PART 3: SCOPE OF WORK

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C3.1: *EMPLOYER*'S SCOPE

Contents

1 Description of the *services*

1.1 Executive overview

The Matimba Power Station Ash Disposal Facility (ADF) Extension is required to ensure that there is sufficient ash storage capacity available for the remaining life of the Power Station and to comply with the National Environmental Management Act (NEMA). The Conditions of Contract are the New Engineering Contract (NEC) Professional Services Contracts (PSC)

Umbani JV comprising of Gibb Consulting and Knight Piésold Consulting was appointed on 5 March 2019 by Eskom to undertake the basic and detailed design of the Matimba Power Station continuous ash disposal facility (ADF) project, in accordance with the approved licences received from Department of Environment, Forestry and Fisheries (DEFF) and Department of Water and Sanitation (DWS).

It is a requirement by the DEA and DWS to appoint Engineering Council of South Africa (ECSA) professional registered Civil Engineers to supervise the construction of the works to ensure that the project complies with the conditions stated in the Environmental Authorization (EA) and Water Use License (WUL) issued to Matimba Power Station for the construction of the ADF.

To allow competitive tendering, the successful Contractor will have to take over the design and the design liability to be able to address design/technical queries and any design changes during the construction supervision period, without the assistance of the original Designer. The appointed *Consultant* will now become the Designer, with full liability for the design including the issuing of a final Professional Engineering Certificate (PEC) for the completed works.

The Matimba Ash Facility Extension project is split into 8 phases:

• Phase 0: I Exemption Area + Piggyback on Existing Ash Dump up until March 2024
• Phase 1: Lined up to August 2028
• Phase 2: Lined up to February 2032
• Phase 3: Lined up to December 2035
• Phase 4: Lined up to November 2039
• Phase 5: Lined up to November 2043
• Phase 6: Lined up to January 2048
• Phase 7: Lined up to February 2051
• Phase 8: Lined up to February 2054

The initial works, exemption area works, and initial lined area works were subdivided into design and construction phases. The purpose of this subdivision was to compartmentalise the various works into smaller packages with the potential for construction to be handled independently of one another.

This proposal is to cover the Construction and Commissioning Monitoring of Phase 1 and all associated infrastructure and provide project readiness for the next Phases.

One of the objectives of the project is to provide placement for learners requiring Work Integrated Learning exposure – P1 and P2 Learners (Method 3) and/or Professional Candidates (Method 4).

1.2 Interpretation and terminology

The following abbreviations are used in this Scope:

Abbreviation	Meaning given to the abbreviation
CMD	Construction Management Department
DEA	Department of Environmental Affairs
DWS	Department of Water and Sanitation
ECSA	Engineering Council of South Africa
EIA	Environmental Impact Assessment
ITP	Inspection Test Plan
PCD	Pollution Control Dam
SME	Subject Matter Expert
SoW	Scope of Work
WUL	Water Use License
QCP	Quality Control Plan

2 Specification and description of the *service*s

2.1 Scope of Works
2.2 Purpose

The purpose of this document is to give a high-level scope of work for the sourcing of professional engineering services from a Civil Subject Matter Expert (SME), for taking over the design and the undertaking of the design clarification, provision of PEC and other related activities but not limited to carry out the following objectives:

- Design Verification and Accountability
- Construction Control and Monitoring Services
- End Phase Commissioning and Completion

2.3 SCOPE OF WORK

The scope of work entails the Design Monitoring and Construction Supervision of the detailed design for the extension of the Matimba Ash Dump Phase 1.
All Construction and Operating Philosophies must be in line with the existing and future ashing area's WUL and the new ashing area's Waste and Water Use Licence requirements.

The *Employer* intends issuing the existing approved designs to the appointed *Consultant*. The *Consultant* shall review and adopt (or modify and seek regulatory approval as applicable) the existing drawings, reports, and design documentation for Matimba Ash Disposal Facility to the extent

necessary to assume professional design liability and accountability for the designs and the constructability of the design. Caveat: It must be noted that the design was completed by the original design *Consultant* around 2019/2020 and [conditionally] approved by the relevant Authorities. The *Employer*'s main objectives is thus to construct the approved designs for the phase outlined above. Consequently, the *Consultant* shall take into consideration, as far as reasonably practicable, the existing project constraints and *Employer'*s objectives.
Any changes to the existing approved design, deemed necessary by the *Consultant*, must be motivated to the *Employer*. The changes must duly follow the relevant regulatory and legislative approval processes including *Employer*'s design change processes.

The *Consultant*'s high-level scope details is as follows, including but not limited to:

- Design Verification and Accountability
- Construction Control and Monitoring Services
- End Phase Commissioning and Completion

2.3.1 Design Verification and Accountability

The *Consultant* shall ensure that all submitted drawings, reports, instructions, and other relevant design related documents are to be signed by an ECSA professionally registered engineer in the relevant engineering discipline. The *Consultant* shall refer to, amongst other relevant requirements, Engineering Council of South Africa Code of Conduct for Registered Professionals, Engineering Professions Act.
The *Consultant* is expected to review and verify all design related information, philosophies, and deliverables from the original design. The *Consultant* is therefore expected to, amongst other things, identify any potential flaws; risks; or possible optimisations, which may arise from the original design, for rectification. If design risks, recommendations and/ or optimised solutions have been identified, this shall be discussed with the *Employer* prior to any further development. The *Consultant* is expected to provide a motivation through discussions regarding any modifications required, as well as the time and cost implications resulting from the deviation. Once accepted this shall be documented in the forthcoming design reports. Caveat: any changes to the existing drawings deemed necessary by the *Consultant* must duly follow the relevant and applicable regulatory and legislative approval processes including *Employer'*s design change process.

All deliverables are submitted in both hard and soft copy formats. All drawings are submitted in PDF and CAD format. The CAD format can either be in .dgn or .dwg format.

The Design Verification and Accountability includes but is not limited to the following:

- Review, verify, adopt or modify as applicable including identification of any potential flaws, risks etc.; or possible optimisations of the Matimba Ash Dump Detailed Design (301-00825-01) and supplementary information provided (including but not limited to Design Report, Drawings, Appendixes, Water Balance, Operational and Maintenance Manual, Matimba Ash Dump Geotechnical Report, Quality Control Plan, Liner and interface Memos, Risk Registers, Project Technical Specification, Construction Works Information, Bill of Quantities, Ash Dump Growth Plans and Constructability Report) to the extent necessary to assume professional design accountability and liability thereof.
- Take full professional design accountability and liability for the existing Matimba Ash Dump Detailed Design and all design clarification updates or changes to the Matimba Ash Dump Detailed Design
- Preparation of any temporary or permanent design changes and approvals that may be required with the approved licences received from Department of Environment, Forestry and Fisheries (DEFF) and Department of Water and Sanitation (DWS) and provision for engagement and correspondence with Authorities on the designs if required.

  - In the detailed design the dirty water runoff from Phase 1 is captured in the effluent trench and drained to the new South Ash Water Return Dam as shown on the detailed design drawings. At the time of compiling this document, the *Employer* is in the process of applying for a Water Use License to include pollution control dam (South Ash Water Return Dam) using the current approved designs. If the *Employer* does not obtain the necessary approvals from the authorities to construct the new South Ash Water Return Dam (AWRD) during Phase 1 construction then the project will need a temporary design to collect and drain the storm water from Phase 1 to the nearest existing dam, Metsimaholo. This temporary design will need to be in place, to allow commissioning and operations of Phase 1, until such time that the South AWRD is constructed.
- Finalisation of but not limited to; Civil Construction Drawings, Bill of quantities, Project Specification, Works Information, design report(s), storm water management, Operating and Maintenance Manual in accordance with Regulations and Environmental Authorisation conditions
- Provision for adhoc surveys as required to verify the Contractor's findings.
- Provision to address Eskom comments by Eskom on identified modifications, flaws, risks, or possible optimisations
- Provision for sectionalisation/compartmentalisation of Phase 1 during construction, as far as reasonably practicable and ensuring environmental compliance, to allow Employer to safely start ashing on completed section
- Assistance on cost estimate reviews, enquiry, and evaluations

  - Perform a high-level review at tender stage to provide the assurance that the *Consultant* will be able to take-over the liability of the original designer minimising and identifying any material changes, which could result in significant cost variations and/or delays on the constrained time frame.
  - To assist the *Employer* in compiling the Works Information for construction of Phase 1 and the associated infrastructure to ensure it is compatible with NEC requirements. The *Employer* for Construction works has chosen Activity Schedule (Option B). Construction drawings pricing should be for NEC (Option B) Bill of Quantities/ schedule of quantities, to align with the chosen NEC option.
  - Construction Cost Review and recommendation
  - Review, verify, adopt, or modify as applicable the Mechanical design including the dust suppression (sprinklers and irrigation lines) and pumping network (inclusive of new, replaced, and existing pumps specification and placement).
  - Updating or creation of applicable P&IDs, pipework construction drawings and sprinkler/irrigation design and requirements.
  - Provision of construction drawings, where applicable, for the pumps, pipework, layout between South Ash Water Return Dam and Metsimaholo. Refer to the relevant sections of the Matimba Ash Dump Continuous Ashing- Basic and Detailed Design Report.
  - Provision for irrigation directly from South Ash Water Return Dam and Metsimaholo to be designed inclusive of P&ID and independent pumping and pipework requirements. Refer to the relevant sections of the Matimba Ash Dump Continuous Ashing-Basic and Detailed Design Report.
  - Provision for ad-hoc Geotechnical verification testing and material conformance testing (third party independent testing) as deemed necessary by the Consultant.

2.3.2 Construction Control and Monitoring Services

The services broadly entail the full time Construction Control and Monitoring in accordance with Level 4 of the ECSA Guideline Scope of Services and Tariff of Fees for Persons Registered in terms of the Engineering Profession Act, 2000, (Act No. 46 of 2000) and ECSA Overarching Code of Practice for the Performance of Engineering Work of Phase 1.

The services are envisaged to include, inter alia, provision of site and head office support engineers, supervisors, and the professional appointed person (if required) as deemed necessary by the *Consultant* during construction to deal with design changes, construction supervision, performing technical assurance and conducting the necessary inspections and monitoring during construction to ensure design intent is achieved and ultimately licencing for the use of the facilities.

This is envisaged to include head office design engineering support, on site construction supervisors including front line supervisors, monitoring progress, safety, and quality. It also requires on site engineering performing technical assurance to ensure that the approved designs are implemented correctly to the specified standards and specifications.

The services include but not limited to the following:

- Performance of duties required as Designer in terms of the Construction Regulations 2014 including.
- Respond and be accountable for technical aspects/queries including but not limited to the review of method statements, material approvals, survey approvals, Requests for Information, Concessions, Data Books, and technical correspondence to the Department.
- Carry out the necessary inspections at appropriate stages to verify that the construction of the scope of works is carried out in accordance with the designs.
- Prevent any contractor from executing any construction work which is not in accordance with the relevant design`s health and safety aspects.
- In the final inspection of the completed structure, include the health, safety, and environmental aspects of the scope of works as far as reasonably practicable, declare the structure safe for use, and issue a completion certificate to the client.
- To assist the *Employer* in Management of Contractor’s Programme and providing technical oversight on the Contractor’s programme.
- Invoicing including all backup documentation such as signed timesheets and payment certificates.
- Monthly progress and inspection reports by Design Engineer and/or authorised Designer Representative.
- Attendance and arrangement of site meetings (Technical (including with the authorities), Quality, Progress).
- Review of contractors Quality Control Plans (QCP), Construction Method Statements.
- Inspection of Hold Points.
- Handling of technical queries and resolutions.
- Construction Material approvals, provision for approval letter for respective material approval submission.
- Input / review to rehabilitation methods and requirements during construction.
- Keeping of detailed records of construction activities.
- Review of as-built information and updating of drawings.
- Independent checks of field tests and surveys.
- Third party adhoc Laboratory verification of tests, as deemed applicable by *Consultant.*
- Review and approval of ITP for construction.
- Progress monitoring and reporting.
- Daily review and sign-off of Contractor’s Quality Control documentation.
- Weekly review of data book documentation.
- Maintain and update *Consultant*s Master Document List (i.e., Control of documentation, registers and record keeping).
- Risk identification, monitoring, and mitigation.

- Submission to the Authorities with input from the Eskom environmental representative (DEFF) & DWS) on progress of construction and commissioning (where applicable)
- General project communication regarding historic decisions, actions and documentation including formal letters.
- Managing interfaces with other *Consultant*s.
- Technical input into claim adjudication.
- Updates on the project specification if required.
- Progressive construction survey review and approvals (i.e., signed approval letters by delegated designer representatives).
- Construction Quality Assurance for water conservation and pollution control barrier systems
- Progressive review and approval of construction data books.
- Provision to review of Electric Leak Location survey report (Environmental Approval Licence condition of the Detailed Design License.
- Construction Material approval reviews and approval letters.
- Provision for reporting on meetings with the Authorities and addressing design related comments. Arrange meetings with DWS / Department of Environmental Affairs (DEFF) and presentations for the approval of designs.
- Provide regular feedback on the status of the works to assist the *Employer* to Manage costs and a scheduled time frame of the *works.*
- Coordinate the inputs / designs from all Eskom disciplines where required.
- Comply with all Eskom specific policies, procedures, and guidelines.
- Adhere to all applicable South African governing legislation and regulations.
- Provision for ad-hoc Geotechnical verification testing and material conformance testing (third party independent testing) as deemed necessary by the Consultant.

2.3.3 End Phase Commissioning and Completion

Preparation of post construction End-of-Job technical documentation required for submission to the Authorities as part of the licensing of the facility. The *Consultant* shall accordingly consider, amongst others, the minimum requirements as outlined in the Department of Water and Sanitation.

The End Phase Commissioning and Completion Requirements shall include but not be limited to:

- Ensure design scope is carried out in full
- Issue signed Professional Engineering Certificates (PECs) and sectional completion certificates (where deemed required)
- Construction Completion (CC) Report/Construction Quality Assurance Report (if required this might be sectionalize). The *Consultant* shall include provision for soft copy file and signed hard copy files (3 no. copies).
- As-Build drawings (hard copies and soft copies)
- 100% (Finalisation of) Data Book Review
- Provision for site visits with the Authorities and addressing design related comments. Arrange meetings with DWS / Department of Environmental Affairs (DEFF) and presentations
- Provision drafting of correspondence and presentations to Authorities to enable commissioning and licensing of the constructed facility.
- End of job documentation shall consider, as far as reasonably practicable, compartmentalisation/sectionalisation of Phase 1 during construction phase 1. Provision shall consider submission of end-of job documents 2 weeks post construction completion of sectionalised work (where applicable).

2.4 Provision of Resources

As required to meet Level 4 of the Guideline Scope of Services and Tariff of Fees for Persons Registered in terms of the Engineering Profession Act, 2000. Potential resources could include:

Resource Required	General Details	Time Requirement
Design Engineer / Specialist	Usually Head office-based resources must oversee the technical details to ensure design intent is achieved and official reporting to DEFF & DWS.	As and When Required
Senior Engineers	Head Office based and/or site resources must oversee the technical details to ensure design intent is achieved. Resources are functionally responsible for design changes and all responses noted of RFI's and ECN's.	As and When Required
Project Manager	Usually, Head Office based project manager will assist in team co-ordination, invoicing, cost and time management, bridge interface for consolidation of technical data and responses from *Consultant*.	As and When Required
Draftsman	Office based for production design changes, updates, and as built drawings.	As and When Required
Civil Engineers	Site based resources, which will conduct site engineering support during construction and ensure design intent is achieved.	As and When Required

2.5 SKILLS TRANSFER:

The *Consultant* is required to provide skills transfer for two Civil Engineers from the *Employer*'s team. The *Consultant* makes available the design tools, and office space as required to include the *Employer*'s engineers in the detailed design development. The *Consultant*'s senior design engineer is required to provide supervision and guidance to the *Employer*'s engineers for the duration of the detailed design. The logistical aspects will be confirmed after appointment.
The design Engineer will be responsible to assist the Eskom civil engineer to meet ECSA outcomes for professional registration. The program for meeting the outcomes will be discussed and agreed upon between the parties (Design Engineer and Eskom civil engineers) before contract award.

2.6 Stage 1 Preparation

N/A

2.7 Stage 2 Concept

N/A

2.8 Stage 3: Design development

N/A

2.9 Stage 4: Production information

N/A

2.10 Stage 5: Manufacture, Installation and Construction Information:

N/A

2.11 Stage 6: Post Practical Completion

N/A

3 Constraints on how the *Consultant* Provides the Services.

3.1 Management meetings

Meetings will be held monthly between the *Project Manager* and the *Consultant* (and any other co-opted members). The *Consultant* is represented at each meeting by the appropriate members of the staff.

The venue for these meetings is as determined by the *Project Manager*. The *Project Manager* writes the minutes of meetings.

Any action of the *Project Manager* and the *Consultant* implied in the minutes of meetings with contractual implications is confirmed by a separate communication given in accordance with this Works Information and NEC
The *Consultant* reports the overall progress and as a minimum requirement, the following is addressed:

(1) *Consultant*'s current activity progress and planned finish dates.
(2) *Consultant*s to report on all items listed in the NEC core clause, 31.
(3) *Consultant*'s and *Project Manager*'s programme agenda compared for delays and milestone targets
(4) Current and projected manpower by class.
(5) Health, safety, and quality Management.
(6) The progress of any other relevant activities.
(7) To discuss any technical or commercial issues.
(8) Skills Development and Localisation.
(9) CSI and Infrastructure Project Implementation Plan.
(10) Procurement progress.
(11) Problem areas or concerns.

Regular meetings of a general nature may be convened and chaired by the *Employer's Agent* as follows:

Title and purpose	**Approximate time & interval**	**Location**	**Attendance by:**
Overall contract progress and feedback (from contract date to execution commencement)	Bi - Weekly	Venue determined by the *Project Manager*	*Employer*, *Consultant(s),* and Others as determined by the *Project Manager*
Planning Meetings (including integration meetings with Others)	Weekly	Venue determined by the *Project Manager*	*Employer*, *Consultant(s)*, Planners and Others as determined by the *Project Manager*
Quality and Engineering Meeting	Monthly or as determined by the *Project Manager*	Venue determined by the *Project Manager*	*Employer*, *Consultant* and Others as determined by the *Project Manager*

Meetings of a specialist nature may be convened as specified elsewhere in this Scope or if not so specified by persons and at times and locations to suit the Parties, the nature, and the progress of the *services*. Records of these meetings shall be submitted to the *Employer's Agent* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

3.2 *Consultant*'s *key persons*

The minimum requirements of the key resources are as follows:

Resource Required	General Details	Time Requirement
Design Engineer / Specialist	Usually, Head Office based resources must oversee the technical details to ensure design intent is achieved and official reporting to DEFF & DWS.	As and When Required
Senior Engineers	Head Office based and/or site resources must oversee the technical details to ensure design intent is achieved. Resources are functionally responsible for design changes and all responses noted of RFI's and ECN's.	As and When Required
Project Manager	Usually, Head Office based project manager will assist in team co-ordination, invoicing, cost and time management, bridge interface for consolidation of technical data and responses from *Consultant*.	As and When Required
Draftsman	Office based for production design changes, updates, and as built drawings.	As and When Required
Civil Engineers	Site based resources, which will conduct site engineering support during construction and ensure design intent is achieved.	As and When Required

3.3 Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Consultant* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Consultant* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Consultant* by the *Employer's Agent* to receive and accept such bond or guarantee. Such withholding of payment due to the *Consultant* does not affect the *Employer*'s right to termination stated in this contract.

3.4 Documentation control and retention

3.4.1 Identification and communication

The *Consultant* is responsible to plan the supply of the documentation during the various project stages and to provide the documentation in accordance with the key scheduled project milestone dates. A document is thus any written or pictorial information describing, defining, specifying, or certifying activities, requirements, procedures, or results.

3.4.2 Retention of documents

The *Consultant* submits all hard copies of documentation on a formal transmittal form in duplicate to the *Project Manager*.
All documentation submitted must have a unique numbering system.

3.4.3 Documentation Synopsis

The documentation synopsis is a summary and general view of the whole documentation package and provides the *Project Manager* with a clear indication of its content for assessment and acceptance.
The *Consultant*'s documentation synopsis is agreed upon at contract award and defines the minimum documentation.

The *Consultant*'s offer includes a detailed summary of the documentation. The documentation synopsis must consist of documentation that is specific for this project and contract for Matimba Power Station. The *Consultant* shall keep all records and organise all project files in data banks in a systematic way with adequate indexing. These files shall include all:

- Inspection reports
- Drawing system description and index
- Annual audit reports
- Operating and maintenance manual
- Daily site events registers
- Monthly reports
- Correspondence files
- Quality records
- Site instructions
- Copies of minutes of meetings

3.5 Documentation Management

The contractor is required to manage documentation in line with the requirements outlined below.

3.5.1 Submission

All submissions to the *Employer*, the language of all documentation is to be in English. Documentation submissions must be through either email or walk-in to documentation centre with CD and/or hard copies. In case submission of documentation is through email, take note of the following:

a) Email submissions, one must direct them to the proxy email and copy all recipient(s) as per the distribution matrix, which will be provided by the project manager.
b) Use emails strictly as a channel for submitting documentation.
c) All information required and intended for use by the *Employer*, may not be part of the body of the email, one must document it.

d) Email must not be used as a transmittal, one must use a transmittal template
e) The email subject must always include the transmittal number, package number/contract number.

Large file transfer: Documentation submission with the file size that exceeds the outlook maximum size, contractor must submit via the *Employer's* large file transfer portal, CD/DVD, and/or hard drives to the Eskom Project Documentation Centre. The contractor/vendor must notify the *Employer* in advance via email, with the transmittal note attached, to confirm the date, time, and method of submitting large files. Method option may be CD/DVD and/or hard drives, which is a walk into Documentation centre or large file transfer portal.

All submissions, the receiver must acknowledge by sending back a signed transmittal to the sender within two working days upon receipt. Every submission must have the PDF version and the Native (Editable) version. The file name for both the PDF and the Native must be the same, and as minimum contain Documentation Number and revision. One must list all items intended for submission, on the transmittal.

If the pack contains 10 documentations, therefore the transmittal must contain 10 items on the list. The listing must include as minimum documentation number, title, and revision. The example of 10 items, will equate to a pack of 10 PDF files and 10 Native files, because each PDF files must have a native file.

3.5.2 Identification

Documentation must have a unique documentation identifier for audit trail. The transmittal must also have the unique identifier. All other documentation properties must be on the document; to supplement the document number. Minimum properties that must be on the document is the package number, contract, revision number, KKS code, functional area (example Unit 1), document type, document status, compiler, reviewer(s), approver, and approval date.

The primary documentation identifier is the Eskom Documentation Management System Generated number, except for the drawings. The primary number for the drawing is the Eskom drawing number with a prefix of 0.84. The contractor\vendor must request in advance the drawings number(s) from the *Employer*, to populate on the drawing before submission. The contractor/vendor must request pre-location of drawing numbers via the pre-allocation form (348-684677)

All letters exchanged between the *Employer* and contractor/vendor will contain a secondary numbering system which is sequential, to account for the audit trail. Example, Eskom compiled letters must use this format P00-ESK-MED-0001,

- P00 = package number
- ESK = Eskom
- MED = Medupi
- 0001 = sequential number.

Contractor/vendor format must be P00-XXX-MED-0001, which is as follows:

- P00 = Package number
- XXX = Contractor name abbreviation
- MED = Medupi
- 0001 = sequential number.

The *Employer* will allocate the Eskom documentation number upon submission from the contractor/vendor, except for drawings and data books. The contractor/vendor must request Eskom documentation number via the pre-allocation form (348-684677), for both the drawings and data books. The secondary or alternative documentation number is the contractor/vendor Documentation identifier.

3.5.3 Revision control

One must use only numeric revision control, and not alpha or alphanumeric. One may not skip revisions, track internal changes via version control, but submission to the *Employer* must maintain a sequential revision control, without skipping numbers. First submission must be revision 0.
Do not revise a record. A document must contain revision control. Design/drawing composed of multiple sheets (example sheet 1 to 10); one must revise all sheets as a batch, even if one only made changes to one sheet. The contractor/vendor must always maintain revision control on the entire batch and submit the entire batch always.

3.6 Drawing Management

Use the *Employer*'s Drawing template and ensure that all the fields on the title block are populated and all signatures completed. Maintain the revision audit trial on the title block. The last submission of the drawing must be the final as-built drawing, both in PDF and native. The creation, issuing and control of Engineering Drawings are in accordance *Employer's* Drawing Standard and Common requirements 240-86973501. The *Contractor* submits as minimum one hardcopy and an electronic copy to the *Employer*.

The *Contractor* submits editable electronic drawings in Micro Station (DGN) format, and scanned drawings in pdf format. Drawings issued to the *Employer* must not be "Right Protected" or encrypted, as the *Employer* must do the necessary configuration management on these documents upon receipt. Electronic drawings must have a watermark indicating the approval phase of a drawing and one must stamp the hardcopies to indicate the phase.

Any additional drawings requested by the *Employer* do not constitute a compensation event. All drawings types including but not limited to the following (General Arrangement, Isometrics, P&IDs, detail drawings), one must submit in the following formats:

- One (1) hard copy.
- One (1) electronic copy in .pdf format
- One (1) electronic copy in the native CAD format, preferably .dwg format

Drawings must be done according Eskom Drawing Standard and Common requirements 240-86973501.
Drawings are submitted in sufficient time to permit review, comment and/or modifications being made, if such are considered necessary by the *Project Manager*, without delaying the Contract Delivery and Completion Dates.

3.7 Report

The *Contractor* shall submit the Vendor Documentation Submission Schedule for review to the *Employer,* within 30 days after the contract is award. After the *Employer* informs the contractor of the decision to accept or reject the schedule, the *Contractor* revises and submits the updated schedule within 48 hours. The VDSS is revisable, and one must discuss any change to reach agreement between all parties, and then properly document the changes. Changes in the VDSS include additional documentation for submission; submission dates; documentation descriptions and document numbers; etc. The *Contractor* shall be responsible for the management of the schedule.

The Contractor must compile a documentation register, to track the documentation submission progress, in line with Contractor-committed dates on the VDSS. The register for tracking submission progress is the master documentation list (MDL); *Contractor* must submit it monthly to the *Employer*. The MDL must list all other submissions not specified on the VDSS, example letters.

3.8 Retention of Documentation

The contractor must retain all documentation, specified on the VDSS. This includes data books. The contractor must keep the documentation for a minimum of 10 years post contract close out. This is in line with the Rules of Conduct for Registered Persons, Engineering Professional Act, paragraph 4(a): “Registered Persons, may not without satisfactory reasons destroy or dispose of, or knowingly allow any other person to destroy or dispose of, any information within a period of 10 years after completion of the work concerned”

The contractor must retain the documentation in electronic format. The contractor must also keep the original ink signed hard copies for the minimum of 10 years post contract close out. When the 10 years end, the contractor must inform the *Employer* in writing prior to disposal, to confirm if the *Employer* is not in need of any documentation. The correspondence must include the master documentation register, which outlines all retained documentation. It is the contractor’s responsibility to ensure that the correspondence has reached the *Employer*, by requesting acknowledgement of receipt. The *Employer* has the maximum of 6 months to respond in writing to the contractor, failure to do so, the contractor may proceed and dispose the documentation after the six months has passed.

3.9 Governance

Contractor must comply with the following governance. 348-883860: Medupi Format and Layout Specification; 348-883808 Medupi Document and Records Management Work Instruction; 240-86973501 Engineering Drawing Standard; 348-885429 Engineering Change Management Work Instruction; 36-943 Engineering Drawings Office and Engineering Documentation Standard; 240-53114186 Eskom Project/Plant Specific Technical Document and Records Management Procedure, 240-83561037 Reporting and Data Requirements Specification for Contractors, 348-942820 Transmittal Template, 200-616427 Data Book Checklist.

4 Records and forecasting of expenses

The *Consultant* shall maintain clear records of expenses and be submitted on request to the *Employer*.

4.1 Records and forecasting of the Time Charge

The *Consultant* shall maintain clear records of time charged and be submitted on request to the *Employer*.

4.2 Invoicing and payment

- All Electronic invoices must be sent in PDF format only.
- Each PDF file should contain one invoice; or one debit note; or one credit note only as Eskom’s SAP system does not support more than one PDF being linked into workflow at a time.
- Your E-mail may contain more than one PDF file (e.g., 2 invoices on 2 separate PDF files in one e-mail)
- All invoices in original PDF format via e-mail to Eskom email address

Invoices are in triplicate and are made out to:

InvoicesgrpcapitalMHP@eskom.co.za

And include on each invoice the following information:

- The words tax invoice
- Supplier's name, address, and VAT number
- Recipient name, address, and VAT number
- Individual serialised invoice number
- Date of issue of tax invoice
- Full and proper description of the goods or services
- Quantity/Volume of the goods or the services supplied
- Amounts (in Rand)
    - Value, VAT, and considerable amounts
    - Consideration and VAT amounts
    - Consideration and statement that VAT is included @15%
- The contract number and title.
- Purchase order number for the work executed.
- *Consultant*'s VAT registration number.
- The *Employer*'s VAT registration number 4740101508.

The Contractor is to keep records of all invoices submitted and paid up to the end of the project, as well as details of actual costs.

The Contractor submits monthly forecasts rate of invoicing for the complete project as well as an annual budget estimate in accordance with the documentation required by the *Employer*. The format will be discussed and agreed upon with the Contractor.

4.3 Contract Change Management

All relevant NEC documents will be provided to the Contractor on request.

4.4 Inclusions in the programme

The Contractor must provide a preliminary bar chart programme with the tender documentation. The programme must include the start and end dates and how the work will be done within the given time frame. It is the *Employer*'s objective to finish the work within the contract period. This programme constraint will influence the critical path of the project.

The Contractor shall include the following time constraints when setting up the work programme:

a) Lost working days due to bad weather e.g., rainy days.
b) Special non-working days.

All work included in this contract shall be included according to the programme to ensure that the project is completed on time.

The contractor will be responsible to prepare and submit a program for the works at least 2 weeks before installation starts.

The programs will have to be accepted by *Employer'*s representative before any work can start within 2 weeks of contract placement the contractor provides a forecast rate of invoicing, linking the values of completed activities as per the accepted programme for the *Employer*'s approval.

4.5 Quality management

4.5.1 Quality assurance requirements

The *Consultant* to ensure that responsibilities, accountabilities, and authorities of all *Consultants* project personnel are defined and communicated to all those within his organization and that of the *Employer.* The *Consultant* to document the aforementioned via Plans, Procedures and RACI diagrams and more specifically the Project Job Descriptions.

The *Consultant* Representative shall appoint a member of management as Project Quality Manager who shall report, and be directly responsible to, the *Consultant* Project Representative and who irrespective of other responsibilities, shall have responsibility and authority for managing

4.5.2 *Consultant* QMS that includes:

a) Ensuring that processes, plans and procedures needed for the QMS are established and maintained and the integrity of the QMS is maintained when changes are implemented.
b) Ensuring that Quality Assurance and Quality Control Depts. are sufficiently manned with competent resources to effectively implement quality requirements.
c) Reporting to top management on the performance of the quality management system any need for improvement.
d) Ensuring the awareness of customer requirements throughout *Consultant* organization.

Quality management shall ensure that the *Employer's* requirements as specified in the *Consultant* are met in full and verified as such to *Employer* satisfaction. Quality management shall be in accordance with ISO 9001:2015 and related ISO 9000 series of Standards and is to provide full documentary and objective evidence that the Works have been designed, manufactured, executed, completed, and maintained in accordance with the Contract.

The quality management system shall apply to the *Consultant* and all persons real or juristic working for or on behalf of the *Consultant* on or in connection with the Works and regardless of the form of employment contract.

Quality management shall ensure that the Quality Control Plans, Inspection and Test Plans and Procedures/ instructions/ method statements/ECNs/FCNs developed or adopted provide stages at which the *Employer* may witness what is being done or require what is being done to be subject to inspection before the execution continues.

Project Manager shall list all documentation needed for the effective implementation of the project quality management system (QMS) and shall, as a minimum, prepare, maintain, and implement throughout the life cycle of the project, as part of the project quality management system. The project specific documentation are as follows:

a) Project Quality Policy
b) Project Quality Strategy
c) Project Quality Objectives

d) Project Quality Management Plan
e) Project Organisation Chart.
f) Project RACI Matrix – may be split by Dept. /Phase/Discipline as required.
g) Job Descriptions including performance requirements and measurements.
h) Equipment and Process Criticality Ratings,
i) Project Quality Assurance Plans – per project phase:
   (i) Design
   (ii) Manufacturing, Inspection and Testing
   (iii) Construction, Inspection and Testing
   (iv) Commissioning and Taking-Over
(j) Project Quality Control Procedures - per discipline:
   (i) Civil and Structural works.
   (ii) Mechanical, Piping, Painting and Insulation works.
   (iii) Electrical works.
   (iv) Control and Instrumentation works.

Project Quality Control Procedures per individual activity identifying specific inspection, test methods and acceptance criteria.

Project Inspection and Test Plans (ITP's) per individual activity that plan, assure quality, and define inspection intervention levels.

Project Quality Verification Records per individual activity - as referenced in ITP's.

Manufacturing, Construction and Commissioning Record Books.

Except where otherwise stated, all documents that constitute the Quality Management System, including proforma Quality Verification Records, shall be complete, in accordance with the *Consultant*, and ready for use and submitted to the *Project Manager* not less than 30 days before the work governed by the documents is planned to start.

Throughout the lifecycle of the project, monthly, the *Consultant* shall maintain and submit an MDL (Master Documentation List), to the *Project Manager* for review and approval. Each document on the Master Document List shall have the following marked against it:

a) The planned and actual date of submittal to the *Project Manager*
a) The classification of documentation (for approval, for review, or for reference) based upon the classification guidelines of Quality specification document.

   (i) Class 1 - for the Engineer's approval - where the *Consultant* may not proceed with the Works that are the subject of the document until it has been approved by the Engineer.
   (ii) Class 2 - for the *Project Manager*'s Review - where the *Consultant* may proceed with the works that are the subject of the documentation if the *Project Manager*'s has made no comment after seven (7) days from the receipt by the *Project Manager*
   (ii) Class 3 - for the Engineer's Reference - where the *Project Manager* reserves the right to comment, but the *Consultant* may proceed with the works that are the subject of the documentation.

Where there is an ambiguity or where a document is produced that is not referenced therein clarification as to classification shall be sought from the *Project Manager*.

The Master Document List shall be submitted to the *Project Manager* electronically via email in native file format monthly.

The *Consultant* submits as a minimum the following documents, as required by the *Employer*, which requirement does not constitute a compensation event, during the execution of the Works: -

a) Updated QCP register
b) Inspection notifications accompanied by their inspection report
c) Non-conformance and Defects registers and reports
d) Updated Site and off-site inspection schedules.
e) Inspection and or FAT dates.
f) Inspections completed/outstanding.
g) Inspection and test reports
h) Monthly contract quality progress report
i) Data books for the completed Works, before commissioning can commence (refer to the Record books section 2.5.2 and data books hand over timelines).

4.5.3 Records Books

The *Consultant* to develop, document via procedure for *Project Manager's* approval and thereafter implement a system for collation or quality verification records, including change management records into Manufacturing, Construction and Commissioning Record Books in accordance with 200-1689 Contractor Quality Specification or the latest.

- *Consultant* to review data book progressively during 30%, 70% and 100% of the completed work and provide valid comments in the form of comment sheet per each stage of review to the *Employer* prior *Employer*'s review.
- No data book shall be reviewed by the *Employer* without *Consultant* s reviewed evidence and comment sheet Indicating first review second review with addressed comments and final review.
- The *Consultant* to develop Data book Register and maintain for the duration of the project said Procedure shall define format, content and structure of Record books and process of compilation and handover and shall, as a minimum, conform to the following:

Record Books shall be provided by the *Consultant* for:

- Manufacturing - Prepared for each individual "Purchase Order refers to 240-109836134 clause 3, Scope of work and *Employer* requirements". Only manufacturing records per discipline e.g., Civil, Structural steel, Mechanical, Electrical, C&I works etc.
- Construction/Erection - Prepared for Each Discipline as in bullet 1, each geographical area for civil works and for systems/sub- systems for mechanical and electrical systems including C&I separately: Commissioning - prepared for each commissioned system.

Note: Record books shall be not combined on Data Dossier. Manufacturing, Construction/Erection and Commissioning shall be separated.

- The *Consultant* need not include documents and drawings etc. that have been approved by the Project Manager which are included in SPO and shall instead provide and include an index of such documents in the Record Books on the basis that the originals are in SPO and traceable via the "Index".
- Record Book shall be written in English or provided with an English translation
- The index of all Record Books shall be submitted to the *Project Manager* for approval.

- As the work progresses, *Consultant* shall compile Record Books progressively with the original material certificates, installation, erection, testing, inspection and change management documents and shall verify continued and accurate updating via weekly review and spot checking against inspection performed that week.
- *Consultant* shall report the status of Record Book compilation progress at Weekly Progress / Quality
  Meetings together with the Data book Register.
- Record Books shall be endorsed by stamp, date and signature of the *Consultant* and the *Employer* signifying completion and accuracy when complete.
- Each Record Book shall have cover sheet (With a Sleeve pocket to insert a cover sheet) of A4 size paper and a spine label on which is printed the following:

i. Title of Document,
ii. *Consultant* s company logo,
iii. Unique number/SPO,
iv. Name of Project
v. *Consultant'* Job Code,
vi. *Consultant* Document number,
vii. *Consultant* Eskom Document Number,
viii. System KKS number,
ix. System Description,
x. Document type "Manufacturing or Construction or commissioning",
xi. *Consultant s* number,
xii. Name of *Consultant*,
xiii. Volume numbering (1 of …or 1/10) xv.
xiv. Address of *Contractor,*
xv. Column for signature by the *Consultant and its Contractor* Representative and *Employer's* representative.

- All Manufacturing Record books shall be Completed, Approved, and handed over to the *Employer* not later than **(7) Seven** days after Delivery Inspection on site Prior Installation/Construction Phase.
- All Construction Record books shall be Completed, Approved Safety Cleared, and handed over to the *Employer* not later than **(7) Seven** days after Final inspection (AFI) Prior Commissioning Phase
- For other civil / Earthwork, All Construction Record books shall be Complete, Approved and handed over to the *Employer* prior taking over section of works.
- All Commissioning Record books, Operating, maintenance and training manuals shall be Completed, Approved, and handed over to Eskom not later than **(7) Seven** days after the last test prior taking over of completed works (TOC)
- Construction Record Book shall be compiled in A4 size with 4-post binders in loose-leaf form with numbered pages such as, Page 1 of 10 or 1/10 whichever sequential counting method that clearly identifies page numbering.
- Summary table of each volume's contents shall appear in all volumes. Volumes are to be numbered e.g., 1 of 3, 2 of 3, 3 of 3 etc. both on spine and front cover.
- The binders are to be robust and not subject to distortion by impact during shipping. The binders shall not be over filled and contain only a suitable number of documents to enable convenient handling.
- Contents shall be sectionalized and separated by properly labelled dividers
- Contents shall be placed in the relevant sections and sections shall be separated by properly labelled section dividers/separator sheets easy referencing with going through the content.

- All section dividers/separator sheets shall be made of card and shall bear the Section Identifier - 1, 2...

(a) The contents of each section, e.g., Section 1, Section 2, etc., of the Record Book shall be placed directly behind the relevant section dividers/separator sheets and each document shall be clearly marked with the following:

- Relevant section letter, Page number - every document shall receive a page number, in each section the page numbers shall run consecutively.

Record Books shall contain as a minimum:

- All material Reports and Certificates, All Inspection Reports, All Test Reports, All Release Notes, All Change Management Reports, all drawings or an index of drawings identifying drawing No. and revision status, All Defect Reports, All Procedures or an Index of Procedures, All Inspection and Test Plans if used as a Quality Verification Record or an Index of Inspection and Test Plans if used as an assurance and control document, All Drawings, or an Index of Drawings.

4.5.4 Statutory Records

The *Consultant* shall submit a statutory compliance file containing minimum documents as follows:

a) Electrical Equipment
   - Statutory register and COCs

b) Civil Structure

c) Professional Engineering Certificates (PEC)
   - Statutory register, Professional Engineering Certificates,

d) Pressurised Equipment
   Statutory register, Certificate of Conformance for PER equipment, Inspection and Hydraulic Pressure Test Certificate for PER equipment and Pre commissioning Certificates

e) e) Lifting Equipment
   Statutory register – lifting equipment, statutory register Load test certificates for all lifting equipment's, Functional safety clearances for all equipment, operating procedures, and maintenance procedures.

f) Permanent KKS certificates (no temporary labels to be allowed at take-over)

4.5.5 Handing over of Record books/Data Books by the *Consultant*

QA Completeness review after addressing all comments given to the *Consultant and its Contractor* during QC 100% review of data books by the *Employer,*
The *Consultant* shall request QA via *Project Manager* to perform completeness review of the record books. The *Employer* Quality Assurance team will also refer to the data book checklist (200-616427) for compliance of format and lay out of the Record Book / Data Book.

4.5.6 System requirements

The *Consultant* shall supply a Quality Control Plan (QCP) prior to the start of any work. The plan must include all inspections and tests that will be performed on the activities and material supplied during construction. The plan will cover the following:

a) Identifying a specific activity or operation.
b) A list indicating the sequence of events in the case of tests and operations.
c) The specification, procedure and drawing for each activity.

d) The criteria for the acceptance of an operation with reference to appropriate technical procedure as set out by the *Consultant*.
e) The inspections and test the *Consultant* has nominated for hold, witness, and verification points.
f) Provision for tests and inspections required by the *Employer*.
g) A record of all tests and inspections done by the *Consultant*.

The *Consultant* is also responsible for the following:

a) The *Consultant* must notify the *Employer* of any changes in the quality standards of material or operations and get approval from the *Employer* to implement the changes on the existing orders and contracts or sub orders and contracts.
b) The employees of the *Consultant*(s) must be skilled tradesmen registered and certified with the relative qualifications' authority, with demonstrated ability to perform the work on a timely basis.
c) Identifying any additional documentation that must be submitted to the *Employer*.
d) Indicating the interface between the QCP for the project and the *Consultant*'s own quality system and applicable documents such as procedures and work instructions.
e) If a sub-*Consultant* is called in to do portion of the work, the *Consultant* must indicate how they will be monitored.
f)

Providing the *Employer* or his representative access to the *Consultant*'s premises to conduct quality inspections, audits, assessments to ensure compliance the contractual requirements

4.5.7 Information in the quality plan

The *Consultant* prepares a contract quality management plan that, where appropriate, indicates the following:

- Indicates the interface with the *Consultant*s quality system and applicable documents such as procedures and work instructions.
- Establishes communication channels between the *Consultant* and the *Project Manager* in respect of quality and the integration of such with the prescribed contract communication channels.
- Indicates how specific sub-*Consultant*s will be monitored (if applicable).
- Identifies items or activities for which quality control plans will be prepared.
- Identifies the specifications, drawings, and acceptance criteria for material for which quality control plans are not required.
- Identifies the areas or processes requiring special controls.
- Identifies the *Consultant*'s Management Representative and personnel responsible for the control of quality activities and their relationship to the *Consultant*'s management structure.
- Identifies the documents which are to be submitted to the *Project Manager*.
- Indicates the *Consultant*'s quality monitoring program.

4.5.7.1 Quality Control Plan

The *Consultant*'s quality control plans cover inspection and test proposals for items or activities to be supplied as part of the works.

The quality control plan indicates the following as appropriate:

- The identification of the item
- The material
- A list of the sequence of operations including inspections and tests
- The identification of the specification, drawings, or procedures for each operation
- The acceptance criteria with reference to the appropriate technical specification, in-house, national, or international standard and relevant clause number
- The inspections and tests the *Consultant* has nominated for hold and witness points
- Provision for inspections and tests nominated by the *Project Manager*
- Provision for inspection status indication
- Inspection and test records that are generated by the *Consultant*.

4.5.7.2 Quality Assurance

The execution of the work shall be conducted by a company who has adequate product liability insurance.

The employees of the *Consultant*(s) must be skilled tradesmen registered and certified with the relative qualifications' authority, with demonstrated ability to perform the work on a timely basis.

The Quality Control Plan consists of the following as a minimum and is accepted by the *Project Manager* and the *Consultant* prior to commencement of the work.

A covering page which includes and makes provision for the following:

- Document unique number.
- Revision number.
- Page number
- Provision to incorporate all inspection report numbers.
- System worked on
- High level description of work execution
- Provision for review and approval signatures by the *Consultant*, the *Project Manager* and the Supervisor.
- Provision for final releases signatures by the *Consultant*, *Project Manager* the System Eng., and the Supervisor.
-

A page which includes a logical sequence of work execution, listed as activities for the fabrication and erection and in addition to this hold, witness points etc. where required or requested by the *Employer*. The activity list should include reference to:

- Abbreviations.
- Record numbers.
- Procedure numbers.
- Reference document numbers.
- Certificate numbers and references.

Where applicable a material summary list should be included containing:

- Material quantities and specifications.

- Material certificate numbers.

Where tests were performed, they are recorded and the positions of measurements are traceable to the specific area of testing against the records, compiled in formal test reports

4.6 The Parties use of material provided by the *Consultant*

4.6.1 *Employer*'s purpose for the material

N/A

4.6.2 Restrictions on the *Consultant*'s use of the material for other work

N/A

4.6.3 Transfer of rights if Option X 9 applies

The *Employer* owns the *Consultant*'s rights over the reports prepared for this Contract by the *Consultant* except as stated otherwise on the scope.

The *Consultant* shall not challenge or assist any other party challenging at any time the validity or ownership of any of the intellectual property rights relating to the material created and developed for this contract.

The *Consultant* grants to the *Employer* an irrevocable, nonexclusive, royalty free license to utilise *Consultant*'s intellectual property to extent necessary for the construction, operation, maintenance, repair, or alteration of its facilities or that of a third party.

4.7 Management of work done by Task Order

No.	Items of work priced on a lump sum basis
1	Design Verification and Accountability as per C3 1 PSC3 Employers Scope Matimba Ash Dump Design Monitoring and Construction Supervision Section 2 - including temporary design and detailed design submission/deliverables to Employer including but not limited to Construction Drawings and BoQ Submitted)
2	Construction Control and Monitoring Services as per C3 1 PSC3 Employers Scope Matimba Ash Dump Design Monitoring and Construction Supervision Section 2 – Payment is aligned with monthly percentage construction progress subject to a progress report outlining all activities (Weeks Progress, Weeks Inspections, Engineering Responses, Record of Approvals, Survey Approvals, Photo Record) - allow for 24 months Control and Monitoring with potential night shifts and accelerations
3	Construction Control and Monitoring – Services as per Construction Control and Monitoring Services as per C3 1 PSC3 Employers Scope Matimba Ash Dump Design Monitoring and Construction Supervision Section 2 – Subject to overrun in construction program – Disclaimer (client has full release control if deemed required) – allow for 10 months Control and Monitoring with potential night shifts and accelerations
4	End Phase Commissioning and Completion as per C3 1 PSC3 Employers Scope Matimba Ash Dump Design Monitoring and Construction Supervision Section 2 - 2 weeks after construction completion of entire works and/or of completion of sectionalised construction works to a maximum of 3 sections).

4.8 Health and Safety

The *Consultant* shall comply with the health and safety requirements contained on the Occupational Health and Safety Act (OHSA Act 85 of 1993) and its regulations, *Employer* Policies and Procedures as well and contract requirements. It is essential that the *Consultant* is conversant with Eskom safety procedures training prior commencing any work on site. Failure to comply shall result in the *Employer* suspending execution of services and removing the *Consultant* from site until compliance is achieved.

The *Employer* may cancel a Task Order and/or terminate the contract depending on the situation and risks to people, plant and equipment, reputation, and the *Employer's* business of electricity supply.

The *Consultant*, shall always, considers itself to be the "*Employer*" for the purposes of the OHSA and shall not consider itself under the supervision or management of the *Employer* regarding compliance with the SHEQ Requirements, the *Consultant* shall furthermore not consider itself to be a subordinate or under the supervision of the *Employer* in respect of these matters.

The *Consultant* is always responsible for the supervision of its employees, agents, Sub *Consultant*s, and mandataries and takes full responsibility and accountability for ensuring they are competent, aware of the SHEQ Requirements and execute the Works in accordance with the SHEQ Requirements. Should the *Consultant* appoint Subcontractor, *Consultant* shall carry responsibilities of a client as per Construction Regulation 2014.

The *Consultant* shall ensure that all statutory appointments and appointments required by the management system are in place, and that all appointees fully understand their responsibilities and are trained and competent to execute their duties. The Service Provide supervises the execution of their duties by all such appointees.

The *Consultant* shall appoint a Safety Officer who will be responsible for the premises relevant to this contract and liaise with the Eskom Safety Department accordingly to ensure compliance to Health and Safety Requirements. As a minimum the appointed SO should have National Diploma – Safety Management or Environmental Health and be registered with SACPCMP.

The *Employer*, or any person appointed by the *Employer*, may at any stage during the period of this contract:

- Conduct health and safety audits regarding all aspects of compliance with the SHEQ Requirements, at any off-site place of work, or the site establishment of the Contractor
- Refuse any employee, Sub *Consultant,* or agent of the *Consultant* access to the premises if such person has been found to commit an unsafe act or any unsafe working practice or is found not to be qualified or authorised in terms of the SHEQ Requirements.
- Issue the *Consultant* with a stop order should the *Employer* become aware of any unsafe working procedure or condition or any non-compliance with any provision of the SHEQ Requirements.

The Client expects the *Consultant* to engage in safety culture initiatives in line with the Eskom SHEQ Policy and value, Zero Harm.

The *Consultant* must implement their OHS management system and requirements and incorporate the applicable Eskom requirements into their system.

4.8.1.1 Compliance with legislation and other requirements

It is required that all *Consultant*s on the project comply with the relevant applicable legislation, specifications, and standards in accordance with the scope of the project.

It is the duty of the *Consultant* and *Consultant* to ensure that they are familiar with the necessary OHS legislation required. Applicable Acts/regulations should be displayed or available for employees, client and inspector when required.

When there is an amendment to the Acts and/or to the Regulations, the OHS plan must be reviewed, updated accordingly, and send through to the client. Changes must be communicated to all relevant employees.

4.8.1.2 SHE Induction and Access to Site

All the employees of the *Consultant* must attend an Eskom SHEQ induction course provided by the Client before commencement of the contracted work or before they will be allowed to work on the Site. It is the responsibility of the *Consultant* to ensure that all employees have attended the safety induction. *Consultant* shall further develop and train all its employees on company specific SHEQ induction. Proof of yearly induction should be always easily identifiable / available.

Only once this induction has been received, will each employee receive a site access permit.

4.8.1.3 ***Consultant*: Details, Accountabilities and Responsibilities**

The *Consultant* carries primary accountability and responsibility for the health and safety of his/her employees within his/her working area, as contemplated by Section 37(2) of the OHS Act No. 85 of 1993 and Regulations. None of the additional safety requirements specified by the Client reduces the *Consultant*'s accountability and responsibility for the health and safety of his employees within his working area.

The *Consultant* shall have a disciplinary process and an organisational structured procedure to deal with employees who have transgressed organisational and legal requirements.

The *Consultant* shall provide a list of names and contact telephone numbers of all his employees on site. This list shall be updated as and when new employees commence on site.

The *Consultant* shall keep a record of all employees, including date of induction, relevant skills, and licenses, and be able to produce this list at the request of the relevant officials. These records shall be filed in the OHS File.

Employees are responsible for their own health, safety, and that of their co-workers in their respective areas of work on the project.

Employees must be made aware of their responsibilities during induction and awareness sessions some of which are:

- Familiarising themselves with their workplaces and health and safety procedures.
- Working in a manner that does not endanger them or cause harm to others.
- Keeping their work area tidy.
- Reporting all incidents/accidents and near misses.
- Protecting fellow workers from injury.
- Reporting unsafe acts and unsafe conditions.

- Reporting any situation that may become dangerous.
- Carrying out lawful orders and obeying health and safety rules.
- Declaring to the *Employer* if taking medication, which may have intoxicating effects.
- If an employee has a reasonable belief that the work to be undertaken is likely to endanger him/her or any other person/s due to sub-standard acts or conditions, inadequate precautions or a lack of protective equipment or clothing, he/she has the right to refuse to work and shall report such situation to the *Employer*.
- An employee does have the right not to work in any area or perform any task where that employee has reasonable justification to believe that the work situation presents a danger to his/her health and safety, organizational assets, or the environment.
- It must be highlighted to all employees, that anyone who becomes aware of any person disregarding a health & safety notice, instruction or regulation shall immediately report this to the person concerned. If the person persists, stop the person from working and report the matter to the Eskom Site/Project Manager immediately.
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The *Consultant* appointed personnel shall be registered in their respective levels as professionals in terms of the legislative requirements (SACPCMP).

OHS professionals (which include Safety Officers) are required to register as professionals with the SACPCMP.

Designer's Roles and Responsibilities

The Designer is the person responsible for the overall management of the project design as well as ensuring the management of the compliance of the completed works to the design during and after construction on site.

Designers should ensure compliance with the Occupational Health and Safety Act in terms of Construction Regulations of 2014, Regulations 6 and all other applicable Regulations, Standards, and legislations.

The designer shall consider the hazards associated with the future use and maintenance of the designed structure (s) and make provision in the design(s) for the necessary maintenance work to be performed such that the associated risks are minimised.

Designers should ensure that when they design for construction work, they consider foreseeable health and safety risks during construction and eventual maintenance and cleaning of the structure in the balance with other design considerations, such as aesthetics and cost.

Inform the Construction Health and Safety Agent or representative (Client) in writing of any known or anticipated dangers or hazards relating to construction work and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered.

They should apply the hierarchy of risk control. This means designers need to identify the hazards inherent in carrying out the construction work and where possible alter the design to avoid them. If the hazards cannot be removed by design changes, the designer should minimize the risks and provide information about the risks that remain.

Make available in a report to Client/ Construction Health and Safety Agent all relevant health and safety information about the design of the relevant structure, geotechnical science aspects where appropriate and the loading structure is designed to withstand.

They should describe any matters that require particular attention by a contractor. Enough information should be provided to alert contractors and others to matters, which they could not be reasonably expected to know about.

Take into consideration and ensure compliance of health and safety specification.
In cases where Eskom uses overseas designers, the appointed designers must indicate and submit to Eskom the legislative requirements/documentation with which they comply to verify whether they meet the South African SHE legislative requirements.

An overseas designer can appoint a local designer to conduct the inspections required by the construction regulations.
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4.8.1.4 SHE organogram

The *Consultant* is required to compile their company organogram for the contract, highlighting the reporting structure from their Senior Management down to their project employees. This diagram must be kept up to date, a copy of which must be given to the client and copy filled in the relevant project SHE files.

4.8.1.5 COID and UIF requirements

The *Consultant* shall be registered with an appropriate employment compensation commissioner and submit proof of good standing with the commissioner. The *Consultant* shall, before the commencement with work on site, furnish Eskom Matimba Power Station Management with proof of a valid registration through a certificate of good standing in terms of the Compensation for occupational Injuries and Diseases Act, (COID Act), 130 of 1993 and that all payments due to the Commissioner are discharged. This cover shall remain in force during the contract and shall be the responsibility of the *Consultant* to ensure validity.

4.8.1.6 Occupational health and safety policy

The *Consultant* shall have an OHS/SHEQ Policy authorised by their Chief Executive (OHS Act Section 16(1) appointee) that clearly states overall SHE/Q objectives and commitment to improving Safety and Health of its employees. The Policy should outline the arrangements for carrying out and reviewing that policy.

Eskom has a SHEQ Policy (32-727) that clearly states the policy principles by which Eskom operates and the commitment to SHEQ excellence and is authorised by the Chief Executive.
*Consultant*s shall support Eskom SHEQ policy.

4.8.1.7 Mandatory agreements

A section 37(2) agreement must be signed between the Client and the *Consultant* at the time of awarding the contract. A signed copy of this agreement is submitted to the Client prior to commencement of any activity on site. The *Consultant* must ensure that a section 37(2) agreement is signed between them and all their appointed *Consultant*s/suppliers for the contract.
Copies of all agreements must form part of the *Consultant*'s OHS file.

4.8.1.8 Annexure B: Eskom SHE Rules and Requirements

Annexure B is the acknowledgement of Eskom's SHE rules, and requirements form signed and submitted by the Consultant.

4.8.1.9 Health and safety (SHE) file

The *Consultant* shall compile a SHE (health and safety) file as per Eskom Matimba Power Station's safety file requirements. The *Consultant* shall also ensure that the health and safety file; which shall include all documentation required in terms of the provisions of the Act and these Regulations; is opened and kept on site and made available to an inspector, client, or client agent upon request. The *Consultant* at the end of the project shall submit health and Safety file.

4.8.1.10 Health and safety management plan

A *Consultant* shall provide and demonstrate to the Client a suitable and sufficiently documented health and safety plan, based on the Client's health and safety specification contemplated in regulation 5(1)(b) provided by the client.

All *Consultant*s must use the applicable OHS information to develop a suitable and sufficient OHS plan, submitted with tender documents, which will indicate to the Client the level of compliance to the OHS requirements. The occupational health and safety plan shall identify each activity to be undertaken by the *Consultant*, the foreseeable internal and external hazards, the specific precautions, and controls that shall be necessary to ensure that the works proceeds safely and without risks to health or adjacent operations.

Upon discussions with the *Consultant*, a final accepted OHS plan would be signed and approved.
The plan shall demonstrate management's commitment to OHS.

The safety plan shall be reviewed to ensure that it fully addresses all the issues and complies with the requirements of the OHS Specifications and contract. If necessary, the *Consultant* shall amend the OHS Plan as required by the Client.

4.8.1.11 Hazard identification and Risk assessment

It is a legal requirement in terms of Section 8 (2)(d) of the OHS Act for an *Employer* to continuously carry out risk assessments, to establish which risks and hazards are attached to the health and safety of persons due to any work which is performed, any article or substance which is, handled, stored, transported.

The *Consultant* shall prepare and provide to the Client a Baseline Risk Assessment as well as activity-based RA for an intended work.

4.8.1.12 Cost Allocation for OHS Compliance

The *Consultant* shall ensure that there is provision for the cost of Occupational Health and Safety measures.

Note: the costing for OHS must be detailed that is itemised based on the overall scope of the project (i.e.) Medical surveillance (Medicals), Training, provision of PPE, COVID-19 compliance, safety equipment purchases, resources etc.

4.8.1.13 Medical programs

The *Consultant* shall ensure that the employees are registered on a medical surveillance programme and are in possession of a valid medical fitness certificate, completed in South Africa. The certificate of fitness should be relevant to the type of work (risk based) that the employee will be exposed to.

This will require each employee to have a risk-based person job specification that will be used as a basis for medical examination.

The *Consultant* must ensure that his employees have undergone pre-entry medical examination before starting work on site, no employee will access site without a valid medical fitness certificate. Periodic medical examination shall be done for all employees as work progresses. Upon completion or as and when employees' leave the project, an exit medical examination must be done for all employees involved in the project.

4.8.1.14 Emergency Care

The *Consultant* shall develop emergency procedure in line with Eskom Matimba Emergency Protocols. *Consultant* shall further ensure that Emergency response service is always available to attend to any emergency cases that may arise during the duration of the contract.

The *Consultant* shall be responsible to familiarise himself with local municipal disaster management portfolios.

A list of emergency numbers must be displayed at notice boards and public areas for ease of access to all employees and visitors. The *Consultant* shall ensure that his employees are familiar with the emergency numbers. Emergency numbers will also be part of the OHS induction.

Consultant shall have one first aid box for the first five (5) persons and thereafter one for every 50 or team of workers on site or part thereof. There should be a trained and appointed person to render first aid service when required. The first aider(s) shall be in possession of a first aid level two (2) training as minimum requirement as per Eskom Emergency planning procedure 32-123.

More first aid boxes shall be provided if the risks, distance between work teams or workplace requirements require it (it should be available and accessible for the treatment of injured persons at that workplace).

Minimum contents of a first aid box: (Refer to GSR 3 Annexure of the OHS Act). A prominent notice or sign shall be erected in a conspicuous place at a workplace (SANS1186 approved signs to indicate location of first aid boxes), indicating where the first aid box or boxes are kept as well as the name and contact details of the First Aider of such first aid box or boxes.

The *Consultant* shall ensure that alternative arrangements shall be made for possible incidents occurring after normal working hours.

4.8.1.15 Eskom lifesaving rules

A *Consultant* shall comply with Eskom's Lifesaving rules. Violation of these rules will be viewed in a serious light and the consequences will be dealt with via the respective disciplinary processes.

Five Life Saving rules have been developed that will apply to all Eskom Employees, agents, *Consultant*s, contractors, *Consultant*s, suppliers, and visitors. Failure to adhere to these rules will be considered a serious transgression. These rules are being implemented to prevent serious injury or death of any employee, labour broker or contractor working in any area within Eskom.

Eskom Life-saving Rules are non-negotiable health and safety rules which must not be broken under any circumstances. It must be highlighted that Eskom takes a ZERO TOLERANCE stance to violation of these rules. These rules are applicable to any person entering Eskom sites.

The rules are as follows:

Rule 1	**OPEN, ISOLATE, TEST, EARTH, BOND AND/OR INSULATE BEFORE TOUCH** Any person who performs work on an electrical installation shall ensure that it is isolated, tested and earthed before starting any work. (That is plant, any plant operating above 1000 V) No person may work on any electrical network unless: • He / she is trained and authorised as competent for the task to be done. • A pre-task risk assessment to identify all risks and hazards must be conducted prior to any work commencing. • An equi-potential zone is created for each worker on the job site by earthling, bonding and/or insulating according to approved divisional procedures. • All conducting material is connected, all staff onsite wear electrical safety shoes and insulating techniques are applied according to standards. • The authorised person (Team leader) has certified and shown all team members that the apparatus is safe to work on. He / she is trained and authorised as competent
Rule 2	**HOOK UP AT HEIGHTS** Working at Height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or. A pre-task risk assessment to identify all risks and hazards must be conducted prior to any work at height commencing.
Rule 3	**BUCKLE UP** Seatbelts shall be always used whilst driving. No person may drive any vehicle on Eskom business and/or on Eskom premises: Unless the driver and all passengers are wearing seat belts.
Rule 4	**BE SOBER** No person is allowed to be under the influence of intoxicating liquor or drugs while on duty. Under-the-influence' means the use of alcohol, drugs and /or a controlled substance to the extent that: • the individual's faculties are in any way impaired by the consumption or use of the substances or. • the individual is unable to perform in a safe, productive manner or. • the individual has a level of any such substance in his body that corresponds with or exceeds accepted medical/legal standards or; • the individual has a level of alcohol in his body that is greater than 0,00 % blood alcohol concentration, or • Any level of an illegal substance in the body' irrespective of when the substance was used.

Rule 5	**PERMIT TO WORK** Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW). • Work is as defined in the Plant Safety Regulations (OHS) and Operating Regulations for High Voltage Systems (ORHVS) of Eskom. • A Risk Assessment must be carried out jointly by the Authorised (AP) and Responsible Person (RP) on all work before it commences. • The PTW must be issued by an AP, in accordance with the PSR. • The PTW must be accepted in writing by an authorised RP. • The PTW shall be shown to everyone working on the job and the risks explained. • The RP must ensure that all staff working on that job are entered on a Workers' Register and the risks explained to each one. • The RP must ensure that the conditions of the PTW are enforced for the duration of the work.

4.8.1.16 Personal Protective Equipment (PPE)

In terms of Section 8 of the OHS Act, the duty of the *Employer* is to take steps to eliminate or mitigate (hierarchy of control measures) any hazard or potential hazard to the safety or health of employees before resorting to PPE.

Consultant's employees on site, including visitors, shall use SANS approved risk-based PPE at all times, as a minimum:

- Head protection hard hat (with chin straps).
- Steel toe capped safety boots.
- Eye protection. Wearing of impact Safety Spectacles with side shields. Prescription glasses must comply with the same standard or cover impact safety spectacles must be worn over them.
- Long sleeved and long pants protective clothing.
- High visibility vests.
- Dust mask and/or Cloth masks.
- Refer to General Safety Regulation 2 of the OHS Act.

The *Consultant* shall ensure that his employees understand why the personal protective equipment is necessary and that they use them correctly. Training should be provided to employees on the use, care, replacement, and limitation of the provided PPE. Records of training to be kept and made available to the Client or inspector upon request.

Strict non-compliance measures must be administered to any employee not complying with the use of PPE and that employee shall be removed from the Site.

Note: Certain areas will be subjected to specific/extra PPE requirement.

4.8.1.17 Health Pandemics and Disaster Management

The *Consultant* shall ensure proper management and control of any disaster and or pandemics that may come forth during the contract.

The *Consultant* shall ensure compliance to all COVID-19 regulations and requirements. A COVID-19 Management plan and risk assessment should be conducted, and appropriate measures taken to minimise exposure to COVID-19. Any new developments regarding COVID-19 and latest updates should be communicated to the employees and visitors to raise awareness.

4.8.1.18 BBSO Behavioural Based Safety Observation (BBSO)

Consultant shall incorporate BBSO or VFL programmes within their Health and Safety Management System.

The objective of behavioural safety observations is to assess and address the actual safe and unsafe behaviours of people in the workplace; as well as workplace conditions - which are caused by the actions or non-actions of employees, *Consultant*s, or their personnel.

4.8.1.19 Employees' Right of refusal to work in an unsafe situation

Employees have a duty to take reasonable care of their own as well as other person's health and safety at work and to cooperate with the *Employer*, carry out lawful orders, including reporting unsafe situations and incidents.

Refer to Eskom Procedure 240-43848327- Employees' right of refusal to work in an unsafe situation. The aim of the procedure is to ensure that an environment is created that promotes zero harm by empowering employees and *Consultant*s to take responsibility for their own safety and that of others.

4.8.1.20 OHS Audits

During this contract, the *Consultant* shall be subjected to scheduled or monthly audits by the client to monitor compliance.

Eskom reserves the right to monitor and conduct unannounced audits to ensure compliance and provide assurance to the Client representatives and their key stakeholders.

4.8.1.21 Incident management

The *Consultant* shall report and investigate all incidents/accidents as required in terms of the legislation.

All incidents reporting, recording, classification, and investigation will be done according to the requirements set out in the Eskom document 32-95 (latest revision).

4.8.1.22 OHS Performance Status Reports

The *Consultant* shall provide OHS statistical and Non-statistical reports, dashboards, presentations on weekly and monthly basis.

4.8.1.23 Hours of Work

All work conducted on site shall fall within the legal requirements in accordance with the Basic Conditions of Employment Act.

The *Consultant* will notify their Eskom responsible manager/supervisor of any work that needs to be performed after hours according to the agreed arrangements. (The application needs to be submitted timeously). Where applicable, the notification should include proof of application, for overtime, to the Department of Employment and Labour and/or the letter of approval from the Department of Employment and Labour.

4.8.1.24 Project Close-out

On completion of the project or service rendered, the appointed *Consultant*s shall close out their project documentation and OHS files and handover to the Eskom Project Manager. All required documentation shall be submitted and handed overusing relevant medium as per the procedure (Project Closeout and H&S documentation, 348-9942695). A checklist shall accompany the submission to verify that all documents are submitted/or handed in to the client.

5 Environmental Management Systems

5.1 Environmental Management

Contractors shall comply with the Projects' Environmental Management Plan (EMP) and ROD requirements.

Minimum requirements for compliance by contractors:

- Ensure that the Method Statements are submitted to the ECO for approval before any work is undertaken. Any lack of adherence to this will be considered as non-compliance to the specifications.
- Ensure that any instructions issued by the Engineer, on the advice of the ECO, are adhered to.
- Ensure that there must be communication tabled in the form of a report at each site meeting, which will document all incidents that have occurred during the period before the site meeting.
- Ensure that a register is kept at the site office, which lists all the transgressions issued by the ECO.
- Ensure that a register of all public complaints is maintained.
- Ensure that all employees, including those of sub-contractors receive training before the commencement of construction in order that they can constructively contribute towards the successful implementation of the environmental requirements of the Contract.
- Ensure compliance with the environmental requirements, relating to the provision of adequate resources for the implementation and monitoring of the requisite environmental controls.
- Compile an Environmental monitoring plan outlining all the construction activities, associated environmental impacts and how they will be mitigated.
- Ensure that the project pricing makes provision for environmental costs.
- Contractor shall attach a company waste management plan including the typical waste inventory and templates used for keeping waste records.
- Include environmental considerations as an item on the agenda of the monthly site meetings.
- Compile and implement the necessary Method Statements; and Undertake environmental awareness training of all site staff during the commencement of each Contract, with regular refreshers for the duration of the Contract.

Ensure that the environmental authorizations required in terms of National Environmental Management Act, 1998 (section 24) are sought prior to storage of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of:

- More than 30m3 (30 000L) but less than 1000m3 (1ML) at any one location or site, GNR 386 (7)
- More than 1000m3 (1 000 000 L or 1ML) at any one location or site, including the storage of one or more dangerous goods in a tank farm, GNR 387 {1(c)}.

5.1.1 Spillage of Hazardous Chemical Substances

- Any spillages that occur shall be treated in accordance with the requirements indicated on the MSDS.
- Identify appropriate storage areas for stockpiling of materials, storage of hydrocarbons and storage of hazardous substances and ensure that these areas are appropriately prepared for their purpose.
- Disposal of hazardous substances shall be done in terms of the relevant legal requirements.
- Limit spillage of hazardous substances or substances with the potential to cause contamination of the environment.
- Develop emergency protocols for dealing with spillages particularly where these pose a pollution risk or involve hazardous substances.
- Compile and implement the necessary Method Statements; and undertake environmental awareness training of all staff.

5.1.2 Herbicide usage

Only registered pest control operators may apply herbicides on a commercial basis. All staff applying herbicides shall be trained in the application thereof and shall be provided with suitable PPE.
The application of herbicides shall be in accordance with the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947. Only approved and tested herbicides with a low environmental risk shall be used.
An herbicide register for usage shall be compiled and maintained, and a copy handed to the project leader / environmental advisor on completion of the project / contract.

Fire hazard

The Contractor shall develop emergency protocols for dealing with fires, which may include a Fire Management Plan in accordance with the National Veld and Forest Fire Act (No 101 of 1998) and ensure that all staff is educated in fire prevention and will be held responsible to avoid the risk of fire. Firebreaks shall be created to prevent fires from spreading... No open fires are allowed on site. The contractor shall ensure that operations always comply with statutory requirements.

The Contractor Environmental Officer shall ensure that in areas with a high fire danger rating, staff are made aware thereof. Smoking shall be restricted to designated areas or shall not be allowed, particularly in areas that have a high fire danger rating.

Contractor shall ensure that adequate Fire Fighting equipment is available on site, particularly near hot work.

5.1.3 Waste

All waste generated shall be disposed of at a registered landfill site. A register of both hazardous and general waste shall be kept. A waste management plan shall be compiled before commencement of work. Records of waste disposal shall be kept and updated all the time. No waste, be it biodegradable or not, shall be left on site once work has ended.

Domestic and hazardous waste generated shall not be burned, buried, or disposed of on Eskom or Landowner property, but will be controlled and removed to a registered waste site on a regular basis (Daily / Weekly). The Principal Contractor and contractor working on site shall ensure that oil, fuel, and chemicals are confined to specific and secure areas throughout the construction period. These materials shall be stored in a bunted area with adequate containment for potential spills and leaks.
Waste may be collected by the relevant Municipality or alternatively taken by the Contractor to a registered landfill site. Where the Municipality does not have a weighbridge, the Contractor is responsible for obtaining a formal notification to this effect.

Contractors shall ensure that sufficient waste bins / containers, with lids are made available for waste control. The contractor shall comply with the requirements of NEM: Waste Act 59 of 2008.
Quantities of disposed waste shall be recorded and reported monthly. Set up system for regular waste removal to an approved facility and minimize waste by sorting wastes into recyclable and non-recyclable wastes.

Equipment maintenance and storage:

- Ensure that all plant is in good working order.
- Undertake maintenance within specified area (workshop); and use drip trays for all stationary or parked plant and when servicing equipment away from designated areas

5.1.4 Material requirement

The use of any material or property belonging to any landowner shall not be permitted prior to arrangements with the relevant landowner. Written proof of such agreement shall be handed to project leader / co-coordinator for record keeping

5.1.5 Dust and Noise

The Contractor shall monitor dust and noise caused by mobile equipment, generators, and other equipment during construction. Factors such as wind can often affect the intensity to which these impacts are experienced.

To ensure that noise does not constitute a disturbance during construction activities, all construction works shall occur between specific working hours. This shall be stipulated in the contract.
Mitigation measures to be implemented as required / agreed upon with the project leader / environmental advisor.

Dust suppression measures shall be in place to reduce the dust caused by the movement of heavy vehicles and other contractor activities.

5.1.6 Environmental Incidents

All environmental incidents such as pollution (air, water, land, noise, etc.), bird kills, and animals killed, plants destroyed, public complaints etc. shall be reported to project leader and / or environmental advisor within 24 hours of its occurrence.

All environmental incidents occurring on site shall be recorded according to Eskom Environmental Incident Management Procedure 240-133087117, detailing how each incident was dealt with. Proof thereof must be kept in an incident register.

The Contractor shall be held liable for any infringement of any Environmental statutory requirements.

5.1.7 Water

Always implement the current project Water Use Licence
No construction shall be allowed within the 1:100-year flood lines. Should any pollution of the watercourse occur, the Department of Water Affairs and Forestry must be notified immediately.

Water usage on site shall be verified with the substations/power stations responsible person, the project leader / environmental advisor to ensure compliance with legislation. Borehole water shall be verified as suitable for human consumption. All incidents related to water contamination shall be reported within 24 hours. Records of water quantities abstracted should be kept.

Chemical toilets shall not be within proximity of the drainage lines / ways.

5.2 REPORTING AND SHE GOVERNANCE

5.2.1 Weekly Inspection

Principal Contractor conduct week inspection and keep report.
Weekly reports must form part of the monthly reports.

5.2.2 Monthly Reporting

Environmental Management reports to be submitted as per timelines determined and agreed upon by project Environmental department.
Eskom project team shall define and provide a reporting template.

5.2.3 Forums for SHE Governance and Communication

Effective governance and communication structures have been established on site where project SHE matters are discussed. Below is an outline of the different forums, where Project Site Management shall engage with the Contractor(s) on SHE issues. This also includes the frequency of the different forums as well as the mediums to be employed.

5.2.4 Contractors Environmental Meetings

Contractors Environmental Meetings are held at intervals as determined by project Environmental Department, such meetings are chaired by the project Environmental Manager and attended by the ECO, project Environmental Practitioners as well as designated environmental resources of all contractors.

Attendance registers shall be kept for all the health and safety meetings.

5.2.5 Environmental file

Environmental file including the following but not limited to must be approved by the client. Ensure the files are updated regularly.

- Comprehensive aspect and Impact register specific to the scope of works.
- SHE policy recently signed.

- Environmental management plan/that address all the potential environmental risks as per aspect and impact register. This includes: Waste Management plan, Hazardous chemical substances management plan, Water management plan etc.
- Method statements that include environmental impact and mitigations measures. Include all activities in sequence as per the project scope and aspect and impact register
    - Incident Management Procedure
    - Non-Conformance Procedure
    - Internal Auditing Procedure.
- Appointment letter and the CV of the qualified Environmental officer with environmental experience

5.2.6 Environmental legislations and other requirements

Ensure compliance to all relevant environmental legislations and other requirements
Ensure compliance to the project available licences, authorisations and permits.

5.3 Procurement

5.3.1 BBBEE and preferencing scheme

The *Consultant* is expected to MAINTAIN OR INCREASE the B-BBEE Level of Contribution on the duration of the Contract.

5.3.2 Skills Development

One of the objectives of the project is to provide placement for learners requiring Work Integrated Learning exposure – P1 and P2 Learners (Method 3) and/or Professional Candidates (Method 4).

The Contract Skills Development Goals (CSDG) expressed in hours, shall not be less than the profession fees (financial value of the contract at time of award, excluding all allowances and expenses, but including VAT) in millions of Rand multiplied by 150.

The consultants are required to propose skills development against Eskom's targets

Category	Number	Entry Level	Output
Civil Engineering	2	S4	National Diploma
Total	2		

5.3.3 Other constraints

The *Consultant* complies with and fulfils the Contractor's obligations in respect of the Supplier Development, Localisation, and Industrialisation (SDL&I)'s Obligations in accordance with and as provided for in the Contractor's SDL&I Undertaking.

The *Consultant* will develop Skills as agreed during the Negotiations and Contract award. The beneficiaries for Skills Development will be graduates from within the Limpopo Province.
Consultant shall keep accurate records and provide the Project Manager with reports on the Contractor's actual delivery against the above stated SD&L criteria.

The *Consultant*'s failure to comply with his SD&L obligations constitutes substantial failure on the part of the Contractor to comply with his obligations under this contract.

5.3.4 Preferred sub-*Consultants*

Not applicable for these works. Any deviation or additions to these works must be discussed and agreed upon with the *Project Manager*.

5.3.5 Subcontract documentation, and assessment of subcontract tenders

Not applicable for these works. Any deviation or additions to these works must be discussed and agreed upon with the *Project Manager*.

5.3.6 Limitations on subcontracting

Not applicable for these works. Any deviation or additions to these works must be discussed and agreed upon with the *Project Manager*.

5.3.7 Attendance on Sub*Consultant*s

Not applicable for these works. Any deviation or additions to these works must be discussed and agreed upon with the *Project Manager*.

5.4 Correction of Defects

Correction of defects will be 4 (four) weeks after completion of the whole of the services as per the contract.

5.5 Working on the *Employer*'s property

5.5.1 *Employer*'s entry and security control, permits, and site regulations

There are currently two access roads. The team will assess both access roads before they decide on a suitable one. During construction, the closed gate will be used. The gate is currently used for maintenance. Eskom will manage the access at the gate.

The *Consultant* liaises with the GCD Safety Health and Environmental (SHE) Practitioner/Officers for Safety Induction prior work to commence. During Safety Induction, site access permits with a copy of the medical and a certified ID copy/passport (not older than three months) should be handed to the GCD SHE Practitioner/Officer for approval.

The *Consultant* employees will take the signed site access documents to security reception official to finalize their site access.

- The *Consultant* ensures that all its employees carry their site access forms with them all the time.
- The *Consultant* may be subjected to alcohol testing daily.
- The *Consultant* submits his application for vehicle permit to the *Project Manager*. The personnel and vehicles entering and leaving the site are subjected to routine searches.

The *Consultant* obtains a "Gate Removal Permit" from the *Project Manager* before materials and equipment can be removed from site. The "Gate Removal permit" gives itemised list of materials and equipment to be removed from site.

The *Consultant* ensures that a tool list is available on the day of arrival and that all tools are captured on the tool list. The tool list will be handed over to the Reception Security official that will stamp the tool list. The tool list will be kept safe and will be used when tools need to be removed from site. This must also be communicated to any Sub-*Consultant* that will be working at Matimba Power Station.

5.5.2 People restrictions, hours of work, conduct and records

It is very important that the *Consultant* keeps records of his people working on the *Employer*'s property, including those of his Sub-*Consultant*s. The *Employer*'s Agent shall have access to these records at any time. These records may be needed when assessing compensation events.

5.5.3 Facilities by the *Consultant*

- **Computers**

The *Consultant* shall provide computer hardware and software with appropriate peripherals including, but not limited to printers, scanners, photocopiers, office consumables for the *Consultant*'s personnel.

- **Transport and Accommodation:**

The *Consultant* shall provide all his transport and accommodation needs appropriately.

- **Tools of the Trade**

The *Consultant* shall provide all required "tools of the trade" for his personnel to carry out their responsibilities.

- **Personal Protective Equipment**

The *Consultant* shall provide all appropriate PPE, including but not limited to hard hats, reflective vests, steel toed safety shoes/ boots, eye protection, dust masks, hearing protection aids, rainy weather protection, cold/icy weather protection etc.

5.6 Cooperating with and obtaining acceptance of Others

The *Consultant* will co-operate with others in obtaining and providing information which they need in connection with the services. Where necessary to provide the services, the *Consultant* may hold or attend meetings with others. The *Consultant* will inform the *Employer* of these meetings beforehand, and the *Employer* may attend them.

5.7 Things provided by the *Employer*

An office space, with all other relevant facilities (e.g., ablution, kitchen, etc.), may be provided to the *Consultant* for execution of the works.

5.7.1 Telecommunication

Neither a network point nor a telephone is available on site. Should the *Consultant* require one, he is to make his own arrangements with relevant authorities. Arrangements may also be made to use the telephones of the station if they are available. Calls from these will be charged for at prevailing GPO rates.

Should the Contractor wish to use radio communication equipment on site, he will make his own arrangements with the relevant authorities. In this case, he is requested to liaise with the head of security at the station to ensure that there is no interference with existing channels or equipment.

5.8 Cataloguing requirements by the *Consultant*

N/A

6 List of drawings

6.1 Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Drawing number	Revision	Title
301-00825/01-100	3	List of Drawings
301-00825/01-101	2	Existing Ash Dump – General Arrangement
301-00825/01-102	2	Topsoil Management – General Arrangement
301-00825/01-103	2	Basin Excavation – General Arrangement
301-00825/01-104	2	Underdrainage Liner System – General Arrangement
301-00825/01-105	2	Roads and Stormwater Management – General Arrangement
301-00825/01-106	2	Rehabilitated Ash Dump Extension – General Arrangement
301-00825/01-107	3	Rehabilitated Ash Dump Extension – Sections
301-00825/01-108	2	Fencing Details – General Arrangement
301-00825/01-109	1	Ash Dump Extension – General Arrangement
301-00825/01-110	3	Phase 0 (Enabling Works): Ash Dump Extension – General Arrangement
301-00825/01-111	3	Phase 0 (Enabling Works): Topsoil Management Layout Plans and Details
301-00825/01-112	2	Phase 0 (Enabling Works): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-113	3	Phase 0 (Enabling Works): Access Ramp – Layout Plans and Sections

301-00825/01-114	3	Phase 0 (Enabling Works): MCP 1 and SCPE1 Positions – Layout Plan and Sections
301-00825/01-115	3	Phase 0 (Enabling Works): MCP1 Position – Longitudinal Section
301-00825/01-116	2	Phase 0 (Enabling Works): SCPE1 Position – Longitudinal Section
301-00825/01-117	2	Phase 0 (Enabling Works): MCP2 to MCP8 to SCPE2 to SCPE8 Positions Layout Plans and Sections
301-00825/01-118	2	Phase 0 (Enabling Works): Extendable Conveyor and MCP8 Position – Layout Plan and Longitudinal Section
301-00825/01-119	2	Phase 0 (Enabling Works): SCPE8 Position – Longitudinal Section
301-00825/01-120	3	Phase 0 (Enabling Works): Rehabilitated Ash Dump Extension Layout Plan
301-00825/01-121	2	Phase 0 (Enabling Works): Rehabilitated Slopes Drainage- Sections and Details
301-00825/01-122	1	Phase 0 (Enabling Works): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-140	3	Phase 1 (4 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-141	3	Phase 1 (4 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-142	2	Phase 1 (4 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-143	3	Phase 1 (4 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-144	2	Phase 1 (4 Years Lined Area): Underdrainage Liner System – Sections and Details
301-00825/01-145	2	Phase 1 (4 Years Lined Area): Permanent South RWD Road – Layout Plan and Longitudinal Section
301-00825/01-146	3	Phase 1 (4 Years Lined Area): South Water Return Dam- Layout Plan, Sections and Details
301-00825/01-147	2	Phase 1 (4 Years Lined Area): South RWD Silt Trap – Layout Plans and Sections
301-00825/01-148	2	Phase 1 (4 Years Lined Area): South RWD Silt Trap – Sections and Details
301-00825/01-149	2	Phase 1 (4 Years Lined Area): South RWD Spillway – Layout, Plans and Sections

301-00825/01-150	3	Phase 1 (4 Years Lined Area): South RWD Pump Sump Layout Plans, Sections and Details
301-00825/01-151	2	Phase 1 (4 Years Lined Area): Permanent South Perimeter Road CH. 0- CH 1340 – Layout Plan and Longitudinal Section
301-00825/01-152	2	Phase 1 (4 Years Lined Area): Permanent South Dirty Water Channel CH.0 – CH.1350 Layout Plan and Longitudinal Section
301-00825/01-153	2	Phase 1 (4 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-154	2	Phase 1 (4 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-155	2	Phase 1 (4 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section
301-00825/01-156	3	Phase 1 (4 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-157	2	Phase 1 (4 Years Lined Area): Clean Water Decant Pipeline CH.0 – CH 1132.27 – Layout Plan and Longitudinal Section
301-00825/01-158	2	Phase 1 (4 Years Lined Area): Clean Water Decant Pipeline Sections and Details Sheet 1 of 2
301-00825/01-159	2	Phase 1 (4 Years Lined Area): Clean Water Decant Pipeline Sections and Details Sheet 2 of 2
301-00825/01-160	2	Phase 1 (4 Years Lined Area): Ash Dump Extension - Front Stack Setting Out Points
301-00825/01-161	3	Phase 1 (4 Years Lined Area): MCP9 to MCP23 and SCP1 to SCP9 Positions – Layout Plan and Sections
301-00825/01-162	2	Phase 1 (4 Years Lined Area): MCP9 and MCP23 Positions – Layout Plan and Longitudinal Sections
301-00825/01-163	3	Phase 1 (4 Years Lined Area): SCP1 Position – Layout Plan and Longitudinal Sections
301-00825/01-164	3	Phase 1 (4 Years Lined Area): SCP9 Position – Layout Plan and Longitudinal Sections
301-00825/01-165	3	Phase 1 (4 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-166	2	Phase 1 (4 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-167	1	Phase 1 (4 Years Lined Area): Temporary Divider Wall – Layout Plan and Longitudinal Sections

301-00825/01-168	1	Phase 1 (4 Years Lined Area): Decant Outlet Structure – Reinforcement Details
301-00825/01-169	1	Phase 1 (4 Years Lined Area): South Return Water Dam – Reinforcement Details Sheet 1 of 3
301-00825/01-170	1	Phase 1 (4 Years Lined Area): South Return Water Dam – Reinforcement Details Sheet 2 of 3
301-00825/01-171	1	Phase 1 (4 Years Lined Area): South Return Water Dam – Reinforcement Details Sheet 3 of 3
301-00825/01-172	1	Phase 1 (4 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-173	0	Phase 1 (4 Years Lined Area): Clean Water Decant Inlet – Layout Plan, Sections and Reinforcement Details
301-00825/01-200	3	Phase 2 (8 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-201	3	Phase 2 (8 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-202	2	Phase 2 (8 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-203	3	Phase 2 (8 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-204	2	Phase 2 (8 Years Lined Area): Underdrainage Liner System – Sections and Details
301-00825/01-205	2	Phase 2 (8 Years Lined Area): Permanent South Perimeter Road CH 1340 – CH 1750- Layout Plan and Longitudinal Sections
301-00825/01-206	2	Phase 2 (8 Years Lined Area): Permanent South Dirty Water Channel CH. 1350 – CH.1770 Layout Plan and Longitudinal Section
301-00825/01-207	2	Phase 2 (8 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-208	2	Phase 2 (8 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-209	2	Phase 2 (8 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section
301-00825/01-210	3	Phase 2 (8 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-211	3	Phase 2 (8 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section

301-00825/01-212	2	Phase 2 (8 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-213	3	Phase 2 (8 Years Lined Area): MCP24 to MCP42 and SCP10 to SCP18 Positions – Layout Plan and Sections
301-00825/01-214	2	Phase 2 (8 Years Lined Area): MCP24 and MCP42 Positions – Layout Plan and Longitudinal Sections
301-00825/01-215	3	Phase 2 (8 Years Lined Area): SCP10 Position - Layout Plan and Longitudinal Sections
301-00825/01-216	3	Phase 2 (8 Years Lined Area): SCP18 Position – Layout Plan and Longitudinal Sections
301-00825/01-217	3	Phase 2 (8 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-218	2	Phase 2 (8 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-219	1	Phase 2 (8 Years Lined Area): Temporary Divider Wall – Layout Plan and Longitudinal Sections
301-00825/01-220	1	Phase 2 (8 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-300	3	Phase 3 (12 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-301	3	Phase 3 (12 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-302	2	Phase 3 (12 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-303	3	Phase 3 (12 Years Lined Area): Liner System – Layout Plan
301-00825/01-304	2	Phase 3 (12 Years Lined Area) Liner System – Sections and Details
301-00825/01-305	2	Phase 3 (12 Years Lined Area): Permanent South Perimeter Road CH 1750 – CH 2080- Layout Plan and Longitudinal Sections
301-00825/01-306	2	Phase 3 (12 Years Lined Area): Permanent South Dirty Water Channel CH. 1750 – CH.2080 Layout Plan and Longitudinal Section
301-00825/01-307	2	Phase 3 (12 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-308	2	Phase 3 (12 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-309	2	Phase 3 (12 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section

301-00825/01-310	2	Phase 3 (12 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-311	3	Phase 3 (12 Years Lined Area): Clean Water Decant Pipeline CH. 1133.27-CH 1342.34 – Layout Plan and Longitudinal Section
301-00825/01-312	2	Phase 3 (12 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section
301-00825/01-313	2	Phase 3 (12 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-314	3	Phase 3 (12 Years Lined Area): MCP43 to MCP55 and SCP19 to SCP26 Positions – Layout Plan and Sections
301-00825/01-315	2	Phase 3 (12 Years Lined Area): MCP24 and MCP42 Positions – Layout Plan and Longitudinal Sections
301-00825/01-316	3	Phase 3 (12 Years Lined Area): SPC19 Positions - Layout Plan and Longitudinal Sections
301-00825/01-317	3	Phase 3 (12 Years Lined Area): SCP26 Position – Layout Plan and Longitudinal Sections
301-00825/01-318	3	Phase 3 (12 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-319	2	Phase 3 (12 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-320	1	Phase 3 (12 Years Lined Area): Temporary Divider Wall/Access Road – Layout Plan and Longitudinal Sections
301-00825/01-321	1	Phase 3 (12 Years Lined Area): Clean Water Decant Inlet – Layout, Sections and Reinforcement Details
301-00825/01-322	2	Phase 3 (12 Years Lined Area): Temporary Dirty Water Trench – Layout Plan and Longitudinal Sections
301-00825/01-323	1	Phase 3 (12 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-400	3	Phase 4 (16 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-401	3	Phase 4 (16 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-402	2	Phase 4 (16 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-403	3	Phase 4 (16 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-404	2	Phase 4 (16 Years Lined Area) Underdrainage Liner System – Sections and Details

301-00825/01-405	2	Phase 4 (16 Years Lined Area): Permanent South Perimeter Road CH 2080 – CH 2390- Layout Plan and Longitudinal Sections
301-00825/01-406	2	Phase 4 (16 Years Lined Area): Permanent South Dirty Water Channel CH. 2080 – CH.2390 Layout Plan and Longitudinal Section
301-00825/01-407	2	Phase 4 (16 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-408	2	Phase 4 (16 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-409	2	Phase 4 (16 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section
301-00825/01-410	3	Phase 4 (16 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-411	3	Phase 4 (16 Years Lined Area): Clean Water Decant Pipeline CH. 1342.34-CH 1534.06 – Layout Plan and Longitudinal Section
301-00825/01-412	2	Phase 4 (16 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section
301-00825/01-413	2	Phase 4 (16 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-414	3	Phase 4 (16 Years Lined Area): MCP56 to MCP66 and SCP27 to SCP33 Positions – Layout Plan and Sections
301-00825/01-415	2	Phase 4 (16 Years Lined Area): MCP56 and MCP66 Positions – Layout Plan and Longitudinal Sections
301-00825/01-416	2	Phase 4 (16 Years Lined Area): SPC27 Positions - Layout Plan and Longitudinal Sections
301-00825/01-417	2	Phase 4 (16 Years Lined Area): SCP33 Position – Layout Plan and Longitudinal Sections
301-00825/01-418	3	Phase 4 (16 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-419	2	Phase 4 (16 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-420	1	Phase 4 (16 Years Lined Area): Temporary Divider Wall/Access Road – Layout Plan and Longitudinal Sections
301-00825/01-421	1	Phase 4 (16 Years Lined Area): Clean Water Decant Inlet – Layout, Sections and Reinforcement Details
301-00825/01-422	2	Phase 4 (16 Years Lined Area): Temporary Dirty Water Trench – Layout Plan and Longitudinal Sections

301-00825/01-423	1	Phase 4 (16 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-500	3	Phase 5 (20 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-501	3	Phase 5 (20 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-502	2	Phase 5 (20 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-503	3	Phase 5 (20 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-504	2	Phase 5 (20 Years Lined Area) Underdrainage Liner System – Sections and Details
301-00825/01-505	2	Phase 5 (20 Years Lined Area): Permanent North Perimeter Road- Layout Plan and Longitudinal Sections
301-00825/01-506	3	Phase 5 (20 Years Lined Area): North Return Water Dam- Layout Plan, Sections and Details
301-00825/01-507	2	Phase 5 (20 Years Lined Area): North RWD Silt Trap- Layout Plan and Sections
301-00825/01-508	2	Phase 5 (20 Years Lined Area): North RWD Silt Trap- Sections and Details
301-00825/01-509	2	Phase 5 (20 Years Lined Area): North RWD Spillway- Layout Plan, Sections and Details
301-00825/01-510	3	Phase 5 (20 Years Lined Area): North RWD Pump Sump- Layout Plan, Sections and Details
301-00825/01-511	2	Phase 5 (20 Years Lined Area): Permanent North Perimeter Road- Layout Plan and Longitudinal Sections
301-00825/01-512	2	Phase 5 (20 Years Lined Area): Permanent North Dirty Water Channel - Layout Plan and Longitudinal Sections
301-00825/01-513	2	Phase 5 (16 Years Lined Area): Permanent South Road CH. 2390 – CH.2690 Layout Plan and Longitudinal Section
301-00825/01-514	2	Phase 5 (16 Years Lined Area): Permanent South Dirty Water Channel CH. 2400 – CH.2700 Layout Plan and Longitudinal Section
301-00825/01-515	2	Phase 5 (20 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-516	2	Phase 5 (20 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-517	3	Phase 5 (20 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section

301-00825/01-518	3	Phase 5 (20 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-519	3	Phase 5 (20 Years Lined Area): Clean Water Decant Pipeline CH. 1534.06-CH 1714.82 – Layout Plan and Longitudinal Section
301-00825/01-520	2	Phase 5 (20 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section
301-00825/01-521	2	Phase 5 (20 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-522	3	Phase 5 (20 Years Lined Area): MCP67 to MCP71 and SCP34 to SCP40 Positions – Layout Plan and Sections
301-00825/01-523	2	Phase 5 (20 Years Lined Area): MCP67 and MCP71 Positions – Layout Plan and Longitudinal Sections
301-00825/01-524	3	Phase 5 (20 Years Lined Area): SPC34 Positions - Layout Plan and Longitudinal Sections
301-00825/01-525	3	Phase 5 (20 Years Lined Area): SCP40 Position – Layout Plan and Longitudinal Sections
301-00825/01-526	3	Phase 5 (20 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-527	2	Phase 5 (20 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-528	1	Phase 5 (20 Years Lined Area): Temporary Divider Wall/Access Road – Layout Plan and Longitudinal Sections
301-00825/01-529	1	Phase 5 (20 Years Lined Area): Temporary Divider Wall/Access Road to North RWD – Layout Plan and Longitudinal Sections
301-00825/01-530	1	Phase 5 (20 Years Lined Area): Clean Water Decant Inlet – Layout Plan, Sections and Reinforcement Details
301-00825/01-531	2	Phase 5 (20 Years Lined Area): Temporary Dirty Water Trench – Layout Plan and Longitudinal Sections
301-00825/01-532	1	Phase 5 (20 Years Lined Area): North Return Water Dam – Reinforcement Details Sheet 1 of 3
301-00825/01-533	1	Phase 5 (20 Years Lined Area): North Return Water Dam – Reinforcement Details Sheet 2 of 3
301-00825/01-534	1	Phase 5 (20 Years Lined Area): North Return Water Dam – Reinforcement Details Sheet 3 of 3
301-00825/01-535	1	Phase 5 (20 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details

301-00825/01-600	3	Phase 6 (24 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-601	3	Phase 6 (24 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-602	2	Phase 6 (24 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-603	3	Phase 6 (24 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-604	2	Phase 6 (24 Years Lined Area) Underdrainage Liner System – Sections and Details
301-00825/01-605	2	Phase 6 (24 Years Lined Area): Permanent South Perimeter Road CH 2690 – CH 3040- Layout Plan and Longitudinal Sections
301-00825/01-606	2	Phase 6 (24 Years Lined Area): Permanent South Dirty Water Channel CH. 2700 – CH.3050 Layout Plan and Longitudinal Section
301-00825/01-607	2	Phase 6 (24 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-608	2	Phase 6 (24 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-609	2	Phase 6 (24 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section
301-00825/01-610	3	Phase 6 (24 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-611	3	Phase 6 (24 Years Lined Area): Clean Water Decant Pipeline CH. 1714.82-CH 1908.74 – Layout Plan and Longitudinal Section
301-00825/01-612	2	Phase 6 (24 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section
301-00825/01-613	2	Phase 6 (24 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-614	3	Phase 6 (24 Years Lined Area): MCP72 to MCP76 and SCP41 to SCP48 Positions – Layout Plan and Sections
301-00825/01-615	2	Phase 6 (24 Years Lined Area): MCP72 and MCP76 Positions – Layout Plan and Longitudinal Sections
301-00825/01-616	3	Phase 6 (24 Years Lined Area): SPC41 Positions - Layout Plan and Longitudinal Sections
301-00825/01-617	3	Phase 6 (24 Years Lined Area): SCP48 Position – Layout Plan and Longitudinal Sections

301-00825/01-618	3	Phase 6 (24 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-619	2	Phase 6 (24 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-620	1	Phase 6 (24 Years Lined Area): Temporary Divider Wall/Access Road – Layout Plan and Longitudinal Sections
301-00825/01-621	1	Phase 6 (24 Years Lined Area): Clean Water Decant Inlet – Layout, Sections and Reinforcement Details
301-00825/01-622	2	Phase 6 (24 Years Lined Area): Temporary Dirty Water Trench – Layout Plan and Longitudinal Sections
301-00825/01-623	1	Phase 6 (24 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-700	3	Phase 7 (28 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-701	3	Phase 7 (28 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-702	2	Phase 7 (28 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-703	3	Phase 7 (28 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-704	2	Phase 7 (28 Years Lined Area) Underdrainage Liner System – Sections and Details
301-00825/01-705	2	Phase 7 (28 Years Lined Area): Permanent South Perimeter Road CH 3040 – CH 3305- Layout Plan and Longitudinal Sections
301-00825/01-706	2	Phase 7 (28 Years Lined Area): Permanent South Dirty Water Channel CH. 3050 – CH.3310 Layout Plan and Longitudinal Section
301-00825/01-707	2	Phase 7 (28 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-708	2	Phase 7 (28 Years Lined Area): Temporary Dirty Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-709	2	Phase 7 (28 Years Lined Area): Temporary Clean Water Channel – Layout Plan and Longitudinal Section
301-00825/01-710	3	Phase 7 (28 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-711	3	Phase 7 (28 Years Lined Area): Clean Water Decant Pipeline CH. 1908.74-CH 2029 – Layout Plan and Longitudinal Section

301-00825/01-712	2	Phase 7 (24 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section
301-00825/01-713	2	Phase 7 (24 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-714	3	Phase 7 (28 Years Lined Area): MCP77 to MCP80 and SCP49 to SCP54 Positions – Layout Plan and Sections
301-00825/01-715	2	Phase 7 (28 Years Lined Area): MCP77 and MCP80 Positions – Layout Plan and Longitudinal Sections
301-00825/01-716	3	Phase 7 (28 Years Lined Area): SPC49 Positions - Layout Plan and Longitudinal Sections
301-00825/01-717	3	Phase 7 (28 Years Lined Area): SCP54 Position – Layout Plan and Longitudinal Sections
301-00825/01-718	3	Phase 7 (28 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-719	2	Phase 7 (28 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-720	1	Phase 7 (28 Years Lined Area): Temporary Divider Wall/Access Road – Layout Plan and Longitudinal Sections
301-00825/01-721	1	Phase 7 (28 Years Lined Area): Clean Water Decant Inlet – Layout, Sections and Reinforcement Details
301-00825/01-722	2	Phase 7 (28 Years Lined Area): Temporary Dirty Water Trench – Layout Plan and Longitudinal Sections
301-00825/01-723	1	Phase 7 (28 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-800	3	Phase 8 (32 Years Lined Area): Ash Dump Extension – General Arrangement
301-00825/01-801	3	Phase 8 (32 Years Lined Area): Topsoil Management – Layout Plans and Details
301-00825/01-802	2	Phase 8 (32 Years Lined Area): Basin Excavation- Layout Plans and Longitudinal Sections
301-00825/01-803	3	Phase 8 (32 Years Lined Area): Underdrainage Liner System – Layout Plan
301-00825/01-804	2	Phase 8 (32 Years Lined Area) Underdrainage Liner System – Sections and Details
301-00825/01-805	2	Phase 8 (32 Years Lined Area): Permanent South Perimeter Road CH 3305 – CH 3693- Layout Plan and Longitudinal Sections

301-00825/01-806	2	Phase 8 (32 Years Lined Area): Permanent South Dirty Water Channel CH. 3310 – CH.3686 Layout Plan and Longitudinal Section
301-00825/01-807	2	Phase 8 (32 Years Lined Area): Spillways – Layout, Plans, Sections and Details
301-00825/01-808	2	Phase 8 (32 Years Lined Area): Permanent North Clean Water Channel – Layout Plan and Longitudinal Sections
301-00825/01-809	2	Phase 8 (32 Years Lined Area): Stormwater Management – Sections and Details
301-00825/01-810	3	Phase 8 (32 Years Lined Area): Clean Water Decant Pipeline CH. 2029 - CH 2246 – Layout Plan and Longitudinal Section
301-00825/01-811	2	Phase 8 (32 Years Lined Area): Clean Water Decant Pipeline – Layout Plan and Section
301-00825/01-812	2	Phase 8 (32 Years Lined Area): Ash Dump Extension – Front Stack Crest Setting Out Points
301-00825/01-813	3	Phase 8 (32 Years Lined Area): MCP81 to MCP85 and SCP55 to SCP60 Positions – Layout Plan and Sections
301-00825/01-814	2	Phase 8 (32 Years Lined Area): MCP81 and MCP85 Positions – Layout Plan and Longitudinal Sections
301-00825/01-815	3	Phase 8 (32 Years Lined Area): SPC55 Positions - Layout Plan and Longitudinal Sections
301-00825/01-816	3	Phase 8 (32 Years Lined Area): SCP60 Position – Layout Plan and Longitudinal Sections
301-00825/01-817	3	Phase 8 (32 Years Lined Area): Rehabilitated Ash Dump Extension – Layout Plan
301-00825/01-818	2	Phase 8 (32 Years Lined Area): Rehabilitated Slopes Drainage – Sections and Details
301-00825/01-819	1	Phase 8 (32 Years Lined Area): Temporary Divider Wall/Access Road – Layout Plan and Longitudinal Sections
301-00825/01-820	1	Phase 8 (32 Years Lined Area): Temporary Clean Channel – Layout Plan and Longitudinal Sections
301-00825/01-821	1	Phase 8 (32 Years Lined Area): Clean Water Decant Inlet – Layout, Sections and Reinforcement Details
301-00825/01-822	2	Phase 7 (32 Years Lined Area): Temporary Dirty Water Trench – Layout Plan and Longitudinal Sections
301-00825/01-823	2	Phase 7 (32 Years Lined Area): Permanent North Perimeter Road – Layout Plan and Longitudinal Sections
301-00825/01-824	2	Phase 7 (32 Years Lined Area): Permanent North Dirty Channel – Layout Plan and Longitudinal Sections

301-00825/01-825	1	Phase 8 (32 Years Lined Area): Rehabilitated Slopes Drainage – Reinforcement Details
301-00825/01-900	2	Phase 1 (4 Years Lined Area): Decant Outlet Structure– Reinforcement Details Sheet 1 of 2
301-00825/01-902	2	Phase 1 (4 Years Lined Area): North and South Return Water Dam – Reinforcement Details Sheet 1 of 3
301-00825/01-903	2	Phase 1 (4 Years Lined Area): North and South Return Water Dam – Reinforcement Details Sheet 2 of 3
301-00825/01-904	2	Phase 1 (4 Years Lined Area): North and South Return Water Dam – Reinforcement Details Sheet 3 of 3

Appendix B – Applicable Standards

The *Consultant* applies the latest versions of the following codes and standards unless a particular version is specified below.

1. Matimba Ash Dump Project – Technical Specifications
2. Matimba Ash Dump Project – Detailed Design Report
3. Matimba Ash Dump Project – Quality Control Manual
4. Matimba Ash Dump – O and M Manual
5. Matimba Ash Dump – Liner Interface Testing Results
6. Matimba Power Station Existing Area Water Use Licence 07/A42J/GECI/5726
7. Matimba Power Station Ash Dump Geotechnical Report
8. Matimba Ash Dump List of Drawings 301-00825-01-100 Rev 3
9. Matimba Ash Dump Environmental Authorization (EA) and Water Use License (WUL) issued for the construction of the ADF
10. Matimba ash Dump Environmental Impact Assessment
11. Matimba Ash Dump EMP
12. Department of Water and Sanitation, Technical Advisory Note: Construction Quality Assurance for Water Conservation and Pollution Control Barrier Systems.
13. Preferential Procurement Policy Framework Act (Act 5 of 200), PPPFA Designated Sector Circular No. 1 of 2021/2022
14. Construction Regulations (latest and applicable)
15. 240-48929482: Tender Technical Evaluation Procedure
16. ISO 9001 Quality Management Systems
17. 32-1034 Eskom Procurement Policy
18. 240-53113685, Design Review Procedure
19. 240-56355754 Field instrument installation standard
20. 240-86973501 Engineering Drawing Standard - Common Requirements
21. 240-53114026 Project Engineering Change Management Procedure
22. 240-66920003 Documentation Management Review and Handover Procedure
23. 32-6 Eskom Document and Record Management Procedure
24. 240-49230111 Hazard and Operability Analysis Guideline
25. 240-49230046 Failure Mode and Effect Analysis Guideline
26. 240-49230030 Reliability Engineering Analysis Guideline
27. 240-49230100 Safety Engineering Analysis Guideline
28. 240-72273656 Power Generation Asset Criticality Classification Standard
29. 200-6166 Eskom Backfill Specification
30. GGS 1427 - Instrument Piping
31. 240-83561037_Reporting & Data Requirements Specification for Contractors
32. 240-49230067_Life Data Analysis Guideline
33. 240-49230046_Failure Mode and Effects Analysis Guideline
34. 240-66920003 Rev 1 Project Handover Documentation Management Procedure
35. 240-72273656 Power Generation Asset Criticality Classification Standard
36. SANS 1200 series standardised specification for Civil Engineering Construction.
37. The National Water Act & Regulation GN704
38. ECSA Overarching Code of Practice for the Performance of Engineering Work
39. ECSA Code of Conduct
40. Legislative and regulatory requirements, relevant and applicable
41. Best Practice Guidelines (relevant and applicable).
42. All work shall be conducted in accordance with the requirements of the Occupational Health and Safety Act (Act 85 of 1993) as amended.