998):

Occurrence

- Probability of occurrence
- Duration of occurrence

Severity

- Magnitude (severity) of impact
- Scale/extent of impact

In order to assess each of these factors for each impact, the following ranking scales were used:

Probability

- 5 – Definite/don't know
- 4 – Highly probable
- 3 – Medium
- 2 – Low probability
- 1 – Improbable
- 0 – none

Duration

- 5 – Permanent
- 4 – Long term (ceases with the operational life)
- 3 – Medium-term (5 – 15 years)
- 2 – Short-term (0 – 5 years)
- 1 – Immediate

Scale

- 5 – International
- 4 – National
- 3 – Regional (>5km)
- 2 – Local (<5km)
- 1 – Site Only
- 0 - None

Magnitude

- 10 – Very High/don't know
- 8 – High
- 6 – Moderate
- 4 – Low
- 2 – Minor

Once the above factors had been ranked for each impact, the environmental significance of each was assessed using the following formula:

$$SP = (\text{magnitude} + \text{duration} + \text{scale}) \times \text{probability}$$

The maximum value is 100 significance points. Environmental effects were rated as either of high, moderate or low significance on the following basis:

- More than 60 significance points indicated high environmental significance
- Between 30 and 60 significance points indicated moderate environmental significance
- Less than 30 significance points indicated low environmental significance

The degree of certainty of the assessment was judged on the following criteria:

Definite: More than 90 % sure of a particular face

Probable: Between 70 and 90 % sure of a particular fact
Possible: Between 40 and 70 % sure of a particular fact
Unsure: Less than 40% sure of a particular fact.

2.0 IDENTIFICATION OF POTENTIAL IMPACTS

The Impact Assessment highlights and describes the impact to the environment following the above-mentioned methodology and assesses the following components which were identified by site assessment and the inputs of specialists as critical components that could be impacted on negatively by the proposed development:

- Heritage;
- Surface Water and Wetlands
- Terrestrial Ecology;
- Visual.
- Landuse
- Biodiversity
- Avifauna
- Vegetation
- Soil
- Socio-economic

3.0 IMPACT ASSESSMENT TABLES