

PART 4: SITE INFORMATION

Document reference	Title	No of pages
C4	This cover page	1
	Site Information	3
	Total number of pages	

PART 4: SITE INFORMATION

1. General description

Provide a general description of the Site and its location. Reference would probably be made to a drawing showing the Site and its surroundings and the *boundaries of the site* as required by the Contract Data. It is particularly important that details of surrounding buildings be provided where crane operation is likely to be affected, or the *works* involve deep foundations adjacent to existing buildings.

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 produce electricity at a voltage of 22KV, the generator transformers step 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 coal ash is removed by a submerged scraper conveyor to the apron conveyor. The fly ash is moistened and mixed in the ash conditioners. Both grading 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 power station is a Zero Liquid Effluent Discharge Station and ISO 14001 compliant.

The main access gate to the Power Station is at 26° 5'0.96"S and 28°58'29.01"E.

Climate and Weather Data

General Weather Conditions

The climate of the site is typical of Highveld conditions, with high summer temperatures and moderate to cold winters. Temperature statistics for the climate which are similar to Bethal were obtained from the South African Weather Service website (www.weathersa.co.za).

Climatic conditions will be defined as exceptionally adverse only when the measured condition deviates from the supplied average data by a margin of 30%, over the time period as stated within the average data (e.g. daily or monthly).

Temperature

During the summer months (October to March) average daily maximum temperatures are between 24°C and 26°C and average daily minimum temperatures are between 10°C and 14°C. In the winter months (April to September) average daily maximum temperatures vary between 17°C and 23°C and average daily minimum temperatures are between 1°C and 9°C. Frost occurs frequently during the winter months.

Rainfall

The area experiences thunderstorms during the summer months, which usually occur in the late afternoons. The annual average precipitation (recorded over a period of over 26 years) is 711mm, while the average monthly precipitation varies 146mm in January and 6mm in July.

Wind

The area is subject to winds predominantly from the north and northwest, with greatest frequency during the months of August to December. During the remainder of the year, the wind remains generally in a north/north westerly direction, but with a lesser frequency.

Site Data

Site Location

Kendal Power Station is located approximately 40km southwest of Witbank in Mpumalanga Province. The location and access roads are shown in the diagrams below

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

If the *works* have interfaces or hook up points with existing facilities or comprise refurbishment of existing facilities, provide full details of these so that the tendering contractor can plan his design and construction to integrate with them as the Works Information requires. As built drawings of the existing facilities usually provide the necessary information; such drawings can be listed here stating where they are located for the *Contractor's* use.

The *Contractor* connects all newly supplied and reinstated/re-used plant and materials to existing services located within and around the xxxxxxxx.

Laydown and Working areas

Definitions and Locations

Laydown Areas are classified as either Workshop Laydown Areas or General Laydown Areas as may be applicable in the context. They are defined as such:

Workshop Laydown Areas - areas where the *Contractor* can carry out typical engineering workshop activities related to the Works, including but not limited to:

- Storage of Contractor's Equipment, Materials, Plant and Temporary Works
- Fabrication, minor maintenance, modifications, inspections of Contractor's Equipment, Materials, Plant and Temporary Works
- Workshop Laydown Areas may also be utilised as General Laydown Areas

General Laydown Areas – areas which the *Contractor* may only utilise for the following:

- Contractor offices
- Welfare facilities including ablution, change rooms and eating facilities

The *Contractor* shall provide a detailed plan of his Laydown and Working Areas within 7 days of the Commencement Date. This plan will include, but is not limited to, details of all Temporary Works to be used, services required and connection details and proposed usage of Laydown and Working Areas.

Maintenance and Housekeeping

Maintenance of and within the Laydown Area and housekeeping of the Laydown and Working Areas will be the sole responsibility of the Contractor. All waste will be managed in accordance with Eskom Waste Management Procedure 32-245

Services

Air

The *Contractor* is responsible for the supply of compressed air as is necessary for the execution and completion of the Works and remedy of defects.

Water

The Employer is to supply free issue potable water for domestic use, at a designated supply point. For uses other than domestic, the *Contractor* shall be responsible for the supply of water. Supply is based on reasonable use. The Supply point information is as per the Laydown and Working Areas Schedule.

Contractor is responsible for connection to the designated supply point and routing to desired areas within Laydown and Working areas.

Electricity

The Employer is to supply free issue electricity, at designated supply points. The Supply points are as per the Laydown and Working Areas Schedule.

Contractor is responsible for connection to the designated supply points and routing to desired areas within Laydown and Working areas in accordance to applicable regulations of the land.

Sewage

The *Contractor* is responsible for either connecting to the local Sewage system or providing other means of managing sewage as required. The *Contractor* is responsible for connection to the designated supply points and routing to desired areas within Laydown and Working areas. The connection points are as per the Laydown and Working Areas Schedule.

Gas

The *Contractor* is responsible for supply of any Gas as is necessary for the execution and completion of the Works and remedy of defects.

Communications

The *Contractor* shall be responsible for all communications services, including but not limited to internet, telephone, radio, required for the execution and completion of the Works and the remedy of Defects.

Overhead lines

The *Contractor* is responsible for ensuring any activities on Site do not interfere, impede or in any way disrupt any overhead lines, pylons or other transmission and distribution equipment. This is including but not limited to the transportation of Contractor's Equipment, Materials, Plant and Temporary Works to and from the Laydown and Working Areas.

Security

Access to Site

Access to Site and continued use of the Site is in accordance with Kendal Access Control Procedure SCP0004 and the National Key Points Act, 1980 (Act No. 102 of 1980).

The following must also be noted:

- The *Contractor* applies for access permits for all works via the Employer's Representative.
- The *Contractor* applies for Contractor's Permits for all his employees and/or subcontractors at the Security gate, at least 48 hours prior to entry of the Kendal Power Station Security Area.
- The *Contractor* submits his/her company's employee list to the Employers Safety Department listing all of the personnel that he intends using on site when booking for SHE Induction as soon as the *Contractor* SHE File has been assessed and approved. At least 48 hours prior notice must be given to the Employer's Representative of the requirement to attend Site SHE inductions.
- The completed list, identified with the Contractor's name, contains the following information:
 - Employee Name
 - Employee ID Number
 - Eskom Safety Co-ordinator signature

- Employer's Representative's signature
 - Validity Date
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- No access permits are issued to personnel who have not attended SHE induction. A copy of proof of SHE induction attendance must be presented at Security when applying for employee access permits.
 - The *Contractor* photocopies the first page of the ID book of every one of his employees.
 - This completed list, together with the photocopies of the ID books / valid Passport / Work Permit is delivered to Protective Services for the preparation of the Contractor's Permits.
 - The *Contractor* allows at least 48 hours for the preparation of the security permits, before he collects the permits from the Protective Services offices.
 - The Contractor's personnel are required to be in possession of a Contractor's Permit at all times inside Kendal Power Station.
 - All *Contractor* permits are submitted back to Protective Services when the workers leave the site after completion of the works. The *Contractor* shall ensure that all its employees/workers return such permits to the Employer. Failure to return the permits will result in a R25, 00 penalties for each non returned permit which will be deducted from the final payment.
 - The *Contractor* compiles detailed Tool Lists (obtainable from Protective Services) of all tools and equipment to be taken on site before arriving at the power station.
 - Authorised copies of these lists are retained to be used again when the tools and equipment is removed from site.
 - The Contractor's visitors and all personnel conform to the security arrangements in force at Kendal Power Station.
 - Application forms for visitors are filled in by the Contractor's Representative and approved by the Employer, and submitted to the Employer's Protective Services office one day prior to the visit.
 - Visitors will not be allowed on site if the necessary forms are not in the possession of security staff.
 - The Employer's Security Manager may, with valid cause, remove any of the Contractor's personnel from the site, either temporarily or permanently. They may deny access to the site to any person whom, in the opinion of the said manager constitutes a security risk.
 - No unauthorised vehicles will be allowed on site. Only *Contractor* vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications are directed to the Employer's Representative for consideration and approval.
 - The *Contractor* is restricted to the Site. The *Contractor* is forbidden to enter any other areas, and ensures that his employees abide by these regulations.
 - No recruiting of casual labour may be done on Eskom premises, including the area outside the Power Station Security Gate.
 - Security personnel may search any premises, property or person within the security area of Kendal Power Station
 - No photographic equipment will be allowed within the security area of the Power Station without obtaining permission. Application forms for such permission is available from the Security Services

offices at the main entrance. Any person found in possession of such equipment will be prosecuted in terms of the National Key Point Act.

- All employees shall be subjected to security checks

Security of Laydown and Working Areas

The *Contractor* is responsible for the security and safe keeping of all Laydown and Work areas and any associated Contractor's Equipment, Materials, Plant, Temporary Works and Employer's Equipment as may be located within those areas. The *Contractor* shall at all times comply with the National Key Points Act, 1980 (Act No. 102 of 1980). The Contractor's proposal for achieving this shall be submitted to the Employer for review within 7 days of the Commencement Date and the Employer shall respond within 14 days of receipt.

Welfare Facilities

The *Contractor* is responsible for provision, accessibility, maintenance, disposal of waste within, and housekeeping of all welfare facilities within the Laydown and Working Areas, which include but are not limited to ablution, eating, changing, shower and rest areas. As a minimum the following shall be provided:

- Shower facilities;
- Sanitary facilities;
- Changing facilities;
- Eating areas;

The *Contractor* shall provide sheltered eating areas for use of all Contractors' personnel on Site.

Eating areas shall provide adequate shelter and shall be ventilated and lighted. Tables and backed seating shall be provided. Suitable receptacles with lids for depositing waste shall be provided at convenient points inside and outside the eating areas.

The *Contractor* shall ensure compliance to all legislation and Eskom's Occupational Hygiene Quality Assurance Manual - SHE0021 and Eskom's Food Hygiene and Safety Management - 39-113 procedure with respect to food management. Compliance shall be verified during the client's audits and inspections on the Contractor.

Drinking Water

The *Contractor* is to make available fresh drinking water for his employees, sub-contractors and any other persons employed on the Site or Works. This water is to be available at the Laydown areas and Working areas in sufficient quantities and within sufficient proximity to the Works so as not to impede the Works or the operations of the Kendal Power Station

Ablution Facilities

The *Contractor* is responsible for provision of suitable ablution facilities within the Laydown and Working areas, which as a minimum will meet all relevant legislation. These facilities are to be provided in sufficient quantities and within sufficient proximity to the Works so as not to impede the Works or the operations of the Kendal Power Station

Meals

The *Contractor* is responsible for the provision of all meals for employees, in line with all relevant legislation and standards. The *Contractor* is responsible for the provision of suitable eating areas and these facilities are to be provided in sufficient quantities and within sufficient proximity to the Works so as not to impede the Works or the operations of the Kendal Power Station

People and Equipment Movement

The Employer does not provide any passenger or goods lift services

Meetings

A calendar of all meetings will be agreed between the Employer and *Contractor* no later than 30 days after Commencement Date. Meetings shall be as per project control specification and ad hoc meeting will be agreed by both parties.

All meetings are to be recorded using minutes or a register, prepared and circulated by the person convening the meeting. Such minutes or register are not used for the purpose of confirming actions, instructions or determinations under the Contract as these are done separately by the person(s) identified in the conditions of contract to carry out such actions, instructions or determinations

Permits

The *Contractor* shall comply with the Generation Plant Safety Regulations 36-681 at all times. The *Contractor* shall provide an acceptable number of authorised Responsible Persons in accordance with the Generation Plant Safety Regulations to ensure no delays occur during the execution of the Works and remedy of defects. Training will be the responsibility of the Contractor. Verification, examination and authorisation of the nominated persons will be the responsibility of the Employer and shall be performed on dates nominated by the Employer. Should the Contractors nominated persons fail to achieve the required standards, any further training, verification, examination and approval will be the responsibility of the Contractor. The *Contractor* is to provide the proposed number of people to be authorised as a tender returnable.

Construction Rules

Rigging and Lifting

All rigging method statements, lift plans and other relevant documents will be reviewed by the Employer, prior to the relevant activity commencing. The review period for method statements is 14 days and if the Employer gives notice to the *Contractor* that a method statement fails to comply with the Contract, as per General Conditions Clause 5.2, it shall be rectified and resubmitted within 7 days of notification.

Cell phone usage

Cell phone usage will be in accordance with Eskom procedure 36-583

Respecting the Working areas

In order to provide a safe working environment and to respect all persons on the Site, the following are strictly forbidden:

- Spitting
- Urination (other than in designated toilets)
- Defecation (other than in designated toilets)
- Sexual Activities

The Employer shall be entitled to immediately remove, or instruct the *Contractor* to immediately remove, any person for whom the *Contractor* is responsible who is in violation of the above, in accordance with applicable contract conditions and/or other rules and regulations.

Environmental and Occupational Hygiene

Environmental Policy

The *Contractor* will implement, and provide a copy of, an Environmental Policy which complies with Environmental Management System ISO 14001 requirements. A copy of the applicable policy shall be provided as a tender returnable. *Contractor* shall be responsible to implement its occupational hygiene plan and programme within his area.

Method Statements

All Method Statements shall include, but not be limited to include, the following environmental information:

- Detailed scope of work
- List of equipment to be used
- List of chemicals to be used with complete MSDS's
- Risk Assessment of the Environmental Risks associated with the activities
- Management Plan of the identified significant risks
- Waste Management Plan
- Oil Spill Management Plan
- Incident reporting and management

3. Subsoil information

Provide details of geotechnical reports, borehole records and test results for parts of the Site where earthworks are required by this contract. These details may be referenced as an Annexure to this document where they are extensive.

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

This subsection may refer to mapping, hydro-graphic data, hydrological information, shipping movements, tides and published papers or Geological Surveys that the tendering contractor may need to be able to decide his method of working and programme and prepare any designs for which he would be responsible.