

# agriculture & rural development

Department:
Agriculture and Rural Development
PROVINCE OF KWAZULU-NATAL

#### **INVITATION OF QUOTATION ABOVE R30,000.00**

THIS FORM SHOULD BE COMPLETED IN DETAIL AND SHOULD BE ACCOMPANIED BY A VALID TAX

COMPLIANCE STATUS PIN AND VALID BBBEE VERIFICATION CERTIFICATE/AFFIDAVIT

QUOTATION NUMBER: R/N/1819/560	VALIDITY PERIOD OF QUOTATION Days
	(To be completed by the Supplier)
CLOSING DATE: 14/08/2018	CLOSING TIME:11h00
DECORPTION/CRECIFICATION/C) OF ITEMS/	COMPANY NAME:
DESCRIPTION(SPECIFICATION/S) OF ITEMS/ SERVICE REQUIRED: Supply ,deliver, offload and erect	TEL NO:
Vegeland irrigation equipment for rehabilitation to	FAX NO:
Emadlangeni Local	
Lilladiangem Local	CONTACT PERSON:
	CCD DEC ANIMADED
	CSD REG NUMBER
	MAAA
DOES OFFER COMPLY WITH	YES/NO
SPECIFICATION?	(DELETE WHICH EVER IS NOT APPLICABLE)
DOES ARTICLE COMPLY WITH SABS SPECIFICATION?	
HAS IT BEEN INSPECTED BY SABS?	YES/NO
	YES/NO (DELETE WHICH EVER IS NOT APPLICABLE)
	(BELETE WITHOUT EVEN 15 TO T AT LICABLE)
DELIVERY PERIOD AFTER INITIAL ORDER?	
IS THE PRICE FIRM	
WHERE ARE THE STOCK HELD?	
(PHYSICAL ADDRESS , PLEASE)	
OUOTATION PRICE INCLUDING VAT	
(VAT TO BE ADDED BY REGISTERED VAT VENDORS ONLY)	TOTAL: R
,	
COMPANY OFFICIAL STAMP (COMPULSORY)	
(2011)	SIGNATURE OF BIDDER
	DATE
	DATE
NUMBER OF PAGES FAXED BACK TO THE DEPARTMENT BY	( Supplier to complete)
THE SUPPIER	and supplied to completely

Quotation for the attention of: Mrs N. Mlaba

Tel. Contact no :033 343 8186

Quotation must be deposited in the bid box situated at Department of Agriculture and Rural

**Development, Supply Chain Management,** 

NB: THE ATTACHED SBD4, SBD9 and SBD10 FORMS MUST BE COMPLETED IN FULL. THIS QUOTATION PAGE MUST BE COMPLETED AND RETURN WITH ALL YOUR QUOTATION

COMPANY NAME
ADDRESS
CONTACT PERSON
CONTACT NUMBER
FAX NUMBER

LINE NO.	DESCRIPTION OR SPECIFICATION OF ITEM			ICE AT	TOTAL PRICE	
	(Please be very specific and clear)		R	С	R	С
1	Supply, deliver, offload and erect Vegeland irrigation equipment for rehabilitation to Emadlangeni Local: See attached Specification					
2.						
	* LABOUR	(IF APPLICABLE	(i)			
	*DELIVERY	(IF APPLICABLE	≣)			
				OTAL		
*ONLY A	APPLICABLE TO VAT REGISTERED SUPP	PLIERS 15% VA	Т			
			TOTAL	PRICE		

MET AFFEIOADEL TO VAT RE	GISTERED SOFFLIERS 13/6 VAT
	TOTAL PRICE
*VAT Registration No. (Supplie	er)
When Required (Requester):	04 September 2018
Where Required (Requester):	Local Office- 53 Voor street Utrecht
Contact details of requester:	Mr. D.C SHABANGU
TEL (COMPULSORY) COMPANY STAMP	076 821 6454 PRICES ARE VALID FOR
COMPANT STAWIF	
	SIGNATURE
	DATE



# agriculture & rural development

Department:
agriculture
& rural development
PROVINCE OF KWAZULU-NATAL

## **VEGIELAND DRAGLINE IRRIGATION**

# GROENVLEI, EMADLANGENI LOCAL MUNICIPALITY

Compilled by : Mr N.S. Njoko

Date : 04 May 2018

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#### 1. INTRODUCTION

#### 1.1 Background

On 28 February 2018, Mr P.X. Mtetwa (Agricultural Advisor) requested Mr N. S. Njoko (Engineering Technician) to carry out an irrigation design for VegieLand garden owned by Mr Ndlovu at Nachtwacht Farm.

Nachtwacht Farm is within Mr Mtetwa's area of jurisdiction under the Department of Agriculture, Utrecht Local Municipality.

#### 1.2 Extent of Project

The total area of VegieLand garden is 1.55ha and the portion for irrigation is 0.72ha (limited by water delivery)

#### 1.3 Locality

The site is located North East from the town of Groenvlei and is 4.5km from the junction of Road P43 and P217 towards Road P332. **See Figure 1 below.** 

Co-ordinates:

S 27° 26' 20.9"

E 30° 15' 27.6"



Figure 1, Farm Boundary

#### 1.4 Type of Irrigation System

Various irrigation systems including dynamics thereof were explained to the farmer to choose from. The systems included permanent sprinkler system, quick coupling system, dragline system and hop along system.

The system chosen by the Farmer was the dragline system.

#### 2. OBJECTIVE

#### 2.1 Irrigation scheme

• The project is focused at growing vegetables including cabbage, spinach, lettuce and carrot. The installation of an irrigation system will improve the Farmer's yield significantly.

#### 3. TECHNICAL INPUTS

This section summaries all technical reports/ Investigations that were conducted prior to commencement of the design process.

#### 3.1 Soil analysis

The soil survey was conducted by Mr F.D. Modiba (Agronomist) with adherence to the Departmental methods and procedures. A total no of 5 (1x1x1) soil pit profiles were established. Selected soil samples were submitted to Cedara for laboratory analysis.

#### 3.2 Topographical survey

A land survey was carried out by Mr N.S Njoko (Engineering Technician) using a Trimble GPS RNGT8 at 1m contour interval. The survey revealed a lower level of 1836m and a highest level of 1845m above sea level.

#### 3.3 Water

The water sources to supply the irrigation system is 2 natural wells. The yield of the sources was measured in November 2017 and was found to deliver 5L in 4seconds. No formal laboratory tests were conducted to ascertain quality.

Water will be drawn from 2 wells to four 10 000L jojo tanks.

#### 3.4 Electricity

There is no electricity available in the area

#### **4 TECHNICAL INFORMATION**

#### 4.1 Sprinkler

Nelson R33LP: 4.4mm nozzle (wetted diameter 26.8m)

Bar: 1.75

I/h: 970

This sprinkler has been chosen for its low operating pressure requirements therefore saving energy.

#### 4.2 Pipe Materials Selection

**HDPE pipes** were selected for the mainline(50mmØ) and laterals(combination, 50 & 40mmØ). The HDPE pipes were selected due to the following attributes and advantages:-

- Suitable for underground applications (i.e. where they will be protected from solar radiation),
- · Cost effective,
- Corrosion resistant and a maintenance free lifespan,
- · Light in weight easy handling, transportation & installation
- · Excellent flow characteristics, resulting in lower pumping costs

#### 4.3 Pump Selection

This irrigation system is gravitational, however it requires a booster pump to meet the required head. There is no electricity in the farm area, therefore the selected pump will be diesel driven. The booster pump (Etanorm 40-25-160) must be capable of delivering 3.88m³/h with a head of 21m and an impeller size of 140mm with NPSH of 1.2m and shaft power of 0.92kw. It will be driven by a 4kw air cooled diesel engine.

#### 4.4 Jojo tanks (X4) Including Tank Stands

See Annexure C, Jojo tank stand drawing. One tank stand will carry 2 jojo tanks

#### 4.5 Spring Water Harvesting Facilities

Spring water will be drawn from two sources by means of harvesting facilities. The facilities consist of rock fill and a peforated 600mm Ø drum, 400mm deep covered by a 200mm layer of top soil. 50mm Diameter pipes will collect water from these facilities to the 4 jojo tanks. See Annexure D

**ANNEXURE A:** 

**BILL OF QUANTITIES** 



#### **KZN** Agriculture & Rural Development

uMnyango: weZolimo nokuThuthukiswa KweMiphakathi yaseMakhaya

### ISIFUNDAZWE SAKWAZULU-NATALI

Project Name: VegleLand Garden

Amajuba District: Local

Utrecht

#### **Dragline Irrigation**

SCHEDULE 1 : PRELIMINARY AND GENERAL

ITEM REF.	DESCRIPTION	UNIT	QTY	RATE (R.c)	AMOUNT (R.c)
	GENERAL				
	FIXED CHARGE ITEMS				
	Contractors Establishment	sum			
	Contractors Insurance	sum	1		
	Contractors Health & Safety	sum	1		
	Contractors De-establishment	sum	1		

## SCHEDULE 2 INSTALLATION OF DRAGLINE SYSTEM AND TANK STAND

TEM	DESCRIPTION	UNIT	QTY.	RATE (R.c)	AMOUNT (R.c)
No.					
_	Excavation and backfill	m	720		
	Excavation in all materials for trenches up to 500mm deep (400mm wide)				
_	Excavation in all materials for delicites up to				
	Pipe bedding and blanket fill	m	720		
	Direct from trench excavation				
_	Direct nont bench excavation				
	Finnishing offf excavation surfaces				
	Finnishing offf excavation surfaces including grassing	m	720		
	Finalishing our excavation surrouse meaning grants				
	10 000L Jojo tank				
	10 000L Jojo tank	No	4		
	10 000£ 50 <b>j</b> 0 kain				
	HDPE Pipes and Fittings				
	Pipe sizes				
$\overline{}$	40mm/ Class 6 HDPE (100m)	No	1		
-	50mm/ Class 6 HDPE (100m)	No	7		
-	50mm Compression Coupling	No	7		
-	Rates to also include testing HDPE type IV pressure				
	End Caps				
	Compression end cap 40mm	No	2		
	valves				
	25mm Double purpose air valve	No	5	ļ	
	Ball valve (brass) 50 mm dia	No	2		
	Compression Couplers with steel bands				
	Elbow with steel band		1		
	50mm Ø 60° female elbow	No	2		

# SCHEDULE 2 INSTALLATION OF DRAGLINE SYSTEM AND TANK STAND

TEM No.	DESCRIPTION	UNIT	QTY.	RATE (R.c)	AMOUNT (R.c)
	Reducers				
	50-40mm Ø reducer	No	2		
	Equal tee				
	50mm Ø equal tee with steel bands	No	2		
	Saddles				
_	40 x 1" Saddles	No	6		
	50 x 1" Saddles	No	10		
	Fittings Between Steel Riser Pipes and Sprinklers				
	25mmø, 600mm long riser pipe	No	16		
_	25 x 25 aluminium piplets	No	4		
_	Hydromatic valves	No	4		
_	25mmø 15m long drag line	No	4		
	three legal sprinkler stands (01.2m high)	No	4		
	Nelson R33LP. 4.4mm nozzle Sprinkler 0.97m3/hr discharge at 17.5m pressure, wetted dia 26.8m	No	4		
	R33 assembly adaptor 11344	No	4		
_	20mm Pressure regulating valves	No	4		
	Booster Pump				
_	Etanorm 40-25-160, to deliver 3.88m³/h with a head of 21m and an impeller				
	size of 140mm with NPSH of 1.2m and shaft power of 0.92kw	No	1		
	4kw air cooled diesel engine	No	1		
	Base plate on wheels to mount pump and engine	No	1		
	Coupling set F40 tapper locks and coupling guard m/s painted	Sum	1		
	Electric start c/w battery and cabbles	Sum	1		
_	Isolation Connections	Sum	1	6000	6000
	104101011. 2 500.11		-		
	Tank Stand & Joio Fittings	No	6		
	Ball valve (brass) 50mm dia	No	2		
	Gate valve (brass) 50mm dia	No	300		
	Cement blocks M150	m	30		
	Brickforce	No	48		
	OPC Cement	m <sup>3</sup>	4		
	19mm Stone	m <sup>3</sup>	4		
	Riversand	m <sup>3</sup>	1.0		
	Buildersand	No	2	+	
	6 x 2.5m Ref395 reinforcement mesh	No	2		
	T piece 50mm dia	No	8		
	90° bend 50mm dia	No	4		
	45° bend 50mm dia	No	2		
	100G/ML PVC Cement	140	-		

# SCHEDULE 2 INSTALLATION OF DRAGLINE SYSTEM AND TANK STAND

TEM No.	DESCRIPTION	UNIT	QTY.	RATE (R.c)	AMOUNT (R.c)
	Embankment Protection, Tank Stand				
	Excavation	m <sup>3</sup>	15		
	Cement blocks M150	No	300		
	Buildersand	m <sup>3</sup>	1		
_	OPC Cement	No	48		
	Backfill including compaction in 150mm layers	m <sup>3</sup>	12		
	Spring Water Harvesting				
	Excavation and levelling	m <sup>3</sup>	3		
	Levelling & bed preparation over 1.32m	No	2		
	Fabricating steel drum container to 600mmØ, 0.4m deep. Drum to include closures	No	2		
	Drilling of pores in drums	Sum	1		
	River stone Rock fill	m³	1		
	Geo fabric to rock fill outer faces	m <sup>2</sup>	14		
	Fitting and mounting 50mmø HDPE pipes to drums	Sum	1		
_	Fencing Off Spring Water Harvesting Facilities				
	Erection and securing of a 2.5m x 2.5m area using welded mesh(25mm x 25mm x 1.5mm) including 1 x pedestrian gate	Sum	1		
	Dayworks				
	Hire of wacker	hrs	40		
	Supply & Deliver	Sum	1		
	Intaliation & construction	Sum	1		
	TOTAL SCHEDULE 2 CARRIED FORWARD TO SUMMARY				

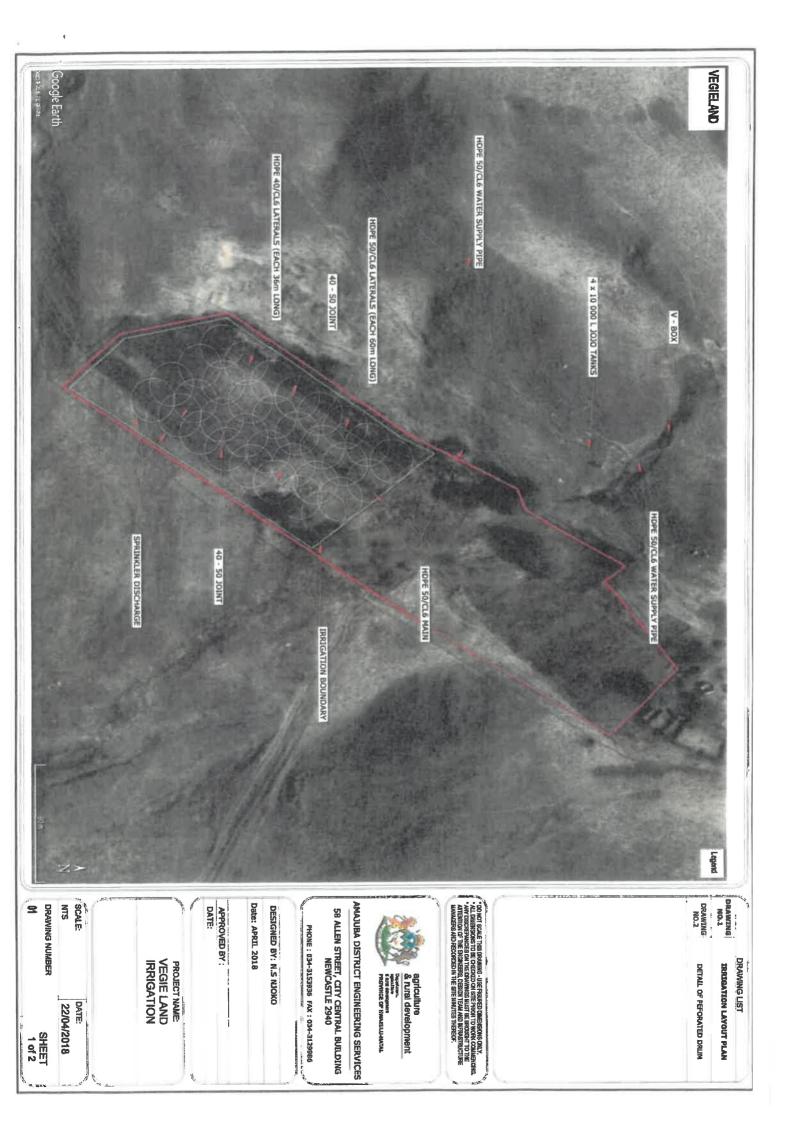
#### SUMMARY

ITEM	DESCRIPTION	AMOUNT
SCHEDULE 1 :	PRELIMINARY AND GENERAL	
SCHEDULE 2 :	INSTALLATION OF DRAGLINE & TANK STAND	
	Sub-Total Sub-Total	
	VAT (15%)	
	TOTAL INCLUDING VAT	

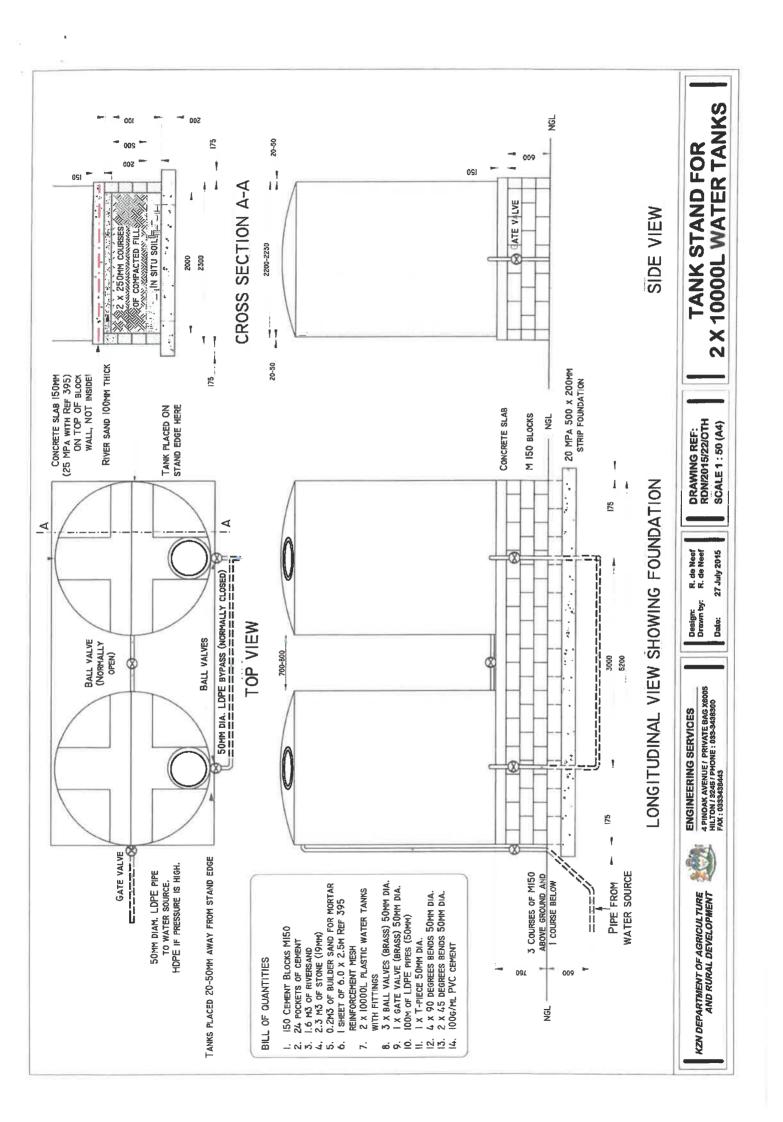
DATE:			

# **ANNEXURE B:**

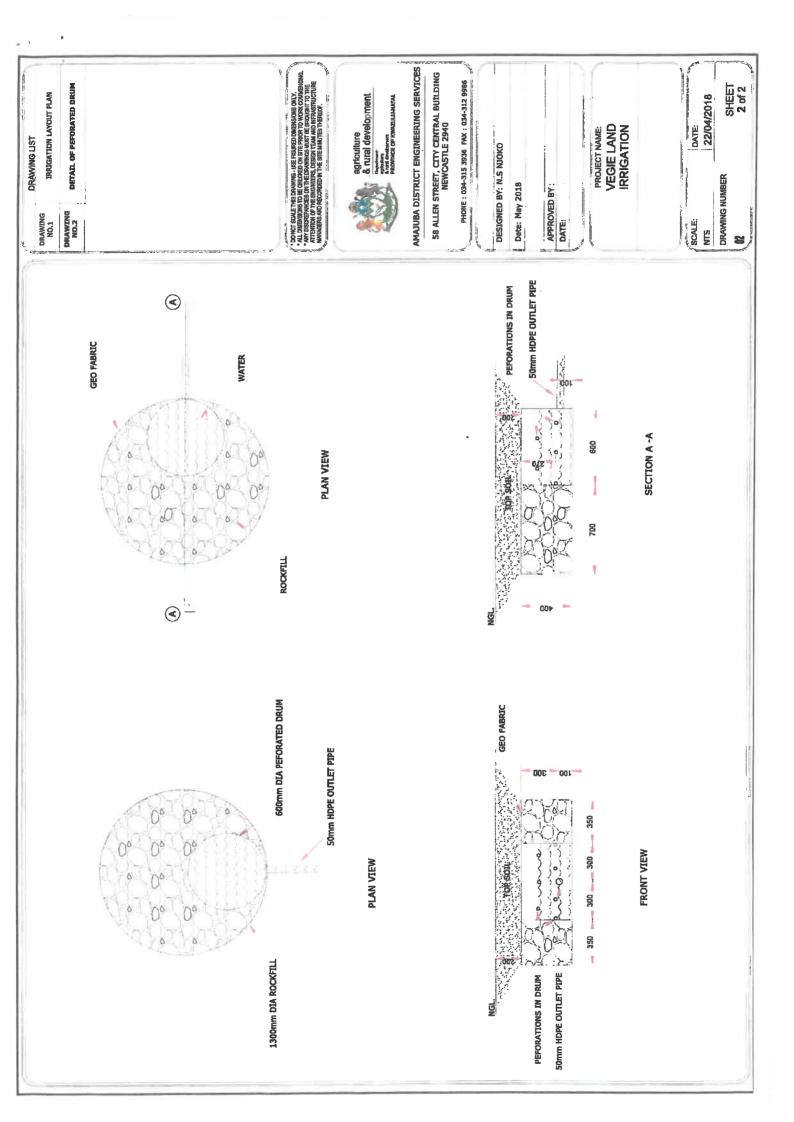
**IRRIGATION LAYOUT** 



# ANNEXURE C: JOJO TANK STANDS (X 2) FOR 4 JOJO TANKS



# ANNEXURE D: SPRING WATER HARVESTING FACILITIES



#### **DECLARATION OF INTEREST**

- Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where
  - the bidder is employed by the state; and/or
  - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

2.	In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
2.1	Full Name of bidder or his or her representative:
2.2	Identity Number :
2.3	Position occupied in the Company (director, trustee, shareholder²):
2.4	Company Registration Number:
2.5	Tax Reference Number:
2.6	VAT Registration Number:
2.6.1	The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

- (a) 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):
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

<sup>1&</sup>quot;State" means -

<sup>2&</sup>quot;Shareholder" means a person who owns shares in the company and is actively involved in the

management of the enterprise or business and exercises control over the enterprise.

2.7	Are you or any person connected with the bidder presently employed by the state?	YES / NO
2.7.1	If so, furnish the following particulars:	
2.7.2	If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector?	YES / NO
2.7.2.1	If yes, did you attached proof of such authority to the bid document?	YES / NO
	(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.	
2.7.2.2	If no, furnish reasons for non-submission of such proof:	
2.8	Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months?	YES / NO
2.8.1	If so, furnish particulars:	
2.9	Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid?	YES / NO
2.9.1	If so, furnish particulars.	
2.10	Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid?	YES/NO

2.10.1		If so, furnish particulars			
2.11		Do you or any o of the company whether or not the	YES/NO		
2.	11.1	If so, furnish par	ticulars		
3		ull details of dire 1 Name	Identity Number	Personal Tax Reference Number	State Employee Number / Persal Number
	4	DECLARATION	IONED (MAME)		
		CERTIFY THAT CORRECT. AC TERMS OF PAR	CEPT THAT THE STAT	URNISHED IN PARAGRA E MAY REJECT THE BID NERAL CONDITIONS OF (	OR ACT AGAINST ME IN
		Signature		_	Date
		Position		-	Name of bidder

#### CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) 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).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
  - a. disregards the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
  - cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- This SBD 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 attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

<sup>&</sup>lt;sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>&</sup>lt;sup>2</sup> 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:				
(Bid Number and Description)				
in response to the invitation for the bid made by:				
(Name of Institution)				
do hereby make the following statements that I certify to be true and complete in every respect:				
I certify, on behalf				
of:that:				

- (Name of Bidder)
- 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:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) 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.
- 7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation)
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a bid;
  - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
  - (f) 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.

Signature	Date
Position	Name of Bidder

#### **SECTION J**

# OFFICIAL BRIEFING SESSION/SITE INSPECTION CERTIFICATE

N. B.: THIS FORM IS ONLY TO BE INCLUDED AND COMPLETED WHEN APPLICABLE TO THE BID.
Site/building/institution involved:
Quotation No:
Service:
********
THIS IS TO CERTIFY THAT (NAME):
ON BEHALF OF:
VISITED AND INSPECTED THE SITE ON(DATE)
AND IS THEREFORE FAMILIAR WITH THE CIRCUMSTANCES AND THE SCOPE OF THE SERVICE TO BE RENDERED.
SIGNATURE OF BIDDER OR AUTHORISED REPRESENTATIVE (PRINT NAME)
DATE:
SIGNATURE OF DEPARTMENTAL REPRESENTATIVE (PRINT NAME)
DEPARTMENTAL STAMP: (OPTIONAL)
DATE: