PART 4: SITE INFORMATION

Document reference	Title	No of pages
	This cover page	1
C4	Site Information	
	Total number of pages	

PART 4: SITE INFORMATION

1. General description

Kendal Power Station is situated approximately 40km South West of Witbank in the Mpumalanga province. Construction started in 1982 and took 11 years to complete.

Kendal Power Station comprises six generating sets (Units) of 686 MW each, the station capacity is 4116 MW, which is indirectly dry-cooled. The generators produces electricity at a voltage of 22KV, the generator transformers steps up the transmission voltage to 400kV.

Kendal Power Station receives its coal supply of over a million tons per month from a neighbouring mine Khutala as well as other sources with varying characteristics. The ash that remains after the combustion of coal has two grading i.e. coarse ash (5% of total ash) and fly ash (95% of total ash). The fly ash together with waste gasses passes through the electrostatic precipitators where 99.9% of the ash is collected. The coarse ash is removed by a submerged scraper conveyor to the apron conveyor. The fly ash is moistened and mixed in the ash conditioners. Both gratings of ash are transported via the overland conveyors to the ash dump, where it is spread by an ash spreader, levelled and covered with topsoil and finally regressed.

The maximum continuous rating of each boiler at the turbine stop valves is 577kg/s with superheated steam temperature and pressure of 540 degrees Celsius and 17,24MPa respectively.

The water usage at Kendal Power Station is minimal (0.1 litre per kilowatt-hour). The water comes from the Vaal and Usutu Water Schemes alternatively. The WTP produces potable and demineralised water, conducts water balancing and effluent management, chemistry control and monitoring of all process water. The CP plants, one at each unit, are used for the polishing of condensate water on the units while the CP Regeneration plant does the transfers and regeneration of the Unit CP resin and is located in the Water Treatment Plant.

The power station had a DIIR of 0.2 in 2005, but is continuously striving towards a DIIR of 0 which has been achieved on 11 August 2006. Kendal Power Station has been graded as a NOSA Integrated Platinum Five Star facility in June 2006.
The power station is a Zero Liquid Effluent Discharge Station and ISO 14001 compliant.

2. Existing buildings, structures, and plant & machinery on the Site

2.1. Offices, workshops and stores

The *Contractor* complies with the environmental policy given in Kendal Safety, Health and Environmental Specification for Contractors.

2.2. Contractor's yard

Should the *Contractor* qualify for a site, the *Employer* will provide a site within the premises of the Power Station for the *Contractor* to establish himself for the execution of the *works*. The *Project Manager* together with the Site Manager will allocate a site to the *Contractor*. A site close to the connection points of water, electricity and toilet facilities cannot be guaranteed.

A Contractor qualifies for a site if the answer to at least one of the following questions is affirmative:

a) Is the contractor needed on site on a daily basis to carryout his/her contractual duties?

b) Does the nature of contract activities demand that the contractor be involved continuously, with his/her contractual duties for the whole day for four (4) or more days in a week?

c) In a case of a break down, is the contractor required to respond to the call out within 15 minutes?

d) Is there any statutory regulation/s that warrants that the contractor must operate within the premises of Kendal Power Station for the delivery of contractual obligations?

e) The *Contractor* is responsible for keeping the site in good state of maintenance and is responsible to ensure that at the end of the Contract period, he informs the Site Manager to inspect the site at least thirty days (30) before the Contract end date. The *Contractor* shall vacate the site allocated to him at the end of the Contract or on termination of the Contract

A written request, indicating the *Contractor's* requirements in locality and area of storage, office and workshop sites is submitted to the *Supervisor* as soon as possible after the Contract Date.

2.3. Supply of electricity

Electric power for construction, both 220V AC and 380V 3-phase supply, is supplied at Site free of charge, but connection fees are for the *Contractor's* account. All installations comply with the details set out in Kendal Maintenance Procedure- Contractor's Temporary Electrical Equipment Supply, and Construction Power Supplies (Occupational Health and Safety Act - Act 85 of 1993) and the Kendal Safety, Health and Environmental Specification for Contractors.
The *Employer* does not guarantee continuity of supply and no claims for standing time as a result of power failures will be considered. The *Employer* connects distribution boards to a 380V three-phase AC power supply, only after the *Contractor* has submitted the valid Certificate of Compliance
A written request, indicating the *Contractor's* requirements is submitted to the *Project Manager* as soon as possible after the Contract Date.

2.4. Water

Potable and raw water for construction purposes are also available free of charge at the nearest point of supply installed.
A written request, indicating the *Contractor's* requirements is submitted to the *Project Manager* as soon as possible after the Contract Date.

2.5. Sanitary facilities

Permanent toilets to serve the Power Station and urinals at the boundary area have been constructed by the *Employer* and all the *Contractor's* personnel may make use of these facilities if within the allocated site for execution of the *Works*.

3. Subsoil information

Ground conditions consist of compacted coal and natural soil. The *Contractor* must make his own observations as to the specific soil conditions. Access to be arranged with the *Project Manager*

4. Hidden services

Provide details about and drawings showing hidden services and underground structures. If accurate details are not available state what assumptions are to be made by the *Contractor* concerning such services.

5. Other reports and publicly available information

Altitude	1624.0m above MSL
Terrace Level	1619.0m above MSL
Outside ambient air temperature Minimum dry bulb Maximum dry bulb Atmosphere	+40 degrees Celsius -6 degrees Celsius +30 degrees Celsius Dry/ Dusty
Rainfall: Mean annual rainfall Maximum rainfall for 24 hour period Relative humidity: Maximum Minimum Weighted average Mean annual barometric pressure	750mm 125mm 90% 30% 61% 83.8kpa
Hail Maximum size	20 mm diameter
Wind: Summer average, daytime Winter, average daytime Minimum expected, normal Minimum expected, gusts	3 m/s NW 3.7m/s NW 13.7 m/s 31 m/s