NEC3 Engineering and Construction

Short Contract (ECSC3)

A contract between **Eskom Holdings SOC Ltd (Reg No. 2002/015527/30)**

and

for **External Works for Park homes and drainage for the Design and Specification Building**

Contents: Compiled in accordance with CIDB Standard for Uniformity in Construction Procurement (May 2010 amendments)

Documentation prepared by:

C1 Agreements & Contract Data

C1.1 Form of Offer and Acceptance

Offer

The Employer, identified in the Acceptance page signature block on the next page, has solicited offers to enter into a contract for the procurement of:

External Works for Park homes and drainage for the Design and Specification Building.

The tenderer, identified in the signature block below, having examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the Contract Data.

The offered total of the Prices exclusive of VAT is	**R[●]**
Value Added Tax @ 15% is	**R[●]**
The offered total of the Prices inclusive of VAT is	**R[●]**
(in words) **[●]**	

This Offer may be accepted by the Employer by signing the form of Acceptance overleaf and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the Contractor in the conditions of contract identified in the Contract Data.

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer: .....
(Insert name and address of organisation)

.....

Name & signature of witness .....

Date .....

Tenderer's CIDB registration number: .....

Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the Contract Data. Acceptance of the tenderer's Offer shall form an Agreement between the Employer and the tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the Contract, are contained in:

Part 1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)

Part 2 Pricing Data

Part 3 Scope of Work: Works Information

Part 4 Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be signed by the duly authorised representative(s) for both parties.

The tenderer shall within one week of receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the tenderer receives one fully completed and signed copy of this document, including the Schedule of Deviations (if any) together with all the terms of the contract as listed above.

Signature(s) .....

Name(s) .....

Capacity .....

for the Employer .....
(Insert name and address of organisation)

.....

Name & signature of witness .....

Date .....

Note: If a tenderer wishes to submit alternative tender offers, further copies of this document may be used for that purpose, duly endorsed, 'Alternative Tender No. _____ '

Schedule of Deviations

Note:

1. To be completed by the Employer prior to award of contract. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1	**[●]**	**[●]**
2	**[●]**	**[●]**
3	**[●]**	**[●]**
4	**[●]**	**[●]**
5	**[●]**	**[●]**
6	**[●]**	**[●]**
7	**[●]**	**[●]**

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

	For the tenderer:	**For the Employer**
Signature		
Name		Mr. Bruce Moyo
Capacity		PSGM
On behalf of	*(Insert name and address of organisation)*	Eskom
Name & signature of witness		
Date		

C1.2 Contract Data

Data provided by the *Employer*

[Instructions to the contract compiler: (delete these two notes in the final draft of a contract)

1. Please read the relevant clauses in the NEC3 Engineering and Construction Short Contract (April 2013) (ECSC3)[1] before you enter data. The number of the principal clause is shown for most statements however other clauses may also use the same data.

2. Where the following symbol is used "**[●]" -** data is required to be inserted.]

Completion of the data in full is essential to create a complete contract.

Clause	Statement	Data
	General	
10.1	The *Employer* is (Name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
10.1 & 14.4	The *Employer*'s representative to whom the *Employer* in terms of clause 14.4 delegates his actions[2] is (Name):	**[●]**
	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	E-mail address	**[●]**
11.2(11)	The *works* are	**Please refer to the scope of works**
11.2(13)	The Works Information is in	**the document called 'Works Information' in Part 3 of this contract.**
11.2(12)	The Site Information is in	**the document called 'Site Information' in Part 4 of this contract.**
11.2(12)	The *site* is	**Eskom Tutuka Power Station**
30.1	The *starting date* is.	**TBC**
11.2(2)	The *completion date* is.	**TBC**
13.2	The *period for reply* is	**3 days**
40	The *defects date* is	**52 weeks after Completion**
41.3	The *defect correction period* is	**1 week**
50.1	The *assessment day* is the	**26th of each month.**

[1] Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za
[2] Except those actions which can only be done by the *Employer* as a Party to the contract.

50.5	The *delay damages* are	**2.5 % per day of the contract value capped at 10%**
50.6	The retention is	**5%**
51.2	The interest rate on late payment is	
80.1	The *Contractor* is not liable to the *Employer* for loss of or damage to the *Employer*'s property in excess of	**the amount of the deductibles relevant to the event**
	Does the United Kingdom Housing Grants, Construction and Regeneration Act (1996) apply?	**No**
93.1	The *Adjudicator* is	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**
	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	e-mail	**[●]**
93.2(2)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body**
93.4	The *tribunal* is:	**arbitration.**
	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**[●] South Africa**
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

The *conditions of contract* are the NEC3 Engineering and Construction Short Contract (April 2013)[3][4] and the following additional conditions Z1 to Z11 which always apply:

[3] If June 2005 Edition applies, delete April 2013 and insert June 2005
[4] State whether attached as a 'PDF' file in terms of Eskom's licence, or to be obtained from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za.

Z1 Cession delegation and assignment

Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer.*

Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

Z2 Change of Broad Based Black Economic Empowerment (B-BBEE) status

Z2.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor*'s B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.

Z2.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Employer* within thirty days of the notification or as otherwise instructed by the *Employer*.

Z2.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the *starting date* the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor*'s obligation to Provide the Works.

Z2.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *works*.

Z3 Confidentiality

Z3.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to others except where required by this contract. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to others where required by this contract the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z3.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Employer*.

Z3.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z3.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Employer*. All rights in and to all such images vests exclusively in the *Employer*.

Z3.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z4 Waiver and estoppel: Add to clause 12.2:

Z4.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties or their delegates or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

Z5 Health, safety and the environment

Z5.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site;
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
- undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z5.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z6 Provision of a Tax Invoice and interest. Add to clause 50

Z6.1 The *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer*'s procedures stated in the Works Information, showing the correctly assessed amount due for payment.

Z6.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z6.3 The *Contractor* is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer*'s VAT number 4740101508 on each invoice he submits for payment.

Z7 Notifying compensation events

Z7.1 Delete from the last sentence in clause 61.1, "unless the event arises from an instruction of the *Employer*."

Z8 *Employer's* limitation of liability; Add to clause 80.1

Z8.1 The *Employer* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand).

Z9 Termination: Add to clause 90.2, after the words "or its equivalent":

Z9.1 or had a business rescue order granted against it.

Z10 Addition to Clause 50.5

Z10.1 If the amount due for the *Contractor*'s payment of *delay damages* reaches the limits stated in this Contract Data (if any), the *Employer* may terminate the *Contractor*'s obligation to Provide the Works.

If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *works*.

Z11 Ethics

For the purposes of this Z-clause, the following definitions apply:

Affected Party means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subconsultants or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

Coercive Action means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,

Collusive Action means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,

Committing Party means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors or the Subcontractor's employees,

Corrupt Action means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

Fraudulent Action means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,

Obstructive Action means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

Prohibited Action means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

Z11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z11.2 The *Employer* may terminate the *Contractor*'s obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor*'s obligation to Provide the Services for this reason.

Z11.3 If the *Employer* terminates the *Contractor*'s obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Z12 Insurance

Z _12.1 Replace core clause 82 with the following:

Insurance cover 82

82.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

82.2 The *Contractor* provides the insurances stated in the Insurance Table A, from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity	Cover provided until
Loss of or damage to the *works*	The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible as at contract date, where covered by the *Employer*'s insurance	The *Employer*'s certificate of Completion has been issued
Loss of or damage to Equipment, Plant and Materials	The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible as at contract date, where covered by the *Employer*'s insurance	The Defects Certificate has been issued
The *Contractor*'s liability for loss of or damage to property (except the *works*, Plant and Materials and Equipment) and for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor*'s Providing the Works	Loss of or damage to property *Employer*'s property The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible as at contract date where covered by the *Employer*'s insurance	

	Other property The replacement cost Bodily injury to or death of a person The amount required by the applicable law	
Liability for death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	

82.3 The *Employer* provides the insurances as stated in the Insurance Table B

INSURANCE TABLE B

Insurance against or name of policy	**Minimum amount of cover or minir of indemnity**
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

Z13 Nuclear Liability

Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z13.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z14 Asbestos

For the purposes of this Z-clause, the following definitions apply:

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.

Ambient Air means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.

Compliance Monitoring means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

OEL means occupational exposure limit.

Parallel Measurements means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.

Safe Levels means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

Standard means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

TWA means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per

millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z14.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z14.3 The *Employer* manages asbestos and ACM according to the Standard.

Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z14.5 The *Contractor*'s personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z14.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer*'s expense, and conducted in line with South African legislation.

Data provided by the *Contractor* (the *Contractor*'s Offer)

The tendering contractor is advised to read both the NEC3 Engineering and Construction Short Contract (April 2013) and the relevant parts of its Guidance Notes (ECSC3-GN)[5] in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on page 31 of the ECSC3 April 2013 Guidance Notes.

Completion of the data in full is essential to create a complete contract.

10.1	The *Contractor* is (Name):	**[●]**
	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	E-mail address	**[●]**
63.2	The percentage for overheads and profit added to the Defined Cost for people is	**[●]%**
63.2	The percentage for overheads and profit added to other Defined Cost is	**[●]%**
11.2(9)	The Price List is in	**the document called 'Price List' in Part 2 of this contract.**
11.2(10)	The offered total of the Prices is [Enter the total of the Prices from the Price List]:	**R[●]** **excluding VAT** **[in words]** **[●]** **excluding VAT**

[5] Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za.

C2 Pricing Data

C2.1 Pricing assumptions

Entries in the first four columns in the Price List are made either by the *Employer* or the tendering contractor

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tenderer enters the amount in the Price column only; the Unit, Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for the item of work which is the rate for the work multiplied by the quantity completed, the tenderer enters the rate which is then multiplied by the expected quantity to produce the Price, which is also entered.

All Prices are to be shown excluding VAT unless instructed otherwise by the *Employer* in Tender Data or in an instruction the *Employer* has given before the tenderer enters his Prices.

If there is insufficient space in the Price List which follows, state in which document the Price List is contained.

C2.2 Price List

The Price List is as follows

EXTERNAL WORKS TO PARKHOMES AND DESIGN & SPECIFICATION BUILDING AT TUTUKA POWER STATION						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SANS 1200 A	SECTION 1: GENERAL				3000012141
		SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
		Establishment of Facilities on the Site:				
		Facilities for Contractor				

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2		SECTION 2: CONSTRUCTION WORKS				
2.1		ENGINEERING PARKHOMES				
	SANS 1200 DB	EARTHWORKS & PAVING				
		AREA 1				3000032745
2.1.1	8.3.11	Clear area of grubbing at 150mm	m²	439		
2.1.2	8.3.4	Importing of 150mm subgrade layer of G5 material compacted to 95% Mod AASHTO density	m³	66		
2.1.3		4% cement Stabilisation of 150mm backfill	m²	66		
2.1.4		River sand compacted to 20mm thickness	m²	439		
2.1.5		Kerbing and haunching	m	107		
2.1.6		Laying of paving (Block type S-A, Block class 35MPa) New blocks at a slope of between 1.5% and 2%	m²	439		
2.1.7		Supply and install concrete barrier Single side	No	3		
2.1.8		Precast drainage channels	No	24		
Total						
		AREA 2				3000032745
2.1.9		Clear area of grubbing at 150mm	m²	144		
2.1.10		150mm subgrade layer of imported G5 material compacted to 95% Mod AASHTO density	m³	21.6		
2.1.11		4% cement Stabilisation of 150mm backfill	m³	21.6		
2.1.12		Soil poisonining	m²	144		
2.1.13		Bedding sand compacted to 20mm thickness	m²	144		
2.1.14		Kerbing and haunching	m	81		
2.1.15		Laying of interlocking 80mm paving (Block type S-A, Block class 35MPa) New blocks at a slope of between 1.5% and 2%33	m²	144		
Total						
		AREA 3				3000032745
2.1.16		Clear area of grubbing at 150mm	m²	144		
2.1.17		150mm subgrade layer of imported G5 material compacted to 95% Mod AASHTO density	m³	21.6		
2.1.18		4% cement Stabilisation of 150mm backfill	m²	21.6		
2.1.19		Soil poisioning	m²	144		
2.1.20		Bedding sand compacted to 20mm thickness	m²	144		
2.1.21		Kerbing and haunching	m	81		
2.1.22		Laying of interlocking 80mm paving (Block type S-A, Block class 35MPa) New blocks at a slope of between 1.5% and 2%	m²	81		
Total						
		DOCUMENTATION CENTRE				3000032745
2.1.23		Clear area of grubbing at 150mm	m²	102		
2.1.24		150mm subgrade layer of imported G5 material compacted to 95% Mod AASHTO density	m³	15.3		
2.1.25		4% cement Stabilisation of 150mm backfill	m³	15.3		
2.1.26		Soil poisioning	m²	102		
2.1.27		Bedding sand compacted to 20mm thickness	m³	2.04		
2.1.28		Kerbing and haunching	m	103		
2.1.29		Laying of interlocking 80mm paving (Block type S-A, Block class 35MPa) New blocks at a slope of between 1.5% and 2%	m²	102		

2.2	SANS 1200LB	POTABLE WATER DOCUMENT CENTRE				3000031741
2.2.1	8.21.	Supply and install 22mm OD high-density polyethylene	m	27		
		Specials				
2.2.2		22mm Ball valve	No	3		
2.2.3		22mm compression Elbow	No	1		
2.2.5		22x50x50mm reducing tee	No	2		
2.2.6		22mm compression coupling	No	6		
2.2.8	SANS 1200 DB 8.3.2(a)	300x150mm Excavate Pipe trench	m³	0.81		
2.2.9		300x150mm Backfill Pipe trench	m³	0.81		

2.3	**SANS 1200 LD**	**SEWER DOCUMENT CENTRE**				**3000055812**
2.3.1	8.2.1	Supply,install,lay 110mm Upvc Pipe,class 34, heavy duty	m	10		
	8.2.2.	Specials				
2.3.2		110mm x 95 degree Junction	No	2		
2.3.3		110mm Two way Vent Valve	No	2		
2.3.4		110mm x 45 Y junction	No	2		
2.3.5		110mm Double socket	No	3		
2.3.6		110mm Gulley Head and grate	No	2		
2.3.7		110mm Gulley P Trap	No	2		
2.3.8		Rubber Seal Ring	No	3		
2.3.9		Rodding eye 45	No	3		
2.3.13	8.2.11	Break into and connect to existing sewer manhole (at correct line and level) for new connections, deal with live seweage flow and make good on all benching	Sum	1		

2.4	**SANS 1200DB**	**BEDDING OF SEWER DOCUMENT CENTRE**				**3000055812**
2.4.1		Excavation to desired depth of 600mm	m³	2.2		
2.4.2	8.2.2.3	Selected fill material 300mm	m³	1.1		
2.4.3		Bedding 150mm	m³	0.5		
2.4.4		Backfill topsoil 150mm	m³	0.5		

2.5	**SANS 1200LB**	**POTABLE WATER AREA 1**				**3000031741**
2.5.1	8.21.	Supply and install 22mm OD high-density polyethylene	m	50		
2.5.2		Specials				
2.5.3		22mm Ball valve	No	3		
2.5.4		22mm compression Elbow	No	7		
2.5.5		22mm compression Tee	No	3		
2.5.6		22x50x50mm reducing tee	No	2		
2.5.7		22mm compression coupling	No	11		
2.5.8		300x150mm Pipe trench	m³	2.25		
2.5.9		300x150mm Backfill Pipe trench	m³	2.25		

2.6	**SANS 1200 LD**	**SEWER AREA 1**				**3000055812**
2.6.1	8.2.1	Supply,install,lay 110mm Upvc Pipe,class 34, heavy duty	m	80		
2.6.2	8.2.2.	Specials				
2.6.3		110mmx 95 degree Junction	No	8		
2.6.4		110mm Two way Vent Valve	No	8		
2.6.5		110mmx45 Y junction	No	12		
2.6.6		110mm Double socket	No	16		
2.6.7		110mm Gulley Head and grate	No	5		
2.6.8		110mm Gulley P Trap	No	5		
2.6.9		Rubber Seal Ring	No	16		
2.6.10		Rooding eye 45	No	5		
2.6.11	8.2.11	Break into and connect to existing sewer manhole (at correct line and level) for new connections, deal with live seweage flow and make good on all benching	Sum	1		

2.7	**SANS 1200DB**	**BEDDING OF SEWER AREA 1**				**3000055812**
2.7.1		Excavation to desired depth of 600mm	m³	17.6		
2.7.2	8.2.2.4	Selected fill material 300mm	m³	8.8		
2.7.3		Bedding 150mm	m³	4.4		
2.7.4		Backfill topsoil 150mm	m³	4.4		

2.8		**Precast panels**				**3000050421**
2.8.1		3.6x1x0.34m Precast Single Side Concrete Road Barrier	No	3		
2.8.2		Precast drainage channels	No	20		

2.9	SANS 1200 GA	DRAINAGE DESIGN & SPECIFICATION BUILDING				3000014688
2.9.1		Removal of exiting paving	m²	1.42		
2.9.2		Excavation of 280mm to desired depth removal of debris	m³	0.672		
2.9.3		Import 150mm G5 material and copacted at 95% Mod AASHTO	m³	0.672		
2.9.4		Supply and installation of bidim A2 or Eskom aaproved geotextile	m²	2.4		
2.9.5		Supply install mesh wire 888 (6mx2.4x12)	m²	2.4		
2.9.6		40mm 30 Mpa cover blocks	m²	2.4		
2.9.7		Supply and installation of jointex	m²	2.6		
2.9.8		Cast, float, cure 30Mpa 130x70mm @2% triangular apron slab	m³	0.126		
2.9.9		Cast, float, cure 30Mpa 50x50 mm U-shape channel	m³	0.026		
2.9.10		Finishing tops of surface of concrete smooth with a wood float	m²	2.40		
2.9.11		Making and testing 150 x 150 x 150mm concrete strength test cubes	no	12		
2.9.12		Rough formwork to sides edges and risers not exceeding 150mm high	m²	2.4		

2.10.	SANS 1200LB	POTABLE WATER AREA 2-3				3000031741
2.10.1	8.21.	Supply and install 22mm OD high-density polyethylene	m	12		
2.10.2	8.21.	Supply and install 50mm OD high-density polyethylene	m	60		
2.10.3		Specials				
2.10.4		22mm Ball valve	No	8		
2.10.5		22mm compression Elbow	No	8		
2.10.6		50mm compression Tee	No	3		
2.10.7		22x50x50mm reducing tee	No	3		
2.10.8		50mm compression coupling	No	13		
2.10.9		22mm compression coupling	No	4		
2.10.10	SANS 1200 DB 8.3.2(a)	300x150mm Excavate Pipe trench	m³	3.24		
2.10.11		300x150mm Backfill Pipe trench	m³	3.24		

2.11	SANS 1200 LD	SEWER2-3				3000055812
2.11.1	8.2.1	Supply,install,lay 110mm Upvc Pipe,class 34, heavy duty	m	66		
2.11.2	8.2.2.	Specials				
2.11.3		110mmx 95 degree Junction	No	6		
2.11.4		110mm Two way Vent Valve	No	6		
2.11.5		110mmx45 Y junction	No	3		
2.11.6		110mm Double socket	No	14		
2.11.7		110mm Gulley Head and grate	No	3		
2.11.8		110mm Gulley P Trap	No	3		
2.11.9		Rubber Seal Ring	No	14		
2.11.10		Rooding eye 45	No	5		
2.11.11	8.2.11	Break into and connect to existing sewer manhole (at correct line and level) for new connections, deal with live seweage flow and make good on all benching	Sum	1		

2.12	SANS 1200DB	BEDDING OF SEWER 2-3				3000055812
2.12.1		Excavation to desired depth of 600mm	m³	14.5		
2.12.2	8.2.2.4	Selected fill material 300mm	m³	7.2		
2.12.3		Pipe bedding 150mm	m³	4		
2.12.4		Backfill topsoil 150mm	m³	3.6		

2.13		GCD YARD PARKHOMES PARKHOMES(3)				
	SANS 1200LB	POTABLE WATER GCD				3000031741
2.13.1	8.21.	Supply and install 22mm OD high-density polyethylene	m	110		
2.13.2		Specials				
2.13.3		22mm Ball valve	No	1		
2.13.4		22mm compression 90 degree Elbow	No	6		
2.13.5		22mm compression Tee	No	5		
2.13.6	SANS 1200 DB 8.3.2(a)	22mm compression coupling	No	18		
2.13.7		Selected fill 300mmx300mm	m³	9		
2.13.8	SANS 1200 DB 8.3.2(a)	300x150mm Excavate Pipe trench	m³	5.0		
2.13.9		300x150mm Backfill Pipe trench	m³	5.0		

2.14	**SANS 1200 LD**	**SEWER GCD**				**3000055812**
2.14.1	8.2.1	Supply,install,lay 110mm Upvc waste Pipe,class 34, heavy duty	m	129		
2.14.2		Specials				
2.14.3	8.2.2.	110mmx 95 degree Junction	No	11		
2.14.4		110mm Two way Vent Valve	No	11		
2.14.5		110mmx45 Y junction	No	11		
2.14.6		110mm Double socket	No	26		
2.14.7		110mm Gulley Head and grate	No	7		
2.14.8		110mm Gulley P Trap	No	9		
2.14.9		Rubber Seal Ring	No	26		
2.14.10		Rooding eye 45	No	9		
2.14.11	8.2.11	Break into and connect to existing sewer manhole (at correct line and level) for new connections, deal with live seweage flow and make good on all benching	Sum	1		

2.15	**SANS 1200DB**	**BEDDING OF SEWER GCD**				**3000055812**
2.15.1		Excavation to desired depth of 600mm	m^3	28.3		
2.15.2	8.2.2.4	Selected fill material 300mm	m^3	14.2		
2.16.2		Pipe bedding 150mm	m^3	7.1		
2.17.3		Backfill topsoil 150mm	m^3	7.1		

		MEDICAL CENTRE PARKHOMES(2)				
2.18.	**SANS 1200LB**	**POTABLE WATER MEDICAL CENTRE**				**3000031741**
2.18.1		Supply and install 22mm OD high-density polyethylene	m	31		
2.18.2	8.21.	Specials				
2.18.3		22mm compression Ball Valve	No	1		
2.18.4		22mm compression 90 Elbow	No	7		
2.18.5		22mm compression Tee	No	2		
2.18.6		22mm compression coupling	No	7		
2.18.7	**SANS 1200 DB** 8.3.2(a)	300x150mm Excavate Pipe trench	m^3	1.4		
2.18.8		300x150mm Backfill Pipe trench	m^3	1.4		

2.19	**SANS 1200 LD**	**SEWER MEDICAL CENTRE**				**3000055812**
2.19.1		Supply,install,lay 110mm Upvc waste Pipe,class 34, heavy duty	m	60		
2.19.2	8.2.1	Specials				
2.19.3	8.2.2.	110mmx 95 degree Junction	No	6		
2.19.4		110mm Two way Vent Valve	No	6		
2.19.5		110mmx45 Y junction	No	3		
2.19.6		110mm Double socket	No	12		
2.19.7		110mm Gulley Head and grate	No	3		
2.19.8		110mm Gulley P Trap	No	3		
2.19.9		Rubber Seal Ring	No	12		
2.19.10		Rooding eye 45	No	4		
2.19.11	8.2.11	Break into and connect to existing sewer manhole (at correct line and level) for new connections, deal with live seweage flow and make good on all benching	Sum	1		

2.20.	**SANS 1200DB**	**BEDDING OF SEWER MEDICAL CENTRE**				**3000055812**
2.20.1		Excavation to desired depth of 600mm	m^3	13.176		
2.20.2	8.2.2.4	Selected fill material 300mm	m^3	6.588		
2.20.2		Pipe bedding 150mm	m^3	3.294		
2.20.3		Backfill topsoil 150mm	m^3	3.294		

2.21.	**SANS 1200 DB**	**EARTHWORKS &PAVING MEDICAL CENTRE**				**3000032745**
2.21.1		**AREA**				
2.21.2		Clear area of grubbing at 150mm	m²	178		
2.21.3	8.3.11	Importing of 150mm subgrade layer of G5 material compacted to 95% Mod AASHTO density	m³	26.7		
2.21.4	8.3.4	C4 layer of Stabilisation of 150mm	m³	26.7		
2.21.5		Bedding sand compacted to 20mm thickness	m²	178		
2.21.6		Kerbing and haunching	m	86		
2.21.7		Laying of paving (Block type S-A, Block class 35MPa) New blocks at a slope of between 1.5% and 2%	m²	178		
2.21.8		**Drainage**				**3000050421**
2.21.9		Precast Drainage channels	No	10		
Total						

2.22		**RISK & SECURITY PARKHOME**				
2.22.1		**POTABLE WATER**				**3000031741**
2.22.2		Supply and install 22mm OD high-density polyethylene	m	191		
2.22.3	8.21.	Specials				
2.22.4		22mm compression Ball Valve	No	1		
2.22.5		22mm compression 90 Elbow	No	9		
2.22.6		22mm compression Tee	No	7		
2.22.7		22mm compression coupling	No	32		
2.22.8	**SANS 1200 DB** 8.3.2(a)	300x150mm Excavate Pipe trench	m³	8.6		
2.22.9		300x150mm Backfill Pipe trench	m³	8.6		

2.23		**SEWER**				**3000055812**
2.23.1		Supply,install,lay 110mm Upvc waste Pipe,class 34, heavy duty	m	40		
2.23.2	8.2.1	Specials				
2.23.3	8.2.2.	110mmx 95 degree Junction	No	6		
2.23.4		110mm Two way Vent Valve	No	6		
2.23.5		110mmx45 Y junction	No	3		
2.23.6		110mm Double socket	No	12		
2.23.7		110mm Gulley Head and grate	No	3		
2.23.8		110mm Gulley P Trap	No	3		
2.23.9		Rubber Seal Ring	No	12		
2.23.10		Rooding eye 45	No	4		
2.23.11	8.2.11	Break into and connect to existing sewer manhole (at correct line and level) for new connections, deal with live seweage flow and make good on all benching	Sum	1		
2.24.	**SANS 1200DB**	**BEDDING OF SEWER RISK ASSURANCE**				**3000055812**
2.24.1		Excavation to desired depth of 600mm	m³	8.784		
2.24.2	8.2.2.4	Selected fill material 300mm	m³	4.392		
2.24.3		Pipe bedding 150mm	m³	2.196		
2.24.4		Backfill topsoil 150mm	m³	2.196		

C3: Scope of Work

C3.1 Works Information

Notes to the document compiler are provided in boxes like this one. They are not part of the contract and may be deleted before printing the final draft.

The Works Information should be a complete and precise statement of the *Employer's* requirements. If it is incomplete or imprecise there is a risk that the *Contractor* will interpret it differently from the *Employer's* intention. Information provided by the *Contractor* should be listed in the Works Information only if the *Employer* is satisfied that it is required, it is part of a complete statement of the *Employer's* requirements and is consistent with the other parts of the Works Information.

1. Description of the *works*

Give a detailed description of what the *Contractor* is required to do and of any work which the *Contractor* is to design.

Tutuka Power Station engineering department currently has limited office space for the engineering personnel. The additional park homes will increase office space. Upon completion of placing the parkhomes, the external services will need to be executed to have fully functional Parkhomes.

I. Potable water, sewer, electrical cable connection, and paving installation is required for the parkhomes at Tutuka Power station Engineering department.

II. Potable water, sewer, electrical cable connection, and paving installation is required for the parkhomes at Tutuka Power Station Medical Centre.

III. Potable water, sewer and electrical cable connection is required for the parkhomes at Tutuka Power Station Group Capital Department (GCD).

IV. Potable water, sewer, electrical cable connection installation is required for the parkhomes at Tutuka Power Station Risk and Security (R&S).

1.1 GENERAL CONSTRAINTS

The parkhomes will be supplied with an outlet sanitary and inlet water supply pipe and electrical connection point. Additionally, inside the parkhomes plumbing, sanitary wear, wiring, distribution boards and air conditioners are provided. External services need to be installed to the parkhomes without disturbing the operation of the water, sewer and electrical connections.

1.2 PARKHOMES

ENGINEERING AREA 1

- Supply and install 22mm Outside Diameter (OD) potable water HDPE pipe at 50m length with

the necessary fittings from the nearest tap in point

- Ensure pipe is buried to reduce tripping hazards by 300x150mm trench
- Supply and install 110mm OD uPVC class 34 heavy duty sewer pipe at 80m length and break connect to nearest manhole
- Supply and install bedding, selected and backfill of sewer pipe
- Supply and install layer works, stabilization and soil poisoning and interlocking paving blocks of area of 439 m², edge restraint of 107m
- Supplier and install single side x3 concrete road barriers
- Supply and install x24 precast drainage channels

ENGINEERING AREA2-3

- Supply and install 22mm OD potable water HDPE pipe at 12m length with necessary fittings from the nearest tap in point
- Supply and install 22mm OD potable water HDPE pipe at 50m length with necessary fittings from the nearest tap in point
- Ensure pipe is buried to reduce tripping hazards by 300x150mm trench
- Supply and install 110mm OD uPVC class 34 heavy duty sewer pipe at 66m length, all required fittings and specials and break connect to nearest manhole
- Supply and install bedding, selected and backfill of sewer pipe
- Supply and install layer works, stabilization and soil poisoning and interlocking paving blocks of area of 144 m², edge restraints of 81m

DOCUMENTATION CENTRE

- Supply and install 22mm OD potable water HDPE pipe at 12m length with necessary fittings from the nearest tap in point
- Supply and install 22mm OD potable water HDPE pipe at 27m length with necessary fittings from the nearest tap in point

- Ensure pipe is buried to reduce tripping hazards by 300x150mm trench
- Supply and install of 110mm OD uPVC class 34 heavy duty sewer pipe at 10m length, all required fittings and specials and break connect to nearest manhole
- Supply and install bedding, selected and backfill of sewer pipe
- Supply and install layer works, stabilization and soil poisoning and interlocking paving blocks of area of 102 m², 103m

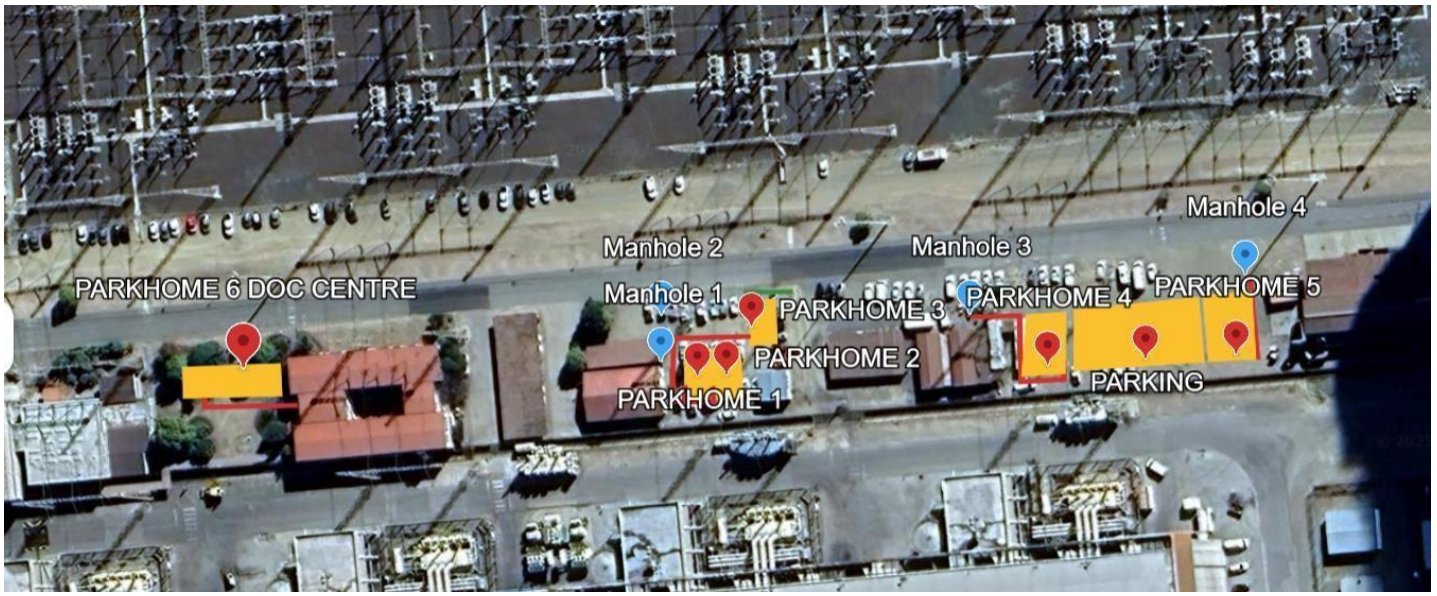
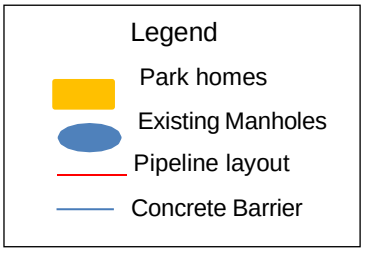


Figure 1:Proposed layout



GCD YARD

- Supply and install 22mm OD potable water HDPE pipe at 110m length with necessary fittings from the nearest tap in point
- Ensure pipe is buried to reduce tripping hazards by 300x150mm trench
- Supply and install 110mm OD uPVC class 34 heavy duty sewer pipe at 129m length, with all the required fittings and specials and break connect to nearest manhole
- Supply and install bedding, selected and backfill of sewer pipe

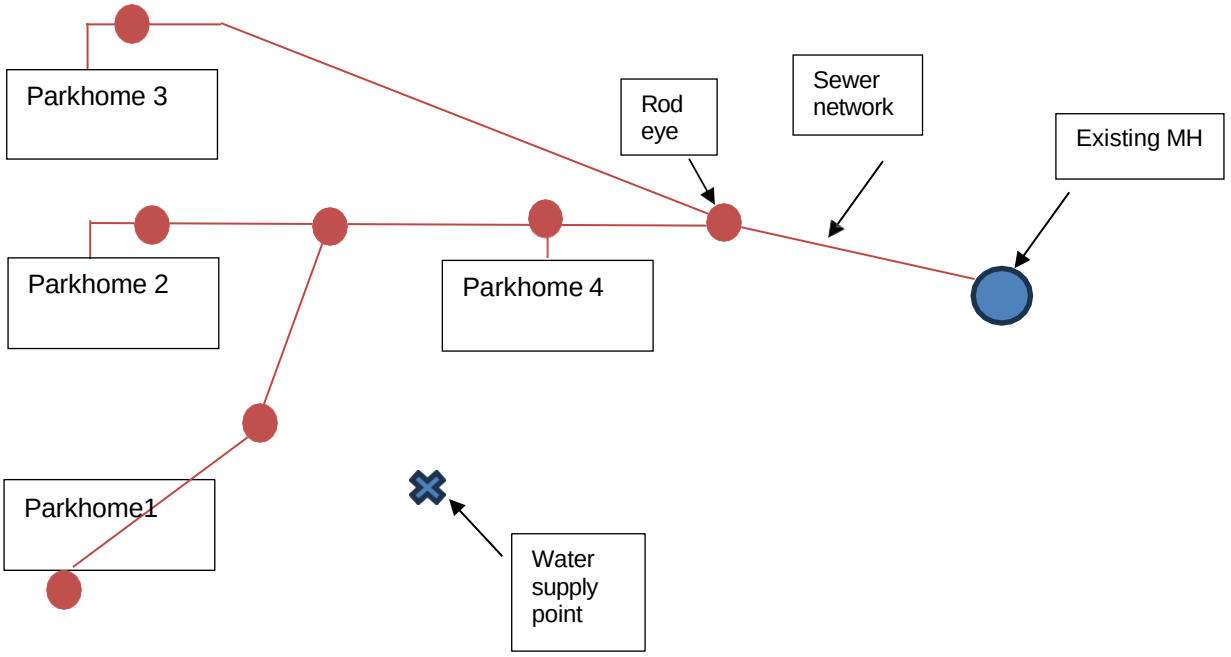


Figure 2:Proposed sewer pipe layout GCD

Figure 3:Existing infrastructure at GCD

MEDICAL CENTRE

- Supply and install 22mm OD potable water HDPE pipe at 31m length with necessary fittings from the nearest tap in point
- Ensure pipe is buried to reduce tripping hazards by 300x150mm trench
- Supply and install 110mm OD uPVC class 34 heavy duty sewer pipe at 60m length, all required fittings and specials and break connect to nearest manhole
- Supply and install bedding, selected and backfill of sewer pipe
- Supply and install layer works, stabilization and soil poisoning and interlocking paving blocks of area of 178 m², edge restraints of 86m

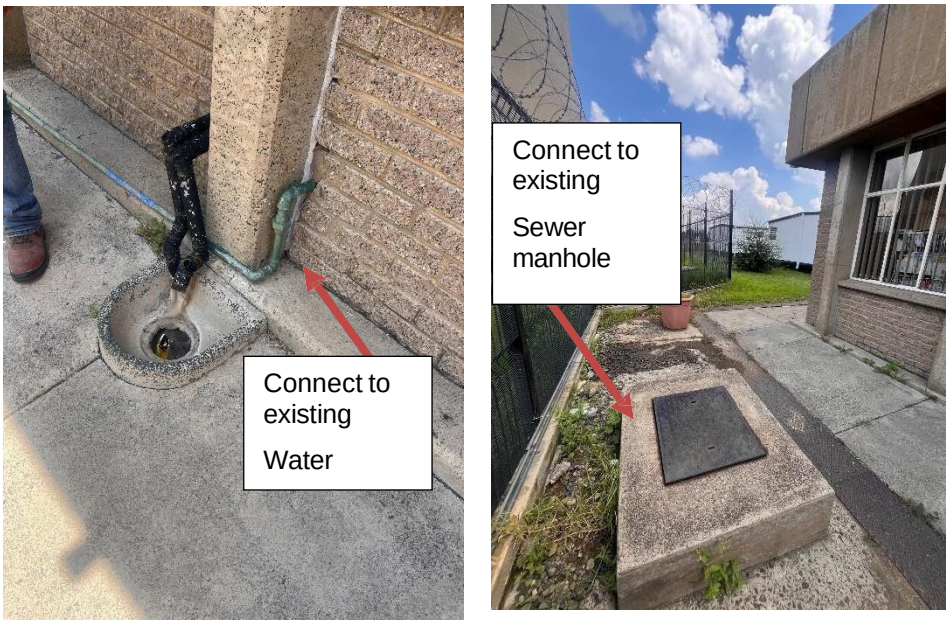


Figure 4:Existing infrastructure at medical centre

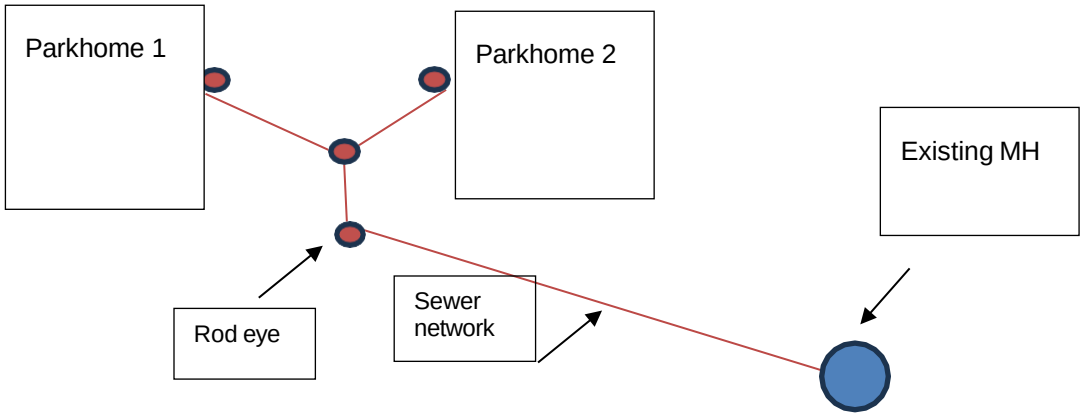


Figure 5: Proposed Sewer network at medical centre

RISK & ASSURANCE

- Supply and install 22mm OD potable water HDPE pipe at 191m length with necessary fittings from the nearest tap in point
- Ensure pipe is buried to reduce tripping hazards by 300x150mm trench
- Supply and install 110mm OD uPVC class 34 heavy duty sewer pipe at 40m length, with all the required fittings and specials and break connect to nearest manhole.

1.3 CIVIL WORKS

1.3.1 EXCAVATIONS AND LAYERWORKS

The principal contractor has the responsibility to conduct a services detection and obtain an excavation permit from civil engineering department prior to conducting excavations. The excavations need to be clearly marked with adequate warning signs and barricading

1.3.2 POTABLE WATER INSTALLATION

The civil engineering department will provide with information for existing connection points to water supply and sanitation manholes to the park homes. It is the contractor's responsibility to provide the service to provide but not limited to the following:

- Supply and install High density polyethylene (HDPE) pipe of 22mm with 10bar (PN 10)

capacity

- All compression fittings to comply with SABS 4427 to be manufactured with nominal pressure of 10 bar (PN 10)
- The pipe should be laid in a box pipe trench of 300mmx150mm width and depth respectively
- All fittings and pipe shall comply to Sans 10252-1.

1.3.3 SEWER CONNECTION

The principal contractor is responsible to supply and install the sewer line to tie-in the existing infrastructure without interrupting operations during and at the end of installation

- Supply and installation of 110mm uPVC waste pipe class 34 (heavy duty)
- All sewer pipes to be in bedding of layers: Eskom approved Fill material of 300mm, pipe bedding of 150mm, backfill of 150mm of topsoil.
- The uPVC pipe is required to have spigot ends to allow ease of installation
- All pipe works, fittings, jointing lubricant and rings shall comply with SABS 791
- Break into manhole, and bench to the required level while dealing with existing sewer outflow.

1.3.4 LAYING AND JOINTING OF SEWER PIPELINES

- Pipes should be laid from the lower end with the spigot facing flow direction
- Prior to laying the pipe, the bottom of trench shall be dry clean, continuous and free from stones rocks.
- The trench bottom should be compacted to 93% Mod AASHTO
- Bedding layer of 150mm with Eskom's engineer's approved material shall be compacted at 95% Mod ASHTO
- All pipes shall be laid accurately to level , with spigot facing the desired flow direction
- The uPVC pipe ends shall be free of burrs
- Lubricate pipe joints with an Eskom approved lubrication to avoid possible leaks.
- All works to be in conjunction with SANS 971 specifications

1.3.5 BACKFILLING OF SEWER PIPELINES

- Ensure the top of pipe is backfilled with Eskom's engineer's approved granular material and a minimum of 300mm compacted to 95% Mod AASHTO
- Both side of the pipe shall be backfilled simultaneously to avoid lateral displacement
- Backfill the remaining with topsoil with 150mm layer compacted at 93% Mod AASHTO
- Backfilling should be done my loaders and compactor equipment or by hand in areas were spreading manually where required.
- All compaction tests shall be done by an approved calibrated Troxler witness by an Eskom engineer

1.3.6 PAVING

The area occupied by the parkhomes is required to be paved to ensure reduce effects of dust around the office space with a required slope of (1.5 - 2) % to minimize ponding of water. The adjacent road has an existing kerb which can allow for surface run off from the paved areas of the parkhomes

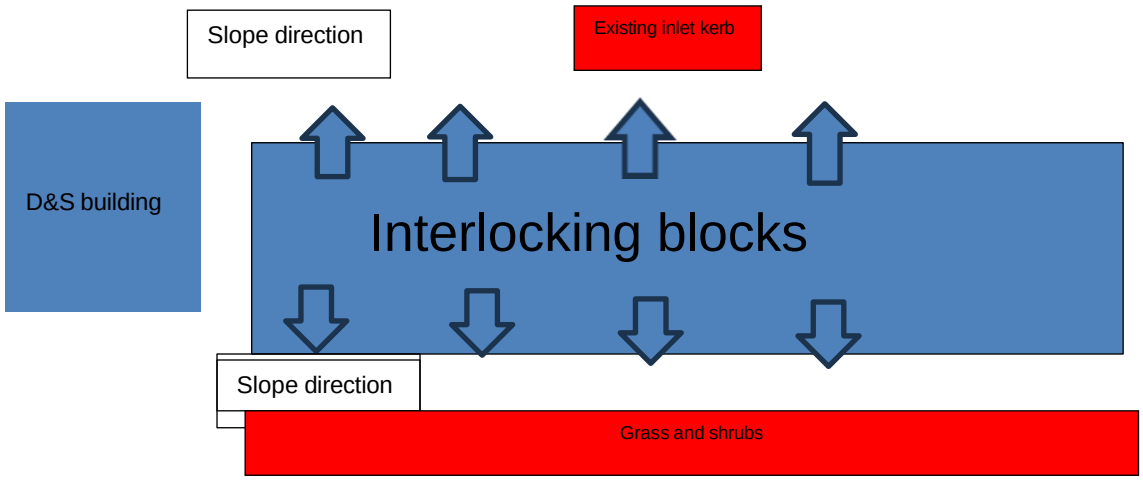


Figure 6:Paved Area 1&2 Engineering Parkhomes

1.3.7 SUBASE LAYER

Suitable G5 material should be imported into the area at 2 layers of 150mm compacted at 95% MOD ASHTO. Should be graded evenly with Grader and should be stabilized by creating cement pockets at 4% of the volume of G5 to create a stabilized layer per m3. Moisture shall be added to the mixed material and the volume shall be determined by the contractor. A smooth drum roller or walk behind roller compactor shall ensure material is compacted at 95% Mod AASHTO, laboratory samples shall be taken to determine if there desired OMC was reached.

1.3.8 KERBING

Prior to the installation of kerbs, the subbase layer shall be bedded and compacted to the desired levels to the kerb, Kerbs need to be placed where 1m will meet the straight edge and 300mm lengths meet the curves. Joints of kerbs shall be 12mm and shall be haunched behind each joint. The kerbs will be placed between the stabilized material.

1.3.9 EDGE RETSRAINT

Edge restraints consisting of kerbs, channels or other approved edge strips, as scheduled or given on the drawings, shall be constructed on the subbase (or other formation) before any units are laid. The function of the edge restraint is to retain the sand bedding and to ensure that units at the edge of the pavement do not creep outwards or rotate under load with consequent opening of joints and loss of interlock. A separate edge restraint is unnecessary where an interlocking concrete block pavement joins an existing concrete pavement, or in the case of a flexible pavement having an asphaltic concrete surface not less than 100 mm thick.

There are various designs for edge restraints. The choice of which design to use is decided by factors for service loading, service life, aesthetic appeal and cost.

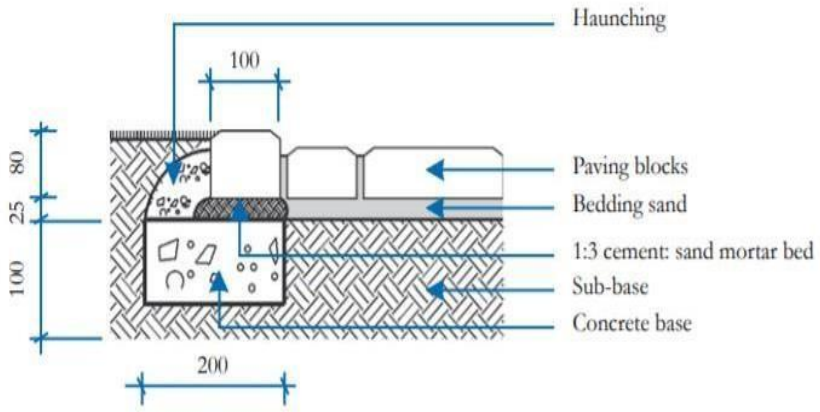


Figure 7:Haunching at edge restraints

1.3.10 INTERLOCKING PAVING BLOCKS

The principal contractor has the responsibility supply and installs the paving as follows:

- Ensure that edge restraints are formed similar to that of figure 10.
- Bedding shall be filled with a depth of +-25mm.
- The paving shall be installed as per herring bone pattern, using 80mm interlocking concrete blocks similar to profile on figure 11.
- Place and sweep jointing sand between the joints of the installed paving.
- Thereafter, compact the area using a plate compactor to ensure all voids are closed up.
- Post survey paved area to ensure levelness and slope to the edges

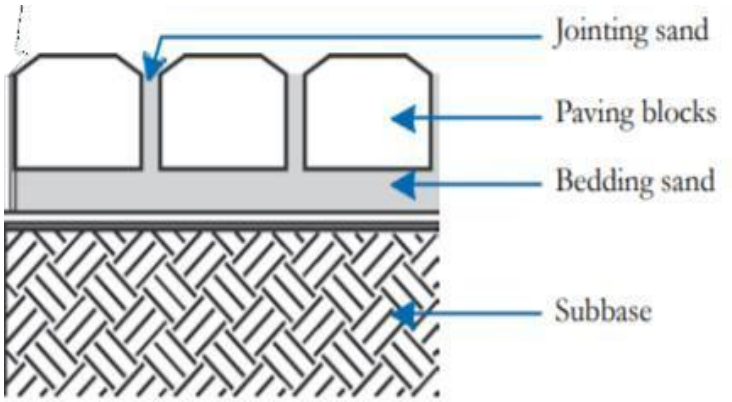


Figure 8:Cross-section of paving

1.4 DESIGN AND SPECIFICATIONS BUILDING DRAINAGE

Drainage infrastructure is necessary in the park homes and including the adjacent building shown in figure 6. For the Design specifications (D&S) building stormwater ingress is currently a challenge an apron slab with a channel need is needed. Excavation and removal of existing paving shall be done to excavate the desired area. Jointex should be installed against the wall of the building during formwork activities prior to casting of concrete. This is to eliminate a cold joint between the concrete apron and the building. A triangular apron slab of 130x70mm with a 2° slope on top and a concrete and a 50mmx50mm u-shaped channel with a depth of 40mm will be needed to be constructed as on figure 10-12. Mesh wire 888 (2.4x6x12) mm and 30 MPa concrete should be used to execute the channel and apron slab to be floated with a wooden or steel finish cured correctly.

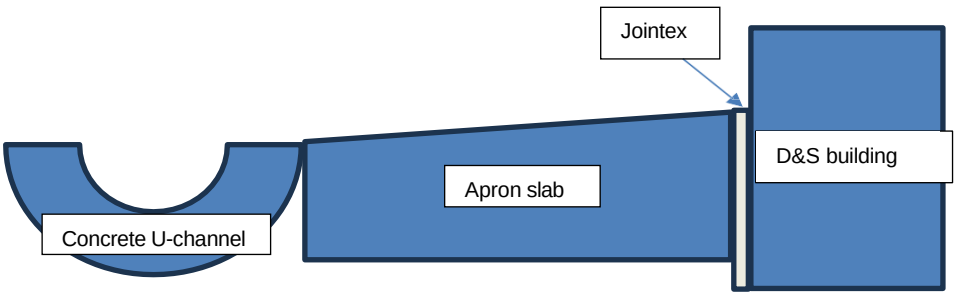


Figure 9:Proposed drainage channel

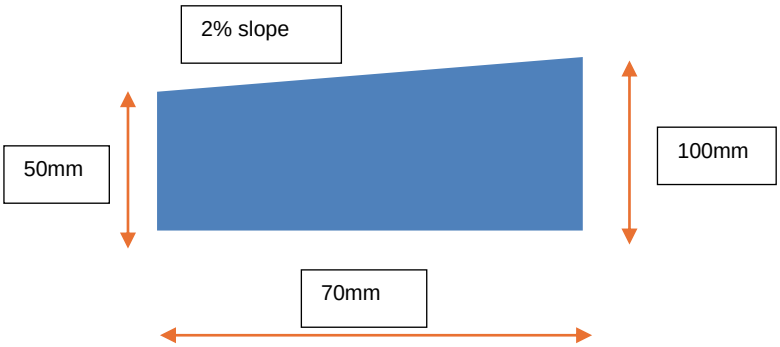


Figure 10:Proposed apron slab

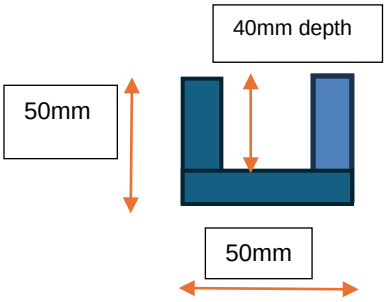


Figure 11: Proposed U-shape channel

Figure 12:Existing drainage at D&S building

The existing water supply pipe at the D&S building as shown in figure 9 should be relocated and reconnected prior to the construction of the surface drainage channel and apron slab.

Figure 13:Existing pipe at D&S building

2. Drawings

List the drawings that apply to this contract.

Drawing number	Revision	Title
0 61/130	13	Tutuka Sewage General Layout
21.61/55323		Tutuka Sewage Drain System P&ID

3. Specifications

List the specifications that apply to this contract. Some typical headings have been provided as a minimum; delete if not required or expand and include correct titles as applicable.

Standard	Name
ISO 9001	Quality Management Systems
240-57127951	Standard for the Execution of Site Investigations
240-57127955	Geotechnical and Foundation Engineering Standard
240-85549846	Standard for Design of Drainage and Sewerage Infrastructure
240-100176167	Excavations
OHS Act	Occupational Health and Safety Act (No. 85 of 1993)
SANS 10252-1	Water supply and drainage for buildings Part 1: Water supply installations for buildings
SANS 10252-2	Water supply and drainage for buildings Part 2: Drainage installations for buildings
SANS 791	Unplasticized poly (vinyl chloride) (PVC-U) sewer and drainpipes and pipe fittings
SANS 1601	Structured wall pipes and fittings of unplasticized poly (vinyl chloride) (PVC-U) for buried drainage and sewerage systems

SANS 10142-1	Part 1: Low-voltage installations
SANS 1200	Standards

Title	Date or revision	Tick if publicly available
General Specifications:		
Health and Safety requirements	**TBC**	✓
Environmental requirements	**TBC**	✓
Site regulations and access control	**TBC**	✓
Technical specifications:		
Kwikspace Modular Buildings (PTY) LTD Technical Specifications		

4. Constraints on how the *Contractor* Provides the Works

State any constraints on the sequence and timing of work and on the methods and conduct of work including the requirements for any work by the *Employer*.
Also include any management related constraints, invoicing and payment procedures some of which have been inserted below as a minimum guide.

4.1 Meetings

Weekly progress and technical meetings will take place regularly. The supplier/contractor shall hold daily safety meeting/toolbox talk with all staff members. Early warning and compensation event meetings shall be communicated by project management office 24 hours prior to the meeting taking place. The table below shows project meetings information.

Title and purpose	Approximate time & interval	Location	Attendance by:
Construction kick-off meeting	Prior to the commencement of any construction activities or manufacturing activities	On site	Project team, Contractor, Engineering and others
Milestone progress feedback	Weekly on as and when.	Contractor's offices/ on site	Project team, Contractor, Engineering and others
Contractor's safety meeting	daily prior to starting work	Contractor's offices	Project Coordinator and contractor
Early Warning Meeting	As and when the needs arise	Virtual meeting/ Project Boardroom	Key members and Contractor

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *works*. Records of these meetings shall be submitted to the *Project Manager* 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.

4.2 Use of standard forms

Provide details of standard forms to be used by the *Contractor* in the administration of the contract, for example early warning and compensation event notifications.

4.3 Invoicing and payment

The Z clauses make reference to invoicing procedures stated here in this Works Information. Also include a list of information which is to be shown on an invoice. The following text is provided as a guide; revise to suit actual requirements.

In terms of core clause 50 the *Contractor* assesses the amount due and applies to the *Employer* for payment. The *Contractor* applies for payment with a tax invoice addressed to the *Employer* as follows:

_____

The *Contractor* includes the following information on each tax invoice:

- Name and address of the *Contractor*
- The contract number and title;
- *Contractor*'s VAT registration number;
- The *Employer*'s VAT registration number 4740101508;
- The total Price for Work Done to Date which the *Contractor* has completed;
- Other amounts to be paid to the *Contractor*;
- Less amounts to be paid by or retained from the *Contractor*;
- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT;
- (add other as required)

The *Contractor* attaches the detail assessment of the amount due to each tax invoice showing the Price for Work Done to Date for each item in the Price List for work which he has completed.

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

The email should be sent to fss@eskom.co.za

4.4 Records of Defined Cost

In order to substantiate the Defined Cost of compensation events, the *Employer* may require the *Contractor* to keep records of amounts paid by him for people employed by the *Contractor*, Plant and Materials, work subcontracted by the *Contractor* and Equipment. [See clause 11.2(5) and 63.2]. State in what form these records are to be kept and how accessed by the *Employer*.

4.5 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

If the ASGI-SA requirements are to be included in this contract specify constraints which *Contractor* must comply with after contract award in regard to any ASGI-SA requirements. The ASGI-SA Compliance Schedule completed in the returnable tender schedules is reproduced here. If ASGI-SA does not apply, delete this paragraph.

The *Contractor* complies with and fulfils the ***Contractor's*** obligations in respect of the Accelerated and Shared Growth Initiative - South Africa in accordance with and as provided for in the *Contractor*'s ASGI-SA Compliance Schedule stated below

.

[Insert the agreed ASGI-SA Compliance Schedule here]

The *Contractor* shall keep accurate records and provide the *Employer* with reports on the *Contractor*'s actual delivery against the above stated ASGI-SA criteria. [Elaborate on access to and format of records and frequency of submission etc.]

The *Contractor*'s failure to comply with his ASGI-SA obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

4.6 BBBEE and preferencing scheme

Specify constraints which *Contractor* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

Nonapplicable

4.7 Facilities to be provided by the *Contractor*

Site offices.

4.8 Title to material from excavation and demolition

Read clause 70.2 then provide details as required. Particularly relevant in demolition where substantial amounts of copper are involved.

4.9 Design by the *Contractor*

Nonapplicable

4.10 Cataloguing requirements by the *Contractor*

Nonapplicable.

5. Requirements for the programme

A programme with activities will be required ***One*** week within the contract commencement.

6. Services and other things provided by the *Employer*

Describe what the *Employer* will provide such as services (including water and electricity) and "free issue" Plant and Materials and equipment.

Item	Date by which it will be provided
Water	TBC
Electricity	TBC
Site space	TBC

C4: Site Information

Site Information is information about the *site* at the time of tender which the tendering contractor needs to allow for in his rates and Prices. The information does not change after contract award, nor does it describe or specify anything which the Parties do during the contract. It is only referred to during administration of the contract if the *Contractor* encounters conditions which are different to those described here. The *Contractor* will then make a comparison between actual conditions encountered and those described here in his assessment of any additional cost or time he may need to be compensated for in order to complete the works. Disputes about the difference between the effects of conditions encountered and those which the *Contractor* allowed for in his Prices will be minimised if the information given here is complete and relevant. If no information is given the tendering contractor will need to guess what he may encounter thus tendering higher Prices to allow for conditions that may not even exist.

C4.1: Information about the *site* at time of tender which may affect the work in this contract

1. Access limitations

State if there is any physical, time or other "third party" constraint associated with gaining access to and doing work on the *site* that may not be immediately apparent from an inspection of the *site*.

Nonapplicable.

2. Ground conditions in areas affected by work in this contract

If earthworks are included in the Scope of Work, provide details of the ground conditions the *Contractor* is likely to encounter when doing the work. This could vary from indicating where a test pit has been opened up for the *Contractor* to make his own observations to providing full borehole logs and associated geotechnical report.

The Contractor to execute services detection prior to commencement of earthworks and excavations.

3. Hidden and other services within the *site*

Provide details of underground or other hidden services which the *Contractor* may encounter whilst doing the work. Instructions about how to deal with them if encountered should be included in the Works Information.

The Contractor to execute services detection prior to commencement of earthworks and excavations.

4. Details of existing buildings / facilities which *Contractor* is required to work on

No existing buildings for this project.