

5. Traffic and Transportation Aspects

5.1. Introduction

In this chapter the traffic and transportation aspects that might influence the selection of suitable sites for the proposed Majuba combined cycle gas turbine (CCGT) plant will be discussed.

The sites proposed for this CCGT plant are located within the Gert Sibande District Municipality and within the Seme Local Municipality (MP 304).

5.2. Methodology

The access roads to reach each of the identified sites will be determined. These sites will then be compared relative to their access arrangements. The following criteria will be used: available capacity on the road network and acceptable travel time to and from residential destinations.

Two secondary counting stations exist along the N11, one north of Amersfoort, number 186 and one South of Amersfoort, number 379. Counts exist for 2001 and 2003 at these two stations. Additional traffic counts will be conducted at identified intersections for the EIA phase.

The current background traffic volumes on the various access routes to the 9 proposed sites indicate sufficient capacity to accommodate the generated traffic with a volume/capacity ratio (V/C ratio) well below 0.5. (Assume 1800 veh per hour for capacity considerations).

The road conditions are generally poor and SANRAL is in the process of upgrading several of their roads in the area, including the N17 which was upgraded in 2006, the N2 which will be upgraded in 2008 etc.

The pavement conditions of the N11 from Amersfoort to Volksrust was evaluated in 2004 by SSI and the following conditions were observed:

- Patching occurred over the whole section at a concerning degree,
- Bleeding occurred along most of this section at a small degree,
- Riding quality is between fair and good.

5.3. Nature of Impact

For the more detailed EIA, the following will be investigated:

- Impact of all traffic during construction
- Impact of employee traffic once operational
- Impact of fuel supply traffic

The gas will be supplied via a pipeline and will therefore not influence the traffic impact of the proposed development.

5.4. Extent of Impact

In order to access the sites, the following routes are expected to be used:

- In a southeastern direction along the R35 from Bethal to Amersfoort,
- Along the N11 in a southern direction from Ermelo to Amersfoort,
- In a northern direction along the N11 from Volksrust to Amersfoort,
- In an eastern direction along Secondary Road 163857 from Standerton to Amersfoort.

All of these routes will be used for all the identified sites under discussion. The sites are located at approximately the following distances from the main roads:

- 529, 530 (375 – 560m from the Standerton road)
- 535, 536 (3 – 4.7km from the N11)
- 528, 531, 532, 533, 534 (8 – 10km from the Standerton road and the N11)

All the identified sites are located close to the nearby towns being Amersfoort, Volksrust and Standerton.

5.5. Conclusions

No significant differences exist between the 9 identified sites from a traffic and transport point of view. Therefore a similar ranking is awarded to all the sites under discussion.

5.6. Recommendations

It is recommended that a detailed traffic impact study be undertaken for the preferred sites as determined by this Environmental Scoping Study to identify possible traffic engineering concerns at the specific site.