



Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekweni Municipality's Vendor Portal.

Engineering Unit

Coastal, Stormwater and Catchment Management

PROCUREMENT DOCUMENT

PROFESSIONAL SERVICES

CONTRACT No: 1D-48388

TITLE: CSCM Field Instruments and DBN Beach Monitoring

Issued by: Engineering Unit

Date of Issue: April 2022

Document Version : 01/04/2021

NAME OF TENDERER :

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PART T1 : TENDERING PROCEDURES
T1.1 : TENDER NOTICE AND INVITATION TO TENDER

Tenders are hereby invited for the works to **do maintenance, support and servicing CSCM field instruments and DBN beach monitoring.**

The Employer is the eThekwini Municipality as represented by: **Deputy Head : Coastal, Stormwater and Catchment Management**

Tenders must be submitted on official tender documentation issued in electronic format) by the eThekwini Municipality.

- Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekwini Municipality's website. The entire document should be printed and suitably bound by the tenderer.

The physical address for collection of tenders is: **Tender Documentation are only available (free of charge) from the National Treasury's eTenders website. Tenderers are to download, print, and suitably bind the documentation**

Documents may be collected, up to 3 days prior to the close of tenders, during office hours: **N/A**

A non-refundable tender charge is payable by bank guaranteed cheque made out in favour of the Employer, or cash, and is required on collection of the tender documents: **N/A**

(F.2.7) There will be a **There will be a non compulsory clarification meeting** and site inspection with **Ms Teams (Please send email to Kwanda.nkosi@durban.gov.za 3 days prior to clarification meeting date to request an invite)**
08 April 2022
10:00am

(F.1.4) Queries relating to these documents, up to 3 days prior to the close of tenders, may be addressed to the Employer's agent whose contact details are: **Senior Manager: Engineering Services and Record**
031 311 7264 (t)
031 311 7490 (f)
gerrard.smith@durban.gov.za

(F.2.13) Tender offers shall be delivered to: **Municipal Building, 166 K.E. Masinga Road (formerly Old Fort Road) DURBAN**
and placed in the tender box located in the ground floor foyer

If registered on the eThekwini Municipality's website submissions can be made electronically **<https://ethekwiniwebsite.durban.gov.za/tenders/availabletenders/>**

(F.2.15) Tender offers shall be delivered: **on or before Friday, 06 May 2022**
at or before 11:00

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data

PART T1 : TENDERING PROCEDURES**T1.2: TENDER DATA****T1.2.1 STANDARD CONDITIONS OF TENDER**

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 10 July 2015.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

T1.2.2 TENDER DATA

Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

F.1.1 The employer : The Employer for this Contract is the eThekweni Municipality as represented by: [Deputy Head: CSCM](#)

F.1.2 Tender documents: The Tender Documents issued by the Employer comprise the documents as per the **INDEX** of this Tender Document.

Tenders must be submitted on official tender documentation issued in electronic format) by the eThekweni Municipality.

- Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekweni Municipality's website. The entire document should be printed and suitably bound by the tenderer.

In addition, Tenderers are advised in their own interest, to obtain their own copies of the following acts, and regulations or standard documents, referred to in this document:

- The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations 2014.
- The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act
- The Construction Industry Development Board Act No 38 of 2000 and the Regulations (2013)
- CIDB Standard for Uniformity in Construction Procurement (July 2015).
- The Employer's current Supply Chain Management Policy.

F.1.4 The employer's agent : The Employer's agent is :
Name : [Senior Manager: Engineering Services and Record](#)
Tel : [031 311 7264 \(t\)](#)
Fax : [031 311 7490 \(f\)](#)
Email : gerrard.smith@durban.gov.za

F.2.1 Eligibility : A Tenderer will not be eligible to submit a tender if:
(a) the Tenderer submitting the tender is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices;

- (b) the Tenderer does not have the legal capacity to enter into the contract;
- (c) The Tenderer does not comply with the legal requirements stated in the Employer's current SCM Policy;
- (d) The Tenderer cannot demonstrate that it possesses the necessary expertise and competence, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract;
- (e) The Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- (f) In the event of a compulsory clarification meeting:
 - The Tenderer fails to attend the compulsory clarification meeting as appear on the Ms Teams attendees register of the host.
- (g) at the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.
- (h) If the tenderer is required by law to prepare annual financial statements for auditing, the tenderer must submit their audited annual financial statements:
 - i) for the past three years; or
 - ii) since their establishment if established during the past three years;

F.2.2.2 The cost of the tender documents: Replace this paragraph with the following:

Documents may be obtained, free of charge, in electronic format, from the National Treasury's eTenders website or the eThekweni Municipality's Website. The entire electronically downloaded document should be printed and suitably bound by the tenderer.

F.2.7 Clarification meeting : There will be a non compulsory clarification meeting.

F.2.7 Clarification meeting : The arrangements for a compulsory clarification meeting are :

Place : [**Ms Teams \(Please send email to Kwanda.nkosi@durban.gov.za 3 days prior to clarification meeting date to request an invite\)**](mailto:Ms Teams (Please send email to Kwanda.nkosi@durban.gov.za 3 days prior to clarification meeting date to request an invite))
Date : **08 April 2022**
Time : **10:00am**

Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to, and tenders will be received only from those tendering entities appearing on the attendance list.

F.2.12 Alternative tender offers : No alternative tender offers will be considered.

F.2.13 Submitting a tender offer : The following applies to this tender

- **F.2.13.3:** Tender offers shall be submitted as an original only;
- **F.2.13.5:** Identification details to be shown on each tender offer package, are: Contract No., Contract Title, Tenderers Name, Contact Address;
- **F.2.13.9 :** Telephonic, telegraphic, telex, facsimile, posted or e-mailed tender offers will not be

accepted.

F.2.15 Closing time : The closing time and the address for delivery of tender offers is :

Closing Date : on or before Friday, 06 May 2022

Closing Time : at or before 11:00

Delivery Address : Municipal Building,
166 K.E. Masinga Road (formerly Old Fort Road)
DURBAN

F.2.16 Tender offer validity : The Tender Offer validity period is 84 Days from the closing time for submission of tenders.

F.2.23 Certificates : Refer to **Part T2.1.2** for a listing of certificates that must be provided with the tender.

F.3.4 Opening of Tender Submissions : Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will not take place due to COVID Protocols.

F.3.11 Evaluation of Tender Offers : The procedure for evaluation of responsive Tender Offers will be in accordance with the eThekweni Municipality's current SCM Policy, the Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act .

- The procedure for the evaluation of responsive tenders is **Method 2**;
- The **80/20** preference points system will be used where the financial value (incl. VAT) of one or more responsive tender offers have a value that equals or is less than R 50,000,000. The Formula used to calculate the **Price Points** will be that in F.3.11.3.4(a) and the **Preference Points** will be allocated according to the 2017 PPPFA.
- The minimum number of evaluation points for Functionality is **70**
- The Functionality criteria and maximum score in respect of each of the criteria are as follows:

Functionality criteria		Points	Evaluation Schedule(s)
Experience of service provider in executing work of similar scope		30	
Experience of Key Staff	Project Manager	20	
	Supervisor	10	
Programme and Training		20	
Methodology (Including programme, risk management and approach)		20	
Maximum possible score for Functionality (M_s)		100	

- Each evaluation criteria will be assessed in terms of five indicators – no response, poor, satisfactory, good and very good. Scores of 0, 40, 70, 90 or 100 will be allocated to no response, poor, satisfactory, good and very good, respectively;
- The prompts for judgment and the associated scores used in the evaluation of Functionality shall be as follows:

Level	pts	Criterion: Tenderer's Experience
0	0	No Submission or Submission of no substance / irrelevant information provided
1	40	To have successfully completed 1 <u>projects</u> of a similar nature within the past 10 years.
2	70	To have successfully completed 2-4 <u>projects</u> of a similar nature within the past 10 years..
3	90	To have successfully completed 5-9 <u>projects</u> of a similar nature within the past 10 years.
4	100	To have successfully completed 10+ <u>projects</u> of a similar nature within the past 15 years.

Experience of Key Resources in executing work of similar nature								
Job Title	Minimum Qualification Required	Professional Registration Required	Number of Years' Relevant Experience on projects of a similar nature					Total Points
			Level 0 0 pts	Level 1 40 pts	Level 2 70 pts	Level 3 90 pts	Level 4 100 pts	
Project manager	BSc Eng or BEng or BTech	Pr. Eng, or Pr Tech Eng or Pr. Sci. Nat (Earth Sci.) or Equivalent.	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	20
Supervisor	BSc Eng or BEng or BTech or Diploma		No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	10

Level	Pts	Criterion : Approach / Programme and Training
0	0	No response/ no documents submitted
1	40	The technical approach is unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. The programme is poor and has missed critical aspects
2	70	The approach is tailored to address the specific project objectives and Training. The approach does adequately deal with the critical characteristics of the project. The project plan and manner in which risk is to be managed etc is tailored to the key aspects of the programme. The programme is adequate.
3	90	The approach is tailored to address the specific project objectives and Training and is sufficiently flexible to accommodate changes that may occur. The project plan and approach to managing risk etc is tailored to the critical characteristics of the project. The programme is good and has allowed for all critical aspects
4	100	Besides meeting the "good" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the- art approaches. The programme is well thought out and makes allowance for all the key risk areas. The approach paper details ways to improve the training outcomes.

Level	Pts	Criterion : Approach / Methodology
0	0	No response/ no documents submitted
1	40	The technical approach and / or methodology is poor / is unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. The programme is poor and has missed critical aspects
2	70	The approach is tailored to address the specific project objectives and methodology. The approach does adequately deal with the critical characteristics of the project. The project plan and manner in which risk is to be managed etc is tailored to the key aspects of the programme. The programme is adequate.
3	90	The approach is tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The project plan and approach to managing risk etc is tailored to the critical characteristics of the project. The programme is good and has allowed for all critical aspects
4	100	Besides meeting the "good" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the-art approaches. The programme is well thought out and makes allowance for all the key risk areas. The approach paper details ways to improve the project outcomes and the quality of the outputs

Level	Score	Prompt for judgement
0	0	Failed to address the question / issue
1	40	Less than acceptable – response / answer / solution lacks convincing evidence of skill / experience sought or medium risk that relevant skills will not be available.
2	70	Acceptable response / answer / solution to the particular aspect of the requirements and evidence given of skill / experience sought
3	90	Above acceptable – response / answer / solution demonstrating real understanding of requirements and evidence of ability to meet it.
4	100	Excellent – response / answer / solution gives real confidence that the tenderer will add real value.

F.3.13 Acceptance of tender offer : In addition to the requirements of Clause F.3.13 of the Standard Conditions of Tender, tender offers will only be accepted if:

- (a) The tenderer submits a valid Tax Clearance Certificate OR Tax Compliance Status PIN, issued by the TCS System of the South African Revenue Services, or has made arrangements to meet outstanding tax obligations;
- (b) The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- (c) The tenderer has not:
 - Abused the Employer's Supply Chain Management System; or
 - Failed to perform on any previous contract and has been given a written notice to this effect;
- (d) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process;
- (e) The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

F.3.18 Copies of contract : The number of paper copies of the signed contract to be provided by the Employer is ONE.

The additional conditions of tender are:

F.2.2.2 The cost of the tender documents:

Documents may be obtained, free of charge, in electronic format, from the National Treasury's eTenders website or the eThekweni Municipality's Website . The entire electronically downloaded document should be printed and suitably bound by the tenderer.

F.2.6 Acknowledge addenda

Add the following paragraphs to the clause:

"Acknowledgement of receipt will be by the return of the relevant completed and signed portion of the addenda, to the address / fax number / email address as specified on the addenda. Failure of the tenderer to comply with the requirements of the addenda may result in the tender submission being made non-responsive."

F.2.24 Appeals

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the Municipality, may lodge an appeal within 14 days of the decision or action, in writing to the Municipality. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to:

The City Manager

Attention Ms S. Pillay

eMail: Simone.Pillay@durban.gov.za

P O Box 1394

DURBAN

4000

F2.25 Prohibition on awards to persons in the service of the state

Clause 44 of the Supply Chain Management Regulations states that the Municipality or Municipal Entity may not make any award to a person:

- (a) Who is in the service of the State;
- (b) If that person is not a natural person, of which a director, manager, principal shareholder or stakeholder is a person in the service of the state; or
- (c) Who is an advisor or consultant contracted with the municipality or a municipal entity.

Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.

F.2.26 Code of Conduct and Local Labour

The Tenderers shall make themselves familiar with the requirements of the following policies that are available on web address: <ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- Code of Conduct;
- The Use of CLOs and Local Labour.

PART T2 : RETURNABLE DOCUMENTS**T2.1 : LIST OF RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES****T2.1.1 General**

The Tender Document must be submitted as a whole. All forms must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is not responsive. The same applies to the Targeted Procurement Schedules.

T2.1.2 Returnable Schedules, Forms and Certificates**Company Specific**

Certificate of Attendance at Clarification Meeting	11
• Ms Teams attendees register as it appears from the host.	
Certificate of Authority	12
Declaration of Municipal Fees	15
Compulsory Enterprise Questionnaire	16
 MBD2 : Tax Clearance Certificate Requirements	 18
MBD4 : Declaration of Interest	19
MBD5 : Declaration For Procurement Above R10 Million	21
MBD6.1 : Preference Points Claim Form ITO the Preferential Regulations	22
MBD8 : Declaration of Bidder's Past SCM Practices	23
MBD9 : Certificate of Independent Bid Determination	25

Technical and Evaluation

Details of proposed programme and training	27
Details of proposed methodology	27
Details of experience of tenderer	28
Details of experience of key staff	29

Contractual

Joint Venture Agreements (if applicable)	30
Record of Addenda to Tender Documents	31
Amendments, Qualifications and Alternatives	32
 Form of Offer	 34
Bill of Quantities / Priced Schedule of Activities	

T2.1.3 Preferential Procurement Schedules and Affidavits

In the event of the Tenderer not being registered with the eThekweni Municipality, the tenderer must register on the internet at www.durban.gov.za by following these links:

- eThekweni Municipality
 - City Government
 - Administration
 - Administrative Clusters
 - Finance
 - Supply Chain Management
 - Accredited Supplier and Contractor's Database.

NOTES

- (a) The information for registration as in the possession of the eThekweni Municipality will apply.
- (b) It is the Tenderer's responsibility to ensure that the details as submitted to the Municipality are correct.
- (c) Tenderers are to register prior to the submission of tenders.

T2.2 : RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates as listed in T2.1.2 can be found on the pages [11](#) to [32](#)

CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION

This is to certify that:

(tenderer name)

of (address)

.....

was represented by the person(s) named below at the [There will be a non compulsory clarification meeting](#) held for all tenderers at:

(location) [Ms Teams \(Please send email to Kwanda.nkosi@durban.gov.za 3 days prior to clarification meeting date to request an invite\)](#)

on (date) [08 April 2022](#)

starting at (time) [10:00am](#)

I / We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name :

Name :

Signature :

Signature :

Capacity :

Capacity :

Attendance of the above person(s) at the meeting is confirmed by the Employer's representative, namely :

Name :

Signature :

Capacity :

Date :

Time :

CERTIFICATE OF AUTHORITY

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category.

(I) COMPANY	(II) CLOSE CORPORATION	(III) PARTNERSHIP	(IV) JOINT VENTURE	(V) SOLE PROPRIETOR

Tenderers are to attach Company / Close Corporation / Partnership / Joint Venture / Sole Proprietor registration certificates.

In the case of a Joint Venture, the Joint Venture Agreement and power of attorney are to be attached.

In the case of one-man concerns, ID certificates are to be attached.

(I) CERTIFICATE FOR COMPANY

I,, chairperson of the Board of Directors of

....., hereby confirm that by resolution of the Board (copy attached) taken on

..... 20....., Mr/Ms, acting in the capacity of

....., was authorised to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

Chairman :

Date :

As Witnesses : 1. 2.

(II) CERTIFICATE FOR CLOSE CORPORATION

We, the undersigned, being the key members in the business trading as

..... hereby authorise Mr/Ms,

acting in the capacity of, to sign all documents in connection

with the tender for Contract No. and any contract resulting from it on our behalf.

<u>NAME</u>	<u>ADDRESS</u>	<u>SIGNATURE</u>	<u>DATE</u>

Note : *This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.*

(III) CERTIFICATE FOR PARTNERSHIP

We, the undersigned, being the key partners in the business trading as

..... hereby authorise Mr/Ms,

acting in the capacity of, to sign all documents in connection

with the tender for Contract No. and any contract resulting from it on our behalf.

<u>NAME</u>	<u>ADDRESS</u>	<u>SIGNATURE</u>	<u>DATE</u>

Note : *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.*

(IV) CERTIFICATE FOR JOINT VENTURE

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize

Mr/Ms , authorized signatory of the company,

..... acting in the capacity of lead partner, to sign all documents in

connection with the tender offer for Contract No. and any contract resulting from it on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the partners to the Joint Venture.

<u>NAME</u>	<u>ADDRESS</u>	<u>SIGNATURE</u>	<u>DATE</u>

Note : *This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Joint Venture as a whole.*

(V) CERTIFICATE FOR SOLE PROPRIETOR

I,, hereby confirm that I am the sole owner of

the business trading as

Signature of Sole owner :

Date :

As Witnesses : 1.

2.

DECLARATION OF MUNICIPAL FEES

I, the undersigned, do hereby declare that the Municipal fees of

.....
(full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)
(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

Account

Account Number: to be completed by tenderer.

Consolidated Account No.

--	--	--	--	--	--	--	--	--	--	--	--	--

Electricity

--	--	--	--	--	--	--	--	--	--	--	--	--

Water

--	--	--	--	--	--	--	--	--	--	--	--	--

Rates

--	--	--	--	--	--	--	--	--	--	--	--	--

JSB Levies

--	--	--	--	--	--	--	--	--	--	--	--	--

Other

--	--	--	--	--	--	--	--	--	--	--	--	--

Other

--	--	--	--	--	--	--	--	--	--	--	--	--

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears. ATTACHED, to the back inside cover of this document, please find copies of the above account's and or agreements signed with the municipality.

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThewini municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

NAME :

(Block Capitals)

SIGNATURE :
(of person authorised to sign on behalf of the Tenderer)

DATE:

COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, a separate questionnaire in respect of each partner must be completed and submitted.

- 1) **Name of enterprise:**
- 2) **VAT registration number, if any:**
- 3) **CIDB registration number, if any:**
- 4) **Particulars of sole proprietors and partners in partnerships**

Full Name	Identity number*	Personal income tax number *

* Complete only if a sole proprietor or partnership and attach separate page if more than 3 partners

5) **Particulars of companies and close corporations**

Company registration number, if applicable:

Close corporation number, if applicable:

Tax Reference number, if any:

6) **Record in the service of the state**

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|---|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | |
| <input type="checkbox"/> an official of any municipality or municipal entity | |

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

Insert separate page if necessary

7) **Record of spouses, children and parents in the service of the state**

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|---|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| <input type="checkbox"/> a member of any provincial legislature | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the National Assembly or the National Council of Province | <input type="checkbox"/> an employee of Parliament or a provincial legislature |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | |
| <input type="checkbox"/> an official of any municipality or municipal entity | |

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

Insert separate page if necessary

The undersigned, who warrant that he/she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my/our tax matters are in order;
- ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercise, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed Date

Name Position

Enterprise Name

MBD 2 : TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.

- 1) In order to meet this requirement bidders are required to complete the TCC 001 : "Application for a Tax Clearance Certificate" form and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2) SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3) The original Tax Clearance Certificate must be submitted together with the bid (attached to the inside back cover of this procurement document). Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4) In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
- 5) Copies of the TCC 001 : "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za .
- 6) Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za .
- 7) Notwithstanding Clauses 1) to 6) above; since 18 April 2016, SARS has introduced a new Tax Compliance Status System (TCS). As part of this enhanced system, tenderers can now submit a Tax Compliance Status PIN instead of an original Tax Clearance Certificate (TCC). This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status.
For further particulars please contact your nearest SARS branch, or call the SARS Contact Centre on 0800 00 7277, or log onto SARS eFiling.

Attach a valid Tax Clearance Certificate OR Tax Compliance Status PIN, issued by the TCS System of the South African Revenue Service, to the inside back cover of this procurement document

MBD 4 : DECLARATION OF INTEREST

1. No bid will be accepted from persons "in the service of the state"¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
3. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
 - 3.1 Full Name of bidder or his or her representative
 - 3.2 ID Number of bidder or his or her representative
 - 3.3 Position occupied in the enterprise (dir, trustee, shareholder²)
 - 3.4 Company registration number
 - 3.5 Tax Reference number
 - 3.6 VAT registration number
 - 3.7 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
 - 3.8 Are you presently in the service of the state? YES / NO
 - 3.8.1 If yes, furnish particulars
 - 3.9 Have you been in the service of the state for the past twelve months? YES / NO
 - 3.9.1 If yes, furnish particulars
 - 3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? YES / NO
 - 3.10.1 If yes, furnish particulars

¹ MSCM Regulations: "in the service of the state" means to be –

- (a) a member of –
 - (i) any municipal council;
 - (ii) any provincial legislature; or
 - (iii) the national Assembly or the national Council of provinces;
- (b) a member of the board of directors of any municipal entity;
- (c) an official of any municipality or municipal entity;
- (d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
- (e) a member of the accounting authority of any national or provincial public entity; or
- (f) an employee of Parliament or a provincial legislature.

² "Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

3.11 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? YES / NO

3.11.1 If yes, furnish particulars

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES / NO

3.12.1 If yes, furnish particulars

3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES / NO

3.13.1 If yes, furnish particulars

3.14 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract YES / NO

3.14.1 If yes, furnish particulars

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity number	State Employee Number	Personal income tax number *

Signed Date

Name Position

Enterprise Name

MBD 5 : DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire.

Tenderers are to
circle applicable

- | | | | |
|-----|---|-----|----|
| 1.0 | Are you by law required to prepare annual financial statements for auditing? | YES | NO |
| 1.1 | If YES, you will be required to submit audited annual financial statements (on request during the tender evaluation period) for the past three years or since the date of establishment if established during the past three years. | | |
| 2.0 | Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days? | YES | NO |
| 2.1 | If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days. | | |
| 2.2 | If YES, provide particulars on a letterhead.
(Attach this letter to the back inside cover of this document). | | |
| 3.0 | Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract? | YES | NO |
| 3.1 | If YES, provide particulars on a letterhead.
(Attach this letter to the back inside cover of this document). | | |
| 4.0 | Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic? | YES | NO |
| 4.1 | If YES, provide particulars on a letterhead.
(Attach this letter to the back inside cover of this document). | | |
| 5.0 | If the tenderer is not required by law to prepare audited financial statements, then the tenderer must submit a Public Interest (PI) Score, whereby if the PI score is above 350 points then the bidder must submit audited financial statements. | | |

I, the undersigned, certify that the information furnished on this declaration form is correct. I accept that the state may act against me should this declaration prove to be false.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

MBD 6.1 (Reduced) : PREFERENCE POINTS CLAIM ITO THE PREFERENTIAL REGULATIONS)**1.0 GENERAL**

- 1.1 Preference points for this tender shall be awarded as per the Tender Data (T1.2.2 – F.3.11) and the Preferential Procurement Regulations (2017).
- 1.2 Failure on the part of a tenderer to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Sworn Affidavit for an EME, or sworn affidavit for a QSE (in line with the revised BBBEE codes of Good Practice), together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

The Employer reserves the right to require of a tenderer, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the Employer.

- 1.3 The Employer reserves the right to require of a tenderer, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the Employer.

Attach the B-BBEE Verification Certificate to the inside back cover of this document.

2.0 DECLARATION

- 2.1 B-BBEE Status Level of Contribution claimed:
(tenderer to complete)

- 2.2 Will any portion of the contract be sub-contracted? (circle applicable) YES / NO

- 2.2.1 If YES, indicate:

- (i) what percentage of the contract will be subcontracted?%
(tenderer to complete)

- (ii) the name of the sub-contractor?
(tenderer to complete)

- (iii) the B-BBEE status level of the sub-contractor?
(tenderer to complete)

- (iv) whether the sub-contractor is an EME? (circle applicable) YES / NO

- 2.3 I / we, the undersigned, certify that the B-BBEE status level of contribution indicated in paragraph 2.1 above qualifies the company / firm for preference points and I / we acknowledge that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

MBD8 : DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

This Municipal Bidding Document must form part of all bids invited. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

The bid of any bidder may be rejected if that bidder, or any of its directors have:

- a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
- b) been convicted for fraud or corruption during the past five years;
- c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
- d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

In order to give effect to the above, the following questionnaire must be completed.

Tenderers are to
circle applicable

- 1) Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?

(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied).

YES NO

The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.

If yes, furnish particulars

.....

- 2) Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?

YES NO

The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.

If yes, furnish particulars

.....

- 3) Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?

YES NO

If yes, furnish particulars

.....

Tenderers are to
circle applicable

- 4) Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months? YES NO

If yes, furnish particulars

- 5) Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract? YES NO

If yes, furnish particulars

I, the undersigned, certify that the information furnished on this declaration form true and correct. I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

MBD9 : CERTIFICATE OF INDEPENDENT BID DETERMINATION

This Municipal Bidding Document (MBD) must form part of all bids¹ invited.

Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

- (a) take all reasonable steps to prevent such abuse;
- (b) reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
- (c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

The following MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

In order to give effect to the above, the following Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid, in response to the invitation for the bid made by the **Deputy Head: CSCM : Engineering Unit**, do hereby make the following statements that I certify to be true and complete in every respect:

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;

5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
- has been requested to submit a bid in response to this bid invitation;
 - could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive bidding. (Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- prices;
 - geographical area where product or service will be rendered (market allocation);
 - methods, factors or formulas used to calculate prices;
 - the intention or decision to submit or not to submit, a bid;
 - the submission of a bid which does not meet the specifications and conditions of the bid;
 - bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

APPROACH PAPER / METHODOLOGY / PROGRAMME

Tenderers must explain their understanding of the objectives of the assignment and the Employer's stated and implied requirements, highlight the issues of importance, and explain the technical approach they would adopt to address them. The approach paper should explain the methodologies to be adopted, and should also include a project plan and programme which outlines processes, procedures and associated resources, indicates how risks will be managed and identifies what contribution can be made regarding value management.

Tenderers must attach their approach papers to this page. The approach paper should not be longer than 6 pages.

The scoring of the approach paper will be as follows:

Criterion : Approach / Methodology		
Level 0	0 pts	No response/ no documents submitted
Level 1	40 pts	The technical approach and / or methodology is poor / is unlikely to satisfy project objectives or requirements. The tenderer has misunderstood certain aspects of the scope of work and does not deal with the critical aspects of the project. The programme is poor and has missed critical aspects
Level 2	70 pts	The approach is tailored to address the specific project objectives and methodology. The approach does adequately deal with the critical characteristics of the project. The project plan and manner in which risk is to be managed etc is tailored to the key aspects of the programme. The programme is adequate.
Level 3	90 pts	The approach is tailored to address the specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The project plan and approach to managing risk etc is tailored to the critical characteristics of the project. The programme is good and has allowed for all critical aspects
Level 4	100 pts	Besides meeting the "good" rating, the important issues are approached in an innovative and efficient way, indicating that the tenderer has outstanding knowledge of state-of-the- art approaches. The programme is well thought out and makes allowance for all the key risk areas. The approach paper details ways to improve the project outcomes and the quality of the outputs

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

TENDERER'S EXPERIENCE

The experience of the tendering entity as opposed to the key staff members / experts, in projects of similar type and scale over the last fifteen years will be evaluated. Tenderers must provide details of their knowledge of the local area and previous experience with key local stakeholders.

Tenderers should very briefly describe their experience in this regard and attach this to this schedule. Proof of participation and contact details of clients of the relevant projects must also be provided

The description should be put in tabular form with the following headings:

Employer, contact person and telephone number, where available	Description of event	Detail of work undertaken, nature of work & value	Date undertaken
--	----------------------	---	-----------------

The scoring of the tenderer's experience will be as follows:

Level	pts	Criterion: Tenderer's Experience
0	0	No Submission or Submission of no substance / irrelevant information provided
1	40	To have successfully completed 1 <u>projects</u> of a similar nature within the past 10 years.
2	70	To have successfully completed 2-4 <u>projects</u> of a similar nature within the past 10 years.
3	90	To have successfully completed 5-9 <u>projects</u> of a similar nature within the past 10 years.
4	100	To have successfully completed 10+ <u>projects</u> of a similar nature within the past 15 years.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

EXPERIENCE OF KEY STAFF

The experience of assigned staff member in relation to the scope of work will be evaluated from three different points of view:

- 1) General experience, level of education and training and positions held of each operational area team leader.
- 2) The skills and experience of the assigned staff in the specific operational areas. Linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to events e.g. local conditions, legislation, techniques etc.

The scoring of the experience of key staff will be as follows:

Experience of Key Resources in executing work of similar nature								
Job Title	Minimum Qualification Required	Professional Registration Required	Number of Years' Relevant Experience on projects of a similar nature					Total Points
			Level 0 0 pts	Level 1 40 pts	Level 2 70 pts	Level 3 90 pts	Level 4 100 pts	
Project manager	BSc Eng or BEng or BTech	Pr. Eng, or Pr Tech Eng or Pr. Sci. Nat (Earth Sci.) or Equivalent.	No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	20
Supervisor	BSc Eng or BEng or BTech or Diploma		No Submission	≤ 3	> 3 ≤ 7	> 7 ≤ 10	> 10	10

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

NAME :

(Block Capitals)

SIGNATURE :
(of person authorised to sign on behalf of the Tenderer)

DATE:

JOINT VENTURES AGREEMENTS

Joint Venture agreement and Power of Attorney Agreements to be attached here.

RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications received from the Employer or his representative before the date of submission of this tender offer, amending the tender documents, have been taken into account in this tender offer.

ADD.No	DATE	TITLE OR DETAILS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

NAME : (Block Capitals)

SIGNATURE : DATE:
(of person authorised to sign on behalf of the Tenderer)

AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(This is not an invitation for amendments, deviations or alternatives but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below :

(a) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

Notes:

- (1) *Amendments to the General and Special Conditions of Contract are not acceptable;*
- (2) *The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.*

(b) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

Notes:

- (1) *Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.*
- (2) *In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.*
- (3) *Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.*

(c) DISCOUNTS

ITEM ON WHICH DISCOUNT IS OFFERED	DESCRIPTION OF DISCOUNT OFFERED

Notes:

- (1) *The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.*

NAME :

(Block Capitals)

SIGNATURE :

(of person authorised to sign on behalf of the Tenderer)

DATE:

PART C1 : AGREEMENTS AND CONTRACT DATA**C1.1 : FORM OF OFFER AND ACCEPTANCE****C1.1.1 : OFFER**

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

Contract No: 1D-48388

Contract Title: CSCM Field Instruments and DBN Beach Monitoring

The Tenderer, identified in the Offer signature block below, has 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 inclusive of Value Added Tax is:

R..... (In words
.....)

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

For the Tenderer:

Signature (of person authorized to sign the tender) :

Name (of signatory in capitals) :

Capacity (of Signatory) :

Name of Tenderer (organisation) :

Address :

:

Witness:

Signature :

Name(in capitals) : :

Date :

Note : Failure of a Tenderer to complete and sign this form will invalidate the tender

C1.1 : FORM OF OFFER AND ACCEPTANCE**C1.1.2 : FORM OF ACCEPTANCE****This Form will be completed by the Employer**

By signing this part of the 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 C1 : Agreement and Contract Data, (which includes this Agreement)
- Part C2 : Pricing Data, including the Bill of Quantities
- Part C3 : Scope of Work
- Part C4 : Site Information

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

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 Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representatives of both parties.

The Tenderer shall within two weeks after 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 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 fulfill 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 original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature (*person authorized to sign the acceptance*) :

Name (*of signatory in capitals*) :

Capacity (*of Signatory*) :

Name of Employer (*organisation*) :

Address :

:

Witness:

Signature : **Date** :

Name(*in capitals*) : :

C1.1 : FORM OF OFFER AND ACCEPTANCE**C1.1.3 : SCHEDULE OF DEVIATIONS****This form will be completed by THE EMPLOYER and ONLY THE SUCCESSFUL TENDERER**

1. **Subject** :
- Details** :
- :
2. **Subject** :
- Details** :
- :
3. **Subject** :
- Details** :
- :

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

FOR THE TENDERER**FOR THE EMPLOYER**

.....	Signature
.....	Name (<i>in capitals</i>)
.....	Capacity
.....	Name and Address of
.....	Organisation
.....	
.....	Witness Signature
.....	Witness Name
.....	Date

C1.2 : CONTRACT DATA

C1.2.1 CONDITIONS OF CONTRACT

C1.2.1.1 GENERAL CONDITIONS OF CONTRACT

The Conditions of Contract are the Standard Professional Services Contract (Third edition: July 2009) published by the Construction Industry Development Board. (see www.cidb.co.za - copied for ease of reference in C4.2).

The Contract Data (including variations and additions) shall amplify, modify or supersede, as the case may be, the Standard Professional Services Contract, to the extent specified below, and shall take precedence and shall govern.

Each item of data given below is cross-referenced to the clause in the Standard Professional Services Contract to which it mainly applies.

C1.2.2 CONTRACT DATA

C1.2.2.1 DATA TO BE PROVIDED BY THE EMPLOYER

The Employer is the eThekweni Municipality as represented by : [Deputy Head: CSCM](#)

3.4 & The authorised and designated representative of the Employer agent is: [Senior Manager: Engineering Services and Record](#)

4.3.2 The contact details of the authorised and designated agent are:

- Telephone : [031 311 7264 \(t\)](#)
- Fax : [031 311 7490 \(f\)](#)
- e-mail : gerrard.smith@durban.gov.za

The address for the Receipt of communications is: [Engineering Unit, 166 K.E. Masinga Road \(formerly Old Fort Road\), DURBAN, 4001](#)

1 The Project is : [1D-48388](#)
: [CSCM Field Instruments and DBN Beach Monitoring](#)

1 Period of Performance : **3 Years**

1 Period of Performance : Unless terminated in terms of the Contract, or otherwise specified in the Contract Data, the Contract completion shall be when the Service Provider has completed all Deliverables in accordance with the Scope of Work.

1 Start Date : **7 days from Award of contract**

3.4.1 Communications by e-mail / facsimile **are** permitted.

3.5 The location for the performance of the Project is **stated in C3 Scope of work however this may be varied by the Engineers instructions.**

3.6 The Service Provider may not release public or media statements or publish material related to the

Services or Project under any circumstances.

- 3.9.2 The time-based fees used to determine changes to the Contract Price are as stated in the Pricing Data.
- 3.12 The penalty per incident payable is : **R 50 000** per incident as defined in the SLA, (Refer to Annexure 3).
- 3.15.1 The programme shall be submitted within **14 Days** of the award of the Contract.
- 3.15.2 The Service Provider shall update the programme at intervals not exceeding **6 weeks**.
- 3.16 The time-based fees shall be adjusted for inflation.
- 3.16.2 The indices are those contained in **Table A of P0141 Consumer Price Index** for "CPI for services" Published by Statistics South Africa.
- 4.3.1(d) The Service Provider is not required to assist in the obtaining of approvals, licenses and permits from the state, regional and municipal authorities having jurisdiction over the Project.
- 5.4.1 The Service Provider is required to provide Professional indemnity in an amount of as set out in the Professional Indemnity Schedule.
- 5.4.1 The Service Provider is required to provide Professional indemnity in an amount as set out in the Professional Indemnity Schedule.
1. Insurance against : **Public Liability Claims**
 Cover is : **R 10 000 000**
 Period of cover : **Duration of the contract**
- 7.2 The Service Provider is required to provide personnel in accordance with the provisions of clause 7.2 and to complete the Personnel Schedule.
- 8.1 The Service Provider is to commence the performance of the Services within **7 Days** of date that the Contract becomes effective.
- 8.2.1 The Contract is concluded **when the three year contract period has lapsed**.
- 8.4.3(c) The period of suspension under clause 8.5 is not to exceed **4 weeks**.
- 9.1 Copyright of documents prepared for the Project shall be vested with the **Employer**.
- 11.1 A Service Provider may subcontract any work which he has the skill and competency to perform.
- 12.1 Interim settlement of disputes is to be by **Adjudication**.
- 12.2/3 Final settlement is by **Arbitration**.
- 12.3.3 The adjudicator is the person appointed by **the Employer**.
- 12.4.1 In the event that the parties fail to agree on an arbitrator, it should be referred to an independent organisation, (SAICE) to allocate such.
- 13.4 Neither the Employer nor the Service Provider is liable for any loss or damage resulting from any occurrence unless a claim is formally made within **36 months** from the date of termination or completion of the Contract.
- 13.5.1 The maximum amount of compensation payable by either Party to the other in respect of liability under the Contract is limited to 2 x the contract value.
- 15 The interest rate will be prime interest rate of the Employers bank at the time that the amount is due.

16. OPERATION OF CONTRACT AND DELIVERABLES

The successful service provider will enter 36 Months contract with eThekweni Municipality. This contract shall commence on the date of signature and shall be in force for the specified contract duration which will be the final date of delivery.

Please note the following criteria to be met:

- Continuous monitoring of data with no breaks in eThekweni Municipality field instruments longer than that of seven (7) calendar days.
- No field instruments to be inactive or malfunctioning due to any circumstances for longer than seven (7) calendar days.
- Continuous checking of data quality from eThekweni metrological sensors
- No metrological sensors to be inactive for longer than seven (7) calendar days.
- Analysis and Reporting (Supply of downloaded data in digital format as well as report detailing checks and calibration used).
- Compulsory monthly report/Updates to (Project Manager / Senior Manager: ESR) for program progress (format to be confirmed on award).
- **All sites activities can commence after being pre-approved only by the Employer's Agent prior to implementation.**
- Continuous monitoring of system (analyzing of technical data i.e. battery voltage, cell signals strength, detailed field instruments status history).
- Detailed programme of work 2 weeks after award (compulsory) no alternative offer will be accepted.

Failure to meet the above criteria will result on Employer's Agent to activate the penalty clause 3.12.

The additional conditions of contract are:

ACC1 PERFORMANCE MONITORING OF SERVICE PROVIDERS

For contract awards that are greater than R10m, the Service Provider shall be subjected to "Performance Monitoring" assessments in terms of the applicable Section of the Council's current Supply Chain Management Policy.

ACC2 RETENTION

For consultant services in respect of construction contracts, 10% retention will be applied until the provision and acceptance of the final 'System user manual' and 'Online Data portal' .

C1.2.2.2 DATA TO BE PROVIDED BY THE SERVICE PROVIDER

Ref / Clause Number	Data
1	<p>The Service Provider is:</p> <p>.....</p> <p>Address :</p> <p>.....</p> <p>.....</p> <p>Telephone : Fax :</p>
5.3	<p>The authorised and designated representative of the Service Provider is:</p> <p>Name :</p> <p>The address for receipt of communications is:</p> <p>Address :</p> <p>.....</p> <p>.....</p> <p>Telephone : Fax :</p> <p>E-Mail :</p>
5.5 & 7.1.2	<p>The Key Persons and their jobs / functions in relation to the services are:</p> <p>Name :</p> <p>Specific Duties :</p> <p>Name :</p> <p>Specific Duties :</p>

PART C2 : PRICING DATA**C2.1 : PRICING INSTRUCTIONS**

- C 2.1.1 The Service Provider is required to provide all the services necessary to undertake the project requirements in accordance with the Scope of Work. This includes all things necessary and incidental to providing the Services, including appointment and payment of subcontractors.
- C 2.1.2 The sole basis for the remuneration of the Service Provider to be appointed to proceed with the project shall be:
- C 2.1.2.1 By monthly interim progress payment certificates assessed by the Engineer and based on the measure in which the work actually carried relates to the extent of the work to be done by the Contractor in accordance with the Schedule of Quantities.

C2.2 : PRICING SCHEDULE

The Bill of Quantities follows and comprises of 6 pages. The pages are numbered C2.2.1 to C2.2.6

Please make note that Unit "Set" is refers to "Per Survey"

INDEX TO BILL OF QUANTITIES**SECTION 1 BEACH SURVEYS(C3.1.1 GROUND BASED LIDAR)****PART AB GENERAL SPECIFICATIONS****SECTION 2 BEACH SURVEYS (AIRBORNE LIDAR)****PART AB GENERAL SPECIFICATIONS****SECTION 3 MAINTAINANCE, SUPPORT AND SERVICING****PART AB GENERAL SPECIFICATIONS****SECTION 4 REAL-TIME MONITORING INSTRUMENTATION****PART AB GENERAL SPECIFICATIONS**

BILL OF QUANTITIES

SECTION 1 BEACH SURVEYS(C3.1.1 GROUND BASED LIDAR)
PART AB GENERAL SPECIFICATIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.1.1	Amanzimtoti	set	18		
2	C3.1.1	Umgeni to Port Entrance	set	36		
3	C3.1.1	Umgeni to Umhlanga	set	36		
4	C3.1.1	Isipingo	set	18		
5	C3.1.1	Bluff Brighton Tidal Pool to Military Fence	set	18		
6	C3.1.1	Umgababa to Umkomaas	set	18		

TOTAL CARRIED TO SECTION 1 SUMMARY: BEACH SURVEYS(C3.1.1 GROUND BASED LIDAR)

R

CSCM Field Instruments and DBN Beach Monitoring

SECTION 2 BEACH SURVEYS (AIRBORNE LIDAR)**PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.1.2	Coastal Airborne LIDAR	no.	6		
2	C3.1.3	Annual Oblique Aerial Photography	set	3		
3	C3.1.4	Offshore Block Mapping - Multibeam	set	12		
4	C3.1.5	Nearshore Block Mapping Single Beam surveys	set	15		
5	C3.1.6	Estuarine Survey	set	9		
6	C3.1.7	Specialist Site Investigations	day	12		

TOTAL CARRIED TO SECTION 2 SUMMARY: BEACH SURVEYS (AIRBORNE LIDAR)**R**

CSCM Field Instruments and DBN Beach Monitoring**SECTION 3 MAINTAINANCE, SUPPORT AND SERVICING****PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.2.1	Datowell Waverider	months	36		
2	C3.2.2	SeaDarq Wave Radar Maintenance and Servicing	months	36		
3	C3.2.3	ADCP Deployments and Processing	set	12		
4	C3.2.4	Telemetry Services	months	36		
5	C3.2.5	Coastal and FEWS Modelling Data Services	months	36		
6	C3.2.6	Online Data Portal	months	36		
7	C3.2.7	Research and Development	PC Sum	750000	1.00	750 000.00
8	C3.2.7	% Mark-up for item 7 above	%	750000		

TOTAL CARRIED TO SECTION 3 SUMMARY: MAINTAINANCE, SUPPORT AND SERVICING**R**

CSCM Field Instruments and DBN Beach Monitoring**SECTION 4 REAL-TIME MONITORING INSTRUMENTATION****PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.3.1	Tide Gauges	months	36		
2	C3.3.2	River Gauges	months	36		
3	C3.3.3	Rain Gauges	months	36		
4	C3.3.4	Weather Stations	months	36		
5	C3.2.5	Stormwater Gauges	months	36		
6	C3.3.6	Webcams	months	36		
7	C3.3.7	Offshore Turbidity Buoy	months	18		
8	C3.3.8	Directional Wave Monitoring Buoys	months	36		
9	C3.3.9	Real-time Water Quality Stations	months	24		
10	C3.3.10	AIS Data Logging	months	36		
11	C3.3.11	eThekweni Municipality LORAWAN Gateway	months	36		
12	C3.3.12	Offshore Weather Station	months	18		
13	C3.3.13	Drifter Buoy Experiment	no.	3		
14	C3.3.14	Real-time Position and Temperature Units	months	24		

TOTAL CARRIED TO SECTION 4 SUMMARY: REAL-TIME MONITORING INSTRUMENTATION**R**

SUMMARY OF BILL OF QUANTITIES

Section

1	BEACH SURVEYS(C3.1.1 GROUND BASED LIDAR)		R	
	AB GENERAL SPECIFICATIONS	R		
2	BEACH SURVEYS (AIRBORNE LIDAR)		R	
	AB GENERAL SPECIFICATIONS	R		
3	MAINTAINANCE, SUPPORT AND SERVICING		R	
	AB GENERAL SPECIFICATIONS	R		
4	REAL-TIME MONITORING INSTRUMENTATION		R	
	AB GENERAL SPECIFICATIONS	R		
SUB TOTAL				R
ADD VAT (15%) - (only if a registered VAT Vendor)				R
TOTAL CARRIED TO FORM OF TENDER				R

PART C3 : SCOPE OF WORK**C3.0 PROJECT DESCRIPTION AND SCOPE OF CONTRACT**

The Frequencies of tasks and/or quantities that follow are given for tendering purposes. The Employer reserves the right to vary the frequency of any task or not to undertake tasks at all.

In all cases the rates tendered must include for the cost of providing all plant, equipment, personnel, overheads and insurances and any other costs deemed necessary by the tenderer to undertake the work.

Where tests on recovered samples are required, separate payment items have been provided in the Pricing Schedule.

C 3.1 BEACH SURVEYS**C 3.1.1 Ground Based Lidar**

Scope: Continuation of the Durban Beach Monitoring program along selected stretches of the eThekweni Municipality coastline. The following equipment is required as a minimum: RTK GPS system, mobile ground-based LIDAR (cm precision), survey grade motion reference unit and an acquisition unit. The surveys should include full coverage from the foredune/back beach to the low water spring tide level (minimum of 1m grid spacing). Sediment samples and analysis should be included along the surveyed areas. The area that need to be covered is from the foredune or back beach to low water spring level, complete data coverage of this area for each section surveyed.

Deliverables:

- Topographic maps
- Survey report detailing, methods, equipment used and results
- DXF contours
- XYZ point data
- Cross sections
- Analysis and comparison to previous survey data
- Profiles at designated positions
- Volume and area calculations
- Profile statistics and change analysis
- Sediment analysis data

The unit of measurement shall be "Set" and shall cover requirements detailed in the scope and deliverables.

C 3.1.2 Coastal Airborne LIDAR

Scope: Continuation of the Durban Beach Monitoring program along selected stretches of the eThekweni Municipality coastline but mainly along the southern stretches of the municipality coastline (Port of Durban to Umkomaas River). The following equipment is required as a minimum: RTK GPS system, airborne LIDAR (cm precision), survey grade motion reference unit and an acquisition unit. The surveys should include full coverage from the foredune/back beach to the low water spring tide level (minimum of 2m grid spacing). 4K video recording of the survey area should also be supplied. The area that need to be covered is from the foredune or back beach to low water spring level, complete data coverage of this area for each section surveyed.

Deliverables:

- Topographic maps
- Survey report detailing, methods, equipment used and results
- DXF contours
- XYZ point data
- Cross sections
- Analysis and comparison to previous survey data
- Profiles at designated positions
- Volume and area calculations
- Profile statistics and change analysis
- 4K video recording of the survey area

The unit of measurement shall be “No.” and shall cover requirements detailed in the scope and deliverables.

C 3.1.3 Annual Oblique Aerial Photography

Scope: Oblique aerial photography is required along the eThekweni Municipality coastline from Tongaat River mouth in the North to Mahlongwa River mouth in the South. High resolution still images should be taken of the complete stretch as well as 4K video. A total of 3 hours flight time per flight is required per trip. A Bell Jet Ranger with extended range fuel tank is the preferred platform..

Deliverables:

- Digital still images
- 4K video files

The unit of measurement shall be “Set” and shall cover requirements detailed in the scope and deliverables.

C 3.1.4 Offshore Block Mapping - Multibeam

Scope: Continuation of the current offshore mapping program within the eThekweni Municipality region. The following equipment is required as a minimum but is not limited to: RTK GPS system, motion reference unit, survey-grade 160kHz MBES, Sound Velocity Profiler, Acquisition system and software (e.g Hypack) and a suitable survey vessel for depth ranges between -3 to 200m (Chart Datum). The survey should meet IHO Order A1 standards. The mapping will take place at any site along the eThekweni Municipality coastline. Full coverage is required for each block. A block is defined as 50-line kilometres of area surveyed.

Deliverables:

- Bathymetric maps
- Survey report detailing, methods, equipment used and results
- DXF contours
- XYZ point data (grids)
- Cross sections
- Line report
- Track chart
- Profiles at designated positions
- KMZ Bathymetric map file

The unit of measurement shall be “Set” and shall cover requirements detailed in the scope and deliverables.

C 3.1.5 Nearshore Single Beam Survey

Scope: Continuation of the current nearshore mapping program within the eThekweni Municipality region. The following equipment is required as a minimum but is not limited to: RTK GPS, motion reference unit, 200kHz survey grade single beam echo sounder, Sound Velocity Profiler, Acquisition system and software (e.g Hypack) and a suitable survey vessel for depth ranges between 0 to 30m (Chart Datum). The survey should meet IHO Order A1 standards. The mapping will take place at any site along the eThekweni Municipality coastline. Line spacing will be determined before each survey to meet the needs of each project. A block is defined as 20-line kilometres of area surveyed.

Deliverables:

- Bathymetric maps
- Survey report detailing, methods, equipment used and results
- DXF contours
- XYZ point data (grids)
- Cross sections
- Line report
- Track chart
- Profiles at designated positions
- KMZ Bathymetric map file
- Data integration with existing products
- Specialist interpretation report

The unit of measurement shall be "Set" and shall cover requirements detailed in the scope and deliverables.

C 3.1.6 Estuarine Survey

Scope: Extension of the current estuarine mapping program. Detailed bathymetric and sedimentological investigation of estuaries within the eThekweni Municipality. This includes bottom sample collection and geochemical analysis of the samples. The following equipment is required as a minimum but is not limited to: RTK GPS, motion reference unit, 200kHz Survey grade single beam echo sounder, Sound Velocity Profiler, Acquisition system and software (e.g Hypack), suitable survey vessel, sediment grab, ground based LIDAR as described in the scope of works for Beach Survey. Sediment sampling and analysis (60-100 samples per estuary), the analyses include grain-size, total organic and carbonate content and bulk geochemical analysis. The area shall cover from the mouth to the head of the estuary (bathymetry), including the beach barrier, banks of the estuary (LIDAR) and the coastal floodplain to the 5m contour where deemed necessary (LIDAR).

Deliverables:

- Technical Survey Report including:
 - Bathymetry
 - Geochemical analysis of sediment samples
 - Carbonate content analysis
 - Organic content analysis
 - Sediment cumulative curves
 - Geochemical distribution maps
 - Topographic maps of the estuary, beach barrier and flood plain
 - XYZ grid files
 - Sedimentological distribution maps (grain size parameters, total organic content, carbonate content)

The unit of measurement shall be "Set" and shall cover requirements detailed in the scope and deliverables.

C 3.1.7 Specialist Site Investigations

Scope: Site investigations may encompass any of the tasks listed in the scope of work document. The purpose of a site investigation is to allow data collection at a point of interest for engineering or Flood Early Warning System (FEWS) reasons that have not yet been identified. Site investigations may require any of the below equipment and are priced at a day rate.

Equipment at a minimum but not limited to: Survey grade RTK GPS positioning
Motion reference unit
Survey grade 160Khz multibeam echo sounder
Survey grade 200Khz single beam echo sounder
Acquisition unit and software
Sound Velocity Profiler
Boomer Seismic System
Pinger Seismic System
Side Scan Sonar
Vibrocorer
Van Veen Sediment Grad
Real-Time monitoring instruments described elsewhere in scope

Deliverables: The specific deliverables will be outlined prior to commencement of the works, as an indication, refer to the deliverables under the various items in this scope.

The unit of measurement shall be “day” and shall cover requirements detailed in the scope and deliverables.

C 3.2 MAINTAINANCE, SUPPORT & SERVICING**C 3.2.1 Datawell Waverider Buoy Deployments, Maintenance and Servicing**

Scope: Facilitate the deployment, maintenance and recovery of the eThekweni Municipality Datawell Mk4 WaveRider buoy. This includes technical support for the receiver station infrastructure and data curation and forwarding to eThekweni Municipality servers. The scope of work includes but is not limited to using a suitable vessel capable of the deployment of the buoy anchor moorings and the buoy itself. Maintenance includes but is not limited to cleaning, painting with antifouling and antenna replacement. A service must be provided (programming for real-time tracking and alerts) for emergency recovery if the buoy breaks free from the mooring. See Datawell Mk4 specifications and manual available on the Datawell website. All consumables and extras are to be accounted for in the tendered rate. The buoy is currently located approximately 1.5km off Suncoast Casino with a water depth of 15m. This site may change to any location along the eThekweni Municipality coast.

Deliverables: Maintenance reports detailing equipment conditional assessment with photographs. Monthly checks and cleaning of bouys and moorings, possible recovery and redeployment when land based repairs are nessesary.

Data Management: Continuous data monitoring and system operation assurance. Consolidation of data streams.

Analysis and Reporting: Consolidation and report detailing the data collected over the month.

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.2.2 SeaDarQ Wave Radar Maintenance and Servicing

Scope: Facilitate the maintenance and running of the eThekweni Municipality SeaDarQ Radar based at the Blue Waters Hotel, Durban. The primary function of the radar is to provide situational awareness on the oceanographic conditions within the Durban Bay for the eThekweni Municipality Flood Early Warning System (FEWS) and water quality prediction system. The radar installation, including but not limited to the radome, radome housing, brackets, cables, server, security, network and power systems are required to be kept in a serviceable condition. Servicing and replacement of the radar magnetron as per the manufacturer specifications (view the SeaDarQ Radar manual on the SeaDarQ website) should be included in the rate.

Deliverables: Condition reports

Service and Maintenance Reports in accordance with manufactures specifications

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.2.3 ADCP Deployments and Processing

Scope: Deploy, maintain, recover and service the eThekweni Municipality ADCP assets. These include 4 Nortek Aquadops and 1 Nortek AWAC. The services shall include construction of moorings/frames, supply and changing of batteries, deployment and recovery operations. A suitable vessel capable of deployment and recovery operations is required. Diver personnel may be required. Up to 5 ADCPs may be deployed at each investigation..

Deliverables: Setup and programming of the instrumentation
Supply of downloaded digital ADCP records
Report of checks and calibration used
Deployment and recovery report

The unit of measurement shall be “Set” and shall cover requirements detailed in the scope and deliverables.

C 3.2.4 Telemetry Services

Scope: Provide and facilitate seamless, interruption free telemetry services for the eThekweni Municipality real-time monitoring infrastructure. The rate for this item to include for the provisioning of data contracts, SIM cards and network support necessary for the equipment installed. This should be compatible with the equipment specifications of the provider.

Deliverables: As above with reporting on a quarterly basis

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.2.5 Coastal and FEWS Modelling Data Services

Scope: Undertake validation studies of current model and radar outputs in relation to real-time measurements which includes recommendations for improvement where applicable. Integration of satellite derived data (Water quality and associated datasets) into the online data portal. The rate is to include any necessary license fees, where applicable, for the duration of the contract.

Deliverables: Integration of ten (10) satellite derived datasets

Bi-annual validation studies

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.2.6 Online Data Portal

Scope: Provide a cloud-based data server including a configuration, viewing and interface portal for all real-time monitoring equipment specified within the BOQ. This server is integral to the eThekweni Municipality Flood Early Warning System (FEWS) and should be able to interface directly with the current FEWS servers. The provided server from inception shall be the property of the eThekweni Municipality.

Deliverables: Data server Portal
Cloud-based server portal capable of:
Directly accepting data streams from each real-time station,
Logging and processing of incoming data,
Storage and management of all metadata associated with each station type and site,
Alerts and warning of events (including and not limited to: online/offline status, trigger levels, geo-fence, battery level and signal strength),
Displaying raw data from each station as time series graphs and table values,
Forwarding of incoming data to FEWS servers,
Archiving of data daily to an offsite location.
Running, maintenance and programming

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.2.7 Research and Development

Scope: Research and Development of new equipment, methods and tools which aids in the more efficient and cost-effective ways of gathering, processing and analysing data collected for the eThekweni Municipality Flood Early Warning System (FEWS). The types of projects envisioned include but are not limited to:

- Cost-effective offshore real-time current monitoring
- Real-time image analysis
- LIDAR-based single point continuous real-time beach profiling
- Integration of remote sensing products from the EU Copernicus Program
- Low-cost water quality sensors

ALLOWANCE FOR RESEARCH AND DEVELOPMENT OF METROLOGICAL EQUIPMENT

Research and development of new equipment which aid in more efficient and cost-effective way of gathering data for the eThekweni Municipality field observation systems. The types of projects envisioned include but are not limited to:

- Cost-effective offshore real-time current monitoring
- Real-time image analysis
- LIDAR-based single point continuous real-time beach profiling
- Integration of remote sensing products from the EU Copernicus Program
- Low-cost water quality sensors

Training and Development of CSCM: ESR Staff on newly/latest innovation technology for eThekwini Municipality CSCM field Instrumentation.

The unit of measurement shall be "PC Sum" and shall cover requirements detailed in the scope and deliverables.

C 3.3 REAL-TIME MONITORING INSTRUMENTATION & MAINTENANCE

C 3.3.1 Time Tide Gauges

Scope: Supply, deploy and maintain a network of at least 2 (TWO) tide gauges. Installations for the eThekwini Municipality including the survey of tidal benchmarks to CDP. Each tide gauge station should be capable of real-time transmission to the data server of tidal levels with a minimum of 10min intervals. The tide gauge stations will be located within the port of Durban and final positions confirmed post award of tender. The gauges should have at least a 1cm resolution. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 36-month period.

Deliverables: Consolidate data into Monthly Digital Reports with associated digital data files
Online data access via web portal

The unit of measurement shall be "months" and shall cover requirements detailed in the scope and deliverables.

C 3.3.2 River Gauges

Existing River Gauge Network:

- Replacement of existing River gauge unit with new as and when it fails and cannot be repaired, Configure, and connect new River Gauge back to eThekwini field instruments network, and ensure that the site is fully operational.
- Monthly maintenance of existing river gauge (Planned and Unplanned maintenance).

Expansion of River Gauge Network (complete new installations):

- Supply and install complete new River gauge unit and associated requirements for functionality.
- Configure and connect new River Gauge to eThekwini field instruments network, and ensure that the site is fully operational.

The unit of measurement shall be "months" and shall cover requirements detailed in the scope and deliverables.

C 3.3.3 Rain Gauges

Existing Rain Gauge Network:

- Replacement of existing rain gauge unit with new as and when it fails and cannot be repaired, Configure and link new Rain Gauge back to eThekwini field instruments network, and ensure that the site is fully operational.
- Monthly maintenance of existing rain gauges (Planned and Unplanned maintenance).

Expansion of Rain Gauge Network (complete new installations):

- Supply and install complete new rain gauge unit and associated requirements for functionality.
- Configure and connect new Rain Gauge to eThekwini field instruments network, and ensure that the site is fully operational.

The unit of measurement shall be "months" and shall cover requirements detailed in the scope and deliverables.

C 3.3.4 Weather Stations

Existing Weather Station Network:

- Replacement of existing weather station unit with new as and when it fails and cannot be repaired, Configure and link new Weather Station back to eThekwini field instruments network, and ensure that the site is fully operational.
- Monthly maintenance of existing weather stations (Planned and Unplanned maintenance) by ensuring metrological sensors (Rain gauge, Radiation, Barometer, and Temperature, Wind speed, Wind direction and Humidity) are fully operational.

Expansion of Weather Station (complete new installations):

- Supply and install complete new weather station unit and associated requirements for functionality.
- Configure and connect new Weather Station to eThekwini field instruments network, and ensure that the site is fully operational.

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C3.3.5 Stormwater Gauges

Existing Stormwater Gauge Network:

- Replacement of existing River gauge unit with new as and when it fails and cannot be repaired, Configure and connect new Stormwater Gauge back to eThekwini field instruments network, and ensure that the site is fully operational.
- Monthly maintenance of existing Stormwater Gauge (Planned and Unplanned maintenance).

Expansion of Stormwater Gauge Network (complete new installations):

- Supply and install complete new stormwater gauge unit and associated requirements for functionality.
- Configure and connect new Stormwater Gauge to eThekwini field instruments network, and ensure that the site is fully operational.

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.6 Webcams

Scope: Supply, deploy and maintain a network of at least 40 (FORTY) real-time webcams for the eThekwini Municipality. Each webcam should be able to transmit still images in near real-time. The stations are to be deployed anywhere within the eThekwini Municipality boundaries but mostly along the coast and fluvial environments. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 36-month period.

Capabilities of each webcam station should include but not be limited to:

Minimum transmission interval: 30min

Independent of mains power

Programmable FTP upload

Programmable interface to FEWS servers

Robust tamper resistant bracket and housing for the near marine environment

Deliverables: Consolidate data into Monthly Digital Reports with associated digital data files
Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.7 Offshore Turbidity Buoy

Scope: Supply, deploy and maintain a real time data buoy capable of transmitting near surface turbidity measurements to the eThekwini Municipality servers. The purpose of the data is to verify and calibrate models from FEWS focused on water quality estimates. The buoy may be placed anyway along the eThekwini Municipality coastline. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 18-month period.

Capabilities of the buoy should include but not be limited to:

Minimum transmission interval: 15min

NTU measurement range: 0- 5000

Wiped Turbidity Sensor

Programmable interface to FEWS servers

Deliverables: Consolidate data into Monthly Digital Reports with associated digital data files
Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.8 Directional Wave Monitoring Buoys

Scope: Supply, deploy and maintain a network of at least 4 (FOUR) real-time directional wave measurement buoys capable of transmitting wave parameter data to the eThekwini Municipality servers. The buoys may be placed anyway along the eThekwini Municipality coastline to a depth maximum of 50m. Maintenance includes but is not limited to cleaning, antifouling and mooring replacement. A service must be provided (programming for real-time tracking and alerts) for emergency recovery if the buoys break free from their mooring. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 36-month period.

Capabilities of each station should include but not be limited to:

Minimum transmission interval: 30min

Output of bulk wave parameters including: Hm0, Hmax, Tp, Tm01, Dirp

Output of Directional Wave Spectrum

GPS position and geofence

Deliverables: Consolidate data into Monthly Digital Reports with associated digital data files
Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.9 Real-Time Water Quality Stations

Scope: Supply, deploy and maintain network of at least 17 (SEVENTEEN) real time water quality station installations for the eThekweni Municipality. The purpose of the data is to verify and calibrate models from FEWS focused on water quality estimates. Each station should be able to accurately measure and transmit water quality data in near real-time. The stations are to be deployed anywhere within the eThekweni Municipality boundaries.(in various environments such as, Estuaries, stormwater, marine.). All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 24-month period.

Capabilities of each station should include but not be limited to:
Measurement Parameters: Depth, Temperature, DO, Salinity, Turbidity
Minimum transmission interval: 15min
Independent of mains power
Programmable FTP upload
Programmable interface to FEWS servers
Robust tamper resistant bracket and housing for the near marine environment

Deliverables: Consolidate data into Monthly Digital Reports with associated digital data files
Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.10 AIS Data Logging

Scope: Supply, deploy and maintain an Automatic Identification System (AIS) receiver base station. The station is to be situated along the Durban Beach Front and is to receive, log and forward vessel position information to the eThekweni Municipality servers. The purpose of this data is to monitor vessel traffic within the Durban Bay, track vessel and dredger movements in relation to work being undertaken by and for the municipality and to monitor offshore eThekweni Municipality Instrumentation assets. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 36-month period.

Capabilities of each station should include but not be limited to:
Able to receive AIS signals from offshore vessels
Able to store/log historical messages
Programmable data forwarding to eThekweni Municipality servers
Robust tamper resistant brackets, antenna and housing for the near marine environment

Deliverables: Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.11 eThekweni Municipality LORAWAN Gateway

Scope: Supply, deploy and maintain LORAWAN Gateway at a secured high site along the Durban Beachfront (site to be provided by the eThekweni Municipality). The purpose of the LORAWAN Gateway is to provide a way for developmental sensor nodes to connect the eThekweni

Municipality Servers via the LORAWAN low power protocol. The gateway should be mains powered with an omni-directional antenna and be connected to a LTE enabled router to provide access to the internet. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 36-month period.

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.12 Offshore Weather Station

Scope: Supply, deploy and maintain an offshore buoy that is equipped with a weather station that can transmit meteorological information to the eThekweni Municipality servers in near real-time. The buoy platform should be stable enough to provide accurate data. The buoy is to be located offshore of Durban in a mooring depth range of 15 to 60 meters. Maintenance includes but is not limited to cleaning, antifouling and mooring replacement, possible multiple replacements of the weather sensors due to corrosion etc. A service must be provided (programming for real-time tracking and alerts) for emergency recovery if the buoy breaks free from its mooring. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 18-month period. All permissions and safety requirements for the operation of the buoy are to be met by the service provider with support from the eThekweni Municipality.

Capabilities of each station should include but not be limited to:

- Sensors: Wind Speed and Direction, Air Temperature, Atmospheric Pressure
- Minimum transmission interval: 10min
- Industry standard sensors
- Programmable interface to FEWS servers
- GPS position and geofence
- Weather sensor to be placed a minimum of 2m above the water surface
- Equipped with a navigation light

Deliverables: Consolidate data into Monthly Digital Reports with associated digital data files
Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

C 3.3.13 Drifter Buoy Experiment

Scope: The purpose of these experiments is to aid in the understanding of current patterns at various locations along the eThekweni Municipality coastline. The information will aid in the calibration of oceanographic models and radar data. Each experiment shall consist of the deployment and recovery of at least 20 drifter buoys capable of drifting with the surface current and transmitting position in real time for a period of up to 2 days. All costs associated with the experiment including but not limited to the hiring or supply of the drifter buoys, deployment and recovery operations and data reporting should be included in the tendered rate per experiment. It is envisioned that 3 such experiments will be needed for successful calibration.

Deliverables: Technical report detailing each experiment

Digital data files

The unit of measurement shall be “no.” and shall cover requirements detailed in the scope and deliverables.

C 3.3.14 Real-Time Position and Temperature Unit

Scope: Supply, deploy and maintain network of at least 20 (TWENTY) real-time position and temperature logging units for the eThekweni Municipality. The purpose of the units is to record and transmit temperature and position values from a moving platform operating within the municipality. The data is to be used to create an active heat map along common vehicle routes. The stations are to be deployed anywhere within the eThekweni Municipal boundaries. It is envisioned that the units will be deployed on municipal vehicles and in such a way as not to be influenced by the heat generated by the vehicle. All consumables, equipment, personnel, overhead, insurances, maintenance and service costs, and any other cost deemed necessary by the tenderer to undertake the work are to be accounted for in the tendered rate for a 36-month period.

Capabilities of each station should include but not be limited to:

Programmable sample and transition interval

Temperature accuracy 0.5 deg C

Position accuracy < 5m

Function in signal poor environments

Long battery life (> 3 months)

HTTPS post, SMS alert, email alert

Programmable daily check in transmission including battery voltage and self-test.

Robust tamper resistant brackets and housing

Deliverables: Online data access via web portal

The unit of measurement shall be “months” and shall cover requirements detailed in the scope and deliverables.

ANNEXURES

1. **STANDARD CONDITIONS OF TENDER**
2. **CIDB STANDARD PROFESSIONAL SERVICES OF CONTRACT**

ANNEXURE 1 : STANDARD CONDITIONS OF TENDER – CIDB SFU (2015)**Annex F**
(normative)**Standard Conditions of Tender****F.1 General****F.1.1 Actions**

F.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict, and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of ineptitude that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.

2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would be any way affect any decisions taken.

F.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

F.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

F.1.3 Interpretation

F.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
- someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially;
 - an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or

ANNEXURE 2 : CIDB STANDARD PROFESSIONAL SERVICES OF CONTRACT

**STANDARD PROFESSIONAL SERVICES
CONTRACT**

(July 2009)
(Third Edition of CIDB document 1014)



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July, 2009: Edition 3 of CIDB document 1015

Standard Professional Services Contract