



Request for Quotations For Works

Paving of various schemes in NamWater BUNW

Procurement Reference No: W/RFQ/NW-010/2027

Name of Bidder		
Contact Person		
E-mail Address		
Postal Address		
Lot 1 Total Amount (Excl. VAT)		
Lot 2 Total Amount (Excl. VAT)		
Contact Phone number	Work:	Mobile:

Documents must be posted/delivered to:

The Quotation/Bid Box

Att: Procurement Management Unit (PMU) (bids@namwater.com.na)

Namibia Water Corporation Ltd.
Private Bag 13389
176 Iscor Street, Aigams Building
Windhoek

Closing Date: Thursday, 23 July 2026 at 11h00
Non-Compulsory pre-Bid meeting: 10 July 2026. Location & Time: Namwater Oshakati office at 10h00,
NO LATE BIDS WILL BE ACCEPTED!

Initial

NOTICE TO BIDDERS

- Please take note of initializing all pages of the standard bidding document and initial all the supporting documents including company profiles, brochures, etc.**
- Take note to sign all relevant pages as stipulated in the bidding standard document.**
- Copies of documents not certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963) will not be accepted.**



Letter of Invitation

Name and Address of Bidder _____

Procurement Reference Number: W/RFQ/NW-010/2026

1 July 2026

Dear Bidders

Request for Quotations for the Paving of various schemes in NamWater BUNW

NamWater invites you to submit your best quote for the items described in detail hereunder.

Any resulting contract shall be subject to the terms and conditions referred to in the document.

Queries, if any, should be addressed to bids@namwater.com.na, Private Bag 13389 Windhoek, Namibia.

Please prepare and submit your quotation in accordance with the instructions given or inform the undersigned if you will not be submitting a quotation.

Yours faithfully,

Procurement Management Unit (PMU)

SECTION I: INSTRUCTIONS TO BIDDERS

1. Rights of Public Entity

NamWater reserves the right:

- (a) to split the contract as per the lowest evaluated cost per lot; and
- (b) to accept or reject any quotation or to cancel the quotation process and reject all quotations at any time prior to contract award.

2. Preparation of Quotations

You are requested to quote for the works mentioned in Section III, by completing, signing and returning:

- (a) the Quotation Letter in Section II with its annex for Bid Securing Declaration, where applicable;
- (b) the Priced Activity Schedule in Section IV;
- (c) the Specifications and Compliance Sheet in Section V; and
- (d) any other attachment as deemed appropriate

You are advised to carefully read the complete Request for Quotations document, including the Special Conditions of Contract in Section VII, before preparing your Quotation. The standard forms in this document may be retyped for completion but the Bidder is responsible for their accurate reproduction.

3. Validity of Quotations

The quotation validity period shall be **90** days from the date of bid submission deadline.

4. Eligibility Criteria

To be eligible to participate in this Quotation exercise, you should:

- (a) Have a certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of a valid company Registration Document;
- (b) Have an original or a certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of a valid Good Standing Tax Certificate, as certified by the Commissioner of Oath;
- (c) Have a valid good Standing Social Security Certificate,
- (d) Have a valid certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998 or a valid certified copy of the original document, as certified by the Commissioner of Oath;
- (e) Submit signed Bid-securing Declaration.
- (f) An undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws,

- Remuneration Order, and Award, where applicable and that it will abide to sub-clause 4.6 of the General conditions of Contract if it is awarded the contract or part thereof; and;
- (g) Submit at least one (1) reference letter for experience in works of an equivalent nature and volume performed in the last 5 years.
 - (h) Submit a Work Delivery Schedule (i.e. time to complete work upon appointment/program of works).
 - (i) Submit a methodology for site management and safety in executing this work, taking cognizance of the heavy equipment and tools to be used.
 - (j) Submit a comprehensive method statement indicating/focusing on the following areas; (Design, Site layout, Integration into the existing scheme, Anticipated water quality expected, Installation methodology & Operational and maintenance methodology).
 - (k) Submit comprehensive CV's of the Key employees (Site Agent, Civil Foreman, Artisan pipe fitting and Safety Officer) allocated to this particular project (Please submit short CV with certified copies of Qualifications (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)).
 - (l) Submit a Technical Data sheet for the type of air valves that the bidder intends to use.
 - (m) Bids from service providers appearing on the ineligibility lists of African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank Group and World Bank Group shall be rejected.

Links for checking the ineligibility lists are available at:

- Republic of Namibia, Procurement Policy Unit
<https://egp2.gov.na/forms/SearchSuspendedBidders.jsf>
- African Development Bank
<https://www.afdb.org/en/projects-operations/debarment-and-sanctions-procedures>
- Asian Development Bank
<http://lnadbg4.adb.org/oga0009p.nsf/sancALLPublic?OpenView&count=999>
- European Bank for Reconstruction and Development
<http://www.ebrd.com/pages/about/integrity/list.shtml>
- Inter-American Development Bank Group
<http://www.iadb.org/en/topics/transparency/integrity-at-the-idb-group/sanctioned-firms-and-individuals,1293.html>
- World Bank Group
<http://www.worldbank.org/en/projects-operations/procurement/debarred-firms>

5. Bid Securing Declaration

Bidders are required to subscribe to a Bid Securing Declaration for this procurement process.

6. Works Completion Period

The completion period for works shall be four **3 months** after acceptance and issue of Purchase Order. Deviation in completion period shall not be accepted/shall be considered if such deviation is reasonable.

7. Sealing and Marking of Quotations

Quotations should be sealed in a single envelope, clearly marked with the Procurement Reference Number, addressed to the Public Entity with the Bidder's name at the back of the envelope.

8. Submission of Quotations

Quotations should be deposited in the Quotation/Bid Box located at Namibia Water Corporation Ltd Head office, Private Bag 13389, 176 Iscor Street, Aigams Building, Windhoek, not later than **Thursday, 23 July 2026 at 11h00. Non-Compulsory pre-Bid meeting: 10 July 2026. Location & Time: Namwater Oshakati office at 10h00.** Quotations by post or hand delivered should reach NamWater, 176 Iscor Street, Aigams Building by the same date and time at latest. Late quotations will be rejected.

Quotations received by e-mail will not be considered.

9. Opening of Quotations

Quotations will be opened internally by NamWater immediately after the closing time referred to in section 8 above. A record of the Quotation Opening stating the name of the bidders, the amount quoted, the presence or absence of a Bid Securing Declaration, will be posted on the website of NamWater and available to any bidder on request within three working days of the Opening.

10. Evaluation of Quotations

NamWater shall have the right to request for clarifications in writing during evaluation. Offers that are substantially responsive shall be compared on the basis of evaluated cost, subject to Margin of Preference where applicable, to determine the lowest evaluated quotation.

10.1. Criteria 1 - Compulsory/Mandatory Documentation

ITEM	REQUIREMENT	CONFORM (YES/NO)
1	Has the bidder submitted a valid certified (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), copy of company Registration Certificate;	
2	Has the bidder submitted a valid original or valid certified copy of an original, (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of good Standing Tax Certificate;	
3	Has the bidder submitted a valid of good Standing Social Security Certificate;	
4	Has the bidder submitted a valid certified copy (certified by a Commissioner of Oath appointed in terms of the Justices of the Peace	

	and Commissioners of Oaths Act.1963 (Act No. 16 of 1963)), of Affirmative Action Compliance Certificate, or proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998;	
5	Has the bidder submitted an undertaking on the part of the Bidder that the salaries and wages payable to its personnel in respect of this proposal are compliant to the relevant laws, where applicable and that it will abide to sub-clause 6.8 of the General conditions of Contract if it is awarded the contract or part thereof.	
6	Has the bidder submitted at least one (1) reference letter for experience in works of an equivalent nature and volume performed in the last 5 years.	
7	Has the bidder submitted a Work Delivery Schedule (i.e. time to complete work upon appointment/program of works).	
8	A comprehensive method statement indicating/focusing on the following areas: <ul style="list-style-type: none"> • Site layout • Quality assurance plan • Installation methodology (Installation of Air, Scour and Isolation manhole appurtenances) • Health and Safety plan • Environmental protection 	
9	Has the bidder submitted comprehensive CV's of the Key employees (Site Agent, Civil Foreman and Occupational Health and Safety Officer) allocated to this particular project (Please submit short CV with CERTIFIED COPIES of the Qualifications. Indicate clearly which personnel will be undertaking the respective roles).	
10	Has the bidder submitted a technical data sheet for the sheeting material they intend to use for water proofing	

Failure to submit all above-mentioned documents and references, the bidder shall be deemed non-compliant, therefore disqualified and excluded from further evaluation and comparison.

10.2. Criteria 2 - Technical Evaluation Criteria

Item	Description of Criteria	Score %
1	Experience in works of an equivalent nature and volume performed in the last five (5) years (attach evidence of reference letter and or completion certificate with contact details and persons to be contacted)	10%
	Five and more reference letters attached	10%
	One to Three reference letters attached	7%
	No reference letters attached	0%
2	Work Delivery Schedule (i.e. time to complete work upon appointment/program of works).	5%
	Detailed work delivery schedule/program	5%

	Generalized work delivery schedule/program		1%
	No work delivery schedule/program		0%
3	Methodology for site safety and environmental protection in executing this work, taking cognizance of the heavy equipment and tools to be used.		10%
	Adequate site safety and environmental protection in place		10%
	Moderate site safety and environmental protection in place		5%
	No site safety and environmental protection in place		0%
4	Qualification for the Site Agent		10%
	National Diploma in civil engineering NQF level 6		10%
	National High certificate in Civil engineering NQF level 4		5%
	Lower than National High Certificate in engineering		0%
5	Qualification for the Civil Foreman		10%
	Level 6 certificate in Bricklaying and Plumbing or higher		10%
	Level 4 certificate in Bricklaying and Plumbing or higher		5%
	Level 3 certificate in Bricklaying and Plumbing or higher		2%
	Level 2 or lower		0%
7	Qualification for the Health and Safety Officer		5%
	Level 3 certificate in Occupational Health and Safety or higher		5%
	Level 2 certificate in Occupational Health and Safety		3%
	Level 1 certificate in Occupational Health and Safety		2%
	Lower than level 1		0%
8	A comprehensive method statement indicating/focusing on the following areas:		30%
	A comprehensive quality assurance plan covering all quality areas for the project	15%	15%
	A moderate quality assurance plan covering some quality areas for the project	10%	
	No quality assurance plan	0%	

	Comprehensive method statement on the paving of the surface with concrete tiles of extended size	15%	15%
	Moderate method statement on the paving of the surface with concrete tiles of extended size	10%	
	Poor method statement on the paving of the surface with concrete tiles of extended size	0	
9	Comprehensive CV's of the Key employees allocated to this particular project (Please submit short CV with Qualifications).		20%
	Site Agent (5 or more years' experience)	5%	5%
	Less than 5 years' experience	0%	
	Site Foreman (5 or more years' experience)	5%	5%
	Less than 5 years' experience	0%	
	Health and Safety Officer (5 or more years' experience)	10%	10%
	Less than 3 years' experience	0%	
	Total		100%

NB: The total evaluation score evaluation is out of 100%. For a bidder to proceed to the next evaluation criteria (**Technical Specifications compliance**), the bidder must score a minimum 70%. Bidders who fail to achieve the required minimum score of **70%** will be deemed as “non-responsive”. Such bidders will be excluded from being considered for further evaluation.

The Contract will be awarded to the lowest substantial responsive bidder

11. Technical Compliance

The Specifications and Compliance Sheet details the minimum specifications of the works to be carried out. The specifications have to be met, but no credit will be given for exceeding the specifications.

12. Prices and Currency of Payment

Prices for the execution of works shall be fixed in Namibian Dollars as quoted.

Quotations shall cover all costs of labour, materials, equipment, overheads, profits and all associated costs for performing the works, and shall include all duties. The whole cost of performing the works shall be included in the items stated, and the cost of any incidental works shall be deemed to be included in the prices quoted.

13. Margin of Preference

13.1. The applicable margins of preference and their application methodology are as follows:

Margins of preference applicable for exclusive preference to local suppliers will be applied as follows

Categories of Bidders	Margin of Preference	Documentary evidence to be submitted	Criteria
Manufacturer	2%	-Certificate of registration from a registering authority -Declaration by the bidder that the manufactured goods meet the local content as determined in Annexure 6 as per the cost structure for Value Added Calculation in Annexure 1, and as certified by an Accountant.	“manufacturer” means a person or a company that is involved in the physical or chemical transformation of materials or components into new products whether or not – (a) the transformation is through work; (i) Performed by a power-driven machine or by hand; or (ii) Done in a home or factory; or (iii) The new products are sold on a wholesale or retail basis.
Micro, Small and Medium Enterprise	1%	-SME registration certificate -Declaration indicating the percentage of Namibian MSME ownership	A bidder who is a MSME, means an enterprise that has a valid micro, small and medium enterprise certificate issued by the Ministry responsible for trade, whose minimum equity is 51 % owned by Namibians.
Women owned Enterprise	1%	-IDs of all shareholders -Founding statement/company registration indicating ownership structure/shareholder certificate -declaration indicating the percentage of Namibian female ownership	A bidder who is a woman or whose minimum equity is 51% owned by Namibian women.
Youth owned enterprise	2%	-IDs of all shareholders -Founding statement/company registration indicating ownership structure/shareholder certificate -Declaration indicating the percentage of Namibian youth ownership	A bidder who is a youth or whose minimum equity is 51% owned by Namibian youths

A bidder that qualifies for margins of preferences on more than one basis, all such preferences must be granted to the bidder but not more than 10%. The bid price will be reduced with the amount determined in accordance with the following formula:

Formula to calculate margins of preference:

$$A = \frac{MP \times BP}{100}$$

in which formula –

- (a) “A” represents the amount to be determined.
- (b) “MP” represents the total percentage of all margins of preferences

granted in respect of the bid; and
(c) "BP" represents the bid price.

13.2. Bidders applying for the Margin of Preference shall submit evidence thereof as required

14. Financial Evaluation

The financial evaluation shall be done as per the NamWater benchmark framework procedures.

Table 6: Financial Evaluation Grid

#	Description
1.	Checking and rectifying of arithmetical errors
2.	Apply Margin of Preference
3.	Bidders' financial offer shall fall within the range of either 10% above or 10% below the average price of the Employers cost estimate.
4.	Procurement contract will be awarded to the lowest substantially responsive and technically compliant Bidder.

15. Award of Contract

The Bidder having submitted the lowest evaluated responsive quotation and qualified to perform the works shall be selected for award of contract. Award of contract shall be by issue of a Purchase Order/Letter of Acceptance in accordance with terms and conditions contained in Section VI: Contract Agreement and General Conditions of Contract.

16. Notification of Award and Debriefing

NamWater shall after award of contract promptly inform all unsuccessful bidders in writing of the name and address of the successful bidder and the contract amount and post a notice of award on its website within 7 days. Furthermore, the Public Entity shall attend to all requests for debriefing made in writing within 7 days of the unsuccessful bidders being informed of the award.

SECTION II: QUOTATION LETTER

(To be completed by Bidders)

*[Complete this form with all the requested details and submit it as the first page of your quotation with the Priced Activity Schedule and documents requested above. A signature and authorisation on this form will confirm that the terms and conditions of the RFQ prevail over any attachments. **If your quotation is not authorised, it will be rejected***

Quotation addressed to:	Namibia Water Corporation Ltd (NamWater)
Procurement Reference Number:	W/RFQ/NW-010/2026
Subject matter of Procurement:	Paving of various schemes in NamWater BUNW

We offer to execute the Works detailed in the Statement of Requirements, in accordance with the terms and conditions stated in your Request for Sealed Quotations referenced above.

We confirm that we are eligible to participate in this Quotation exercise and meet the eligibility criteria specified in Section 1: Instructions to Bidders

We undertake to abide by the Conduct of Bidders and Suppliers as provided under the Public Procurement Act during the procurement process and the execution of any resulting contract.

We have read and understood the content of the Bid Security/Bid Securing Declaration (BSD) attached hereto and subscribe fully to the terms and conditions contained therein. We further understand that this subscription could lead disqualification on the grounds mentioned in the BDS.

The validity period of our Quotation is _____ days *[insert number of days]* from the date of the bid submission deadline.

We confirm that the prices quoted in the Priced Activity Schedule are fixed and firm and will not be subject to revision or variation, if we are awarded the contract **prior to the expiry** date of the quotation validity.

Works will commence within _____ *[insert number]* days from date of issue of Purchase Order/ Letter of Acceptance.

Works will be completed within _____ *[insert number]* days from date of issue of Purchase Order/ Letter of acceptance.

Quotation Authorised by:

Name of Bidder		Company's Address and seal	
Contact Person			
Name of Person Authorising the Quotation:	Position:	Signature:	
Date	Phone No./E-mail		

Appendix to Quotation Letter

BID SECURING DECLARATION
(Section 45 of Act) (Regulation 37(1) (b) and 37(5))

Date: *[Day | month | year]*

Procurement Ref No.:

To:*[insert complete name of Public Entity and address]*.....

I/We* understand that in terms of section 45 of the Act a public entity must include in the bidding document the requirement for a declaration as an alternative form of bid security.

I/We* accept that under section 45 of the Act, I/we* may be suspended or disqualified in the event of

- (a) **a modification or withdrawal of a bid after the deadline for submission of bids during the period of validity;**
- (b) **refusal by a bidder to accept a correction of an error appearing on the face of a bid;**
- (c) **failure to sign a procurement contract in accordance with the terms and conditions set forth in the bidding document, should I/We* be successful bidder; or**
- (d) **failure to provide security for the performance of the procurement contract if required to do so by the bidding document.**

I/We* understand this bid securing declaration ceases to be valid if I am/We are* not the successful Bidder

Signed:
[insert signature of person whose name and capacity are shown]

Capacity of:
[indicate legal capacity of person(s) signing the Bid Securing Declaration]

Name:
[insert complete name of person signing the Bid Securing Declaration]

Duly authorized to sign the bid for and on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____
[insert date of signing]

Corporate Seal (where appropriate)
[Note*: In case of a joint venture, the bid securing declaration must be in the name of all partners to the joint venture that submits the bid.]

**delete if not applicable / appropriate*

Initials.....



Republic Of Namibia

Ministry of Labour, Industrial Relations and Employment Creation

Written undertaking in terms of section 138 of the Labour Act, 2015 and section 50(2) (D) of the Public Procurement Act, 2015

1. EMPLOYERS DETAILS

Company Trade Name:.....

Registration Number :.....

Vat Number:

Industry/Sector:

Place of Business:.....

Physical Address:.....

Tell No.:.....

Fax No.:.....

Email Address:.....

Postal Address:.....

Full name of Owner/Accounting Officer:.....

.....

Email Address:.....

2. PROCUREMENT DETAILS

Procurement Reference No.:

Procurement Description:

.....

.....

Anticipated Contract Duration:

Location where work will be done, good/services will be delivered:

.....

3. UNDERTAKING

I[insert full name], owner/representative

of[insert full name of company]

hereby undertake in writing that my company will at all relevant times comply fully with the relevant provisions of the Labour Act and the Terms and Conditions of Collective Agreements as applicable.

I am fully aware that failure to abide to such shall lead to the action as stipulated in section 138 of the labour Act, 2007, which include but not limited to the cancellation of the contract/licence/grant/permit or concession.

Signature:

Date:

Seal:.....

Please take note:

- 1. *A labour inspector may conduct unannounced inspections to assess the level of compliance*
- 2. *This undertaking must be displayed at the workplace where it will be readily accessible and visible by the employees rendering service(s) in relations to the goods and services being procured under this contract.*

Initials.....

SECTION III: STATEMENT OF REQUIREMENTS

SCOPE OF WORKS, SPECIFICATIONS AND PERFORMANCE REQUIREMENTS

Scope of Works

In case of discrepancy or conflict between the various specifications and drawings, the order of preference shall be as follows:

1. Bid Drawings
2. Particular Specifications
3. The variations and additions to the Standardized Specifications
4. Standardized Specifications

1. General

The general scope of works for the project entails the paving of various NamWater schemes with 0.75mx0.85m concrete tiles that are located at Epalela (Olushandja NamWater scheme). The specific scope of work is as indicated below:

1.1 Transportation of the concrete tiles from Olushandja to the designated location

The contractor shall load, transport and offload the tiles from Epalela at Olushandja NamWater scheme to the designated site.

1.2 Site clearance

The contractor shall clear the site of work, rip of 150mm topsoil and prepare the ground works for earthworks

1.3 Earthworks

The contractor shall wet and compact the bedding and other gravel layers as per the drawing specifications.

1.4 Paving

The contractor shall pave the surface as per the specifications contained in the drawings.

2. Inspections

NamWater will inspect the works during the construction phase several site visits to ascertain the work quality of the works. The onus thus rest with the contractor to ensure that all items purchased and sourced are to specifications. Payment will only be made if all the works are completed and to specifications.

3. Defect notification period and retention.

During the guarantee period, an authorised sales agent capable of replacing the offered items must be located in Namibia, and must be able to replace failed offered items to NamWater Head office within 30 working days of receipt of request for such items. However, 10% retention will be kept, and the defect period is for 6 months

Technical Specifications

SANS1200 has reference as the technical specifications.

PSC	Site clearance
PSD	Earthworks
PSDA	Earthworks (small works)
PSGA	Concrete (small works)
PSL	Pipe laying works
PG	Fencing
PSLB	Bedding pipes
PJ	Cleaning and Finishing

AMENDMENT TO STANDARD SPECIFICATIONS

PSC: SITE CLEARANCE

PSC 3 MATERIALS

PSC 3.1 Disposal of Material

Material obtained from clearing and grubbing shall remain the property of the Client and shall be disposed of in a manner approved by him. Irrespective of any arrangement reached with the Client, the Site shall be left in a condition that meets with the approval of the Project Manager and no material shall be disposed of on the Site.

PSC 5 CONSTRUCTION

PSC 5.1 Areas to be cleared and grubbed

Only the minimum area required shall be cleared and grubbed and the Contractor shall take care not to unnecessarily damage natural vegetation.

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.2 Scheduled Items

PSC 8.2.5 Take Down Existing Fences

Add the following to paragraph 8.2.5

“The rate will also cover the cost of reinstating the fence to its original condition to the satisfaction of the Project Manager including the cost of any material so required.”

EARTHWORKS

PSD 3 MATERIALS

PSD 3.1.2 Classes of Excavation

Only "soft" and "hard" excavation shall be applicable to this Contract. All material that does not classify as "soft excavation" in terms of clause 3.1.2 (a) shall be classified as "hard excavation". "It is estimated that approximately 60% of the excavations will be hard excavation"

PSD 5 CONSTRUCTION

PSDB 5.1 PRECAUTIONS

PSDB 5.1.1.2 Safeguarding of Excavations

The Contractor shall be responsible for safeguarding all open excavations and shall indemnify the Project Manager and the Client against any loss or damage suffered by any persons resulting from the presence of any open excavations.

PSD 5.2 METHODS AND PROCEDURES

PSD 5.2.2 Excavation

PSD 5.2.2.1 Excavation for General Earthworks and for Structures

The Contractor shall acquaint himself at bid stage of the geological conditions on Site and shall allow for this in his rates.

(Clause 5.2.2.1 c)

The Contractor shall excavate to the net outline of the structure plus an allowance for workspace. Vertical concrete walls shall not be cast against excavated surfaces unless as so specified on drawings.

(Clause 5.2.2.1 e)

Should, after excavation to the foundation levels shown on the drawings, the founding materials prove to be unsuitable, the Project Manager will instruct the contractor to excavate to some greater depth. The excess excavation shall be backfilled with cement stabilized sand comprising of 6% by mass of cement compacted to 100% MOD AASHTO or with mass concrete specified by the Project Manager.

Should the Contractor excavate to dimensions in excess of those stipulated or permitted, he shall fill in the excess with material specified or approved by the Project Manager at his own expense.

PSD 5.2.2.3 Disposal

All excess material not designated for re-use shall be disposed of at approved spoil sites.

PSD 6 TOLERANCES

PSD 6.1 Position, Dimensions, Levels, etc.

Degree of Accuracy II shall apply for all earthworks.

PSD 6.2 Moisture Content and Density

Degree of Accuracy II shall apply.

PSDA EARTHWORKS (small works)

PSDA 3 MATERIALS

PSDA 3.1 Classification for excavation purposes

Omit paragraph 3.1.2(a) - (e) and replace with the following:

"Notwithstanding the provision of sub-clause 3.1 the materials excavated will only be classified as soft excavation and hard rock excavation. Material classified as intermediate excavation shall be deemed to be soft excavation for the purpose of this contract".

PSGA **CONCRETE (Small works)**

PSGA 3 **MATERIAL**

PSGA 3.2 Cement

Only mixtures of Ordinary Portland Cement (OPC) compliant with the requirements of SANS 471 and Pulverised Fly Ash (PFA) shall be used for concrete in this Contract. The fly-ash cement thus obtained by blending of the OPC and Pulverised Fly Ash (PFA) shall comply with the requirements of SANS 1491 Part II of 1989. No other types of cement (e.g. Rapid Hardening Cement, Portland Blastfurnace Cement or Slagment) may be used without the prior approval by the Project Manager

The Concrete mix must be determined by means of a proper mix design by an accredited laboratory and must be approved by the Project Manager.

PSGA 3.2.1 Applicable Specifications

The SANS approved the European Pre-standard (ENV) specification for Common and Masonry cements and issued these standards as SANS ENV 197-1 and SANS ENV 413-1 respectively for general use. These standard specifications (and specifications directly related thereto) will be applicable to this contract and reference to the various cements to be used will be based on the descriptions, notations and types as specified therein.

SANS 471, SANS 626 and SANS 831 have however not been withdraw and are still applicable. SANS ENV 197-1, SANS ENV 197-2, SANS 413-1 and SANS ENV 413-2 shall therefore be deemed to be included wherever reference is made to SANS standard specifications in the contract document and drawings. In case of conflict, SANS ENV 197-1 and SANS ENV 413-1 will govern.

PSGA 3.2.2 Storage of Cement

Cement shall be used in the order in which it was received.

Unless approved by the Project Manager, cement kept in storage for longer than 8 weeks shall not be used in the works.

Any cement that contains lumps that cannot easily be crumbled to powder between the fingers, may not be used.

It is of prime importance that OPC to be used in concrete structures shall always be stored in a cool environment, and it is strongly advised that OPC silos be painted white to reduce any temperature rise in the stored cementitious material.

PSGA 3.3 Water

To limit heat gain in concrete for water retaining structures, the temperature of the mixing water must preferably be below 20 °C when added to the concrete mix.

PSGA 3.4 Aggregates

PSGA 3.4.1 Applicable Specifications

The maximum size of well graded aggregate shall be 19 mm for the concrete used in all other structures.

The maximum water absorption of the coarse aggregate shall not exceed 1% and the flakiness index shall not exceed 25%.

Aggregate to be used in this contract shall be tested in accordance with subsection C-15 of SANS 1245 of 1994 to determine whether they are potentially alkali-aggregate reactive. If they are alkali-aggregate reactive they shall either be replaced with aggregates that are not alkali-aggregate reactive or the requirements of PSGA 3.2 in the respect of alkali-aggregate reactivity shall apply.

The content of chloride ion in the aggregates shall be determined and shall be within the limits specified in SANS 1083. Test results of this regard shall be submitted to the Project Manager.

At bid stage the Contractor shall assure himself by means of tests and test mixes by an accredited laboratory that the fine and coarse aggregates that he intends to use comply with the specification. The bid rates shall therefore be deemed to allow for the importation of aggregates that do comply with the specification.

The Contractor shall be responsible for locating the sources of all aggregate. It shall be the contractor's responsibility to ascertain the sufficiency of the supplies and their conformity to the requirements of the respective specifications. The Contractor shall not be entitled to claim for additional costs arising from the rejection of concrete aggregates, which do not meet the requirements of the specifications.

PSGA 4 PLANT

PSGA 4.4 Formwork

PSGA 4.4.1 Design

All internal and exposed external angles in concrete shall have 25 mm x 25 mm fillets and chamfers respectively unless otherwise specified or ordered.

PSGA 4.5 Cube Mould (New Clause)

At least 2 (two) 150 mm cube moulds and a temperature controlled water-bath for curing the concrete cubes shall be available on Site at all times.

PSGA 5 CONSTRUCTION

PSGA 5.1 Reinforcement

PSGA 5.1.2 Fixing

The Contractor shall give the Project Manager at least 24 hours' notice, in which time the Project Manager shall have time to inspect the fixed reinforcement if needed, of his intention to close up the shuttering around the reinforcement.

PSGA 5.1.3 Cover

The cover of all concrete on the Works shall be a minimum of 30 mm unless specified otherwise.

PSGA 5.2 Formwork

PSGA 5.2.3 Removal of Formwork

PSGA 5.2.3.1 Add the following to sub clause 5.2.3.1

Formwork for PFA concrete shall remain in place after placing of the concrete as indicated in Table 1 for Portland Blast furnace cement.

PSGA 5.4 Concrete

PSGA 5.4.1 Quality

PSGA 5.4.1.3 Workability

The workability range for all PFA concrete (slump) shall be between 50 and 75 mm.

PSGA 5.4.1.5 Strength Concrete

All concrete shall be Class 30 MPa / 19 mm.

The maximum allowable standard deviation (S.D) shall be 4.5 MPa.

PSGA 5.4.1.7 Chloride content (New clause)

Efflorescence will not be acceptable on any exposed concrete surface.

PSGA 5.4.1.8 Durability (New clause)

The maximum ratio of water to cementitious material shall be 0.45 with a minimum of 420 kg/m³ cement content for all concrete works on this project.

PSGA 5.4.2 Batching

Batching of strength concrete shall be by mass.

PSGA 5.4.3 Mixing

PSGA 5.4.3(g) Ready-mixed concrete (New clause)

The use of ready-mixed concrete for this Contract will only be permitted if adequate proof of quality control for the specific design mix can be provided to the Project Manager.

PSGA 5.4.5.5 Casting of concrete in excavation (New clause)

Structural concrete shall not be cast directly against the side of any excavation without the use of formwork unless prior approval has been obtained in writing from the Project Manager.

PSGA 5.4.7 Curing and Protection

Replace paragraphs (a) to (c) by the following:

Curing shall be as specified below, unless otherwise approved by the Project Manager, for:

- (a) Surfaces shall be protected with approved plastic sheets that comply with the requirements as specified below immediately after the prescribed surface finishing has been completed. When the concrete has gained sufficient strength to prevent damage to the surface thereof, the plastic sheets shall be removed on a regular basis to allow the application of more water to the concrete to ensure that it is kept moist continuously. Plastic sheets shall be reinstalled after each wetting of the concrete. The curing period shall be at least 10 days.

The sheeting shall be firmly held in place at its edges by means that do not damage the fresh concrete.

(b) Notwithstanding the preceding specifications, the Contractor shall also ensure that the concrete shall not be exposed to thermal shocks during the first 28 days after casting and he shall take the necessary, additional precautions to shield the concrete with plastic sheets or hessian during extreme warm, cold or windy weather. Hessian shall be wetted should the conditions necessitate this. Curing methods shall be such that saturation and subsequent damage to soil foundations is prevented. The Contractor shall make allowance in his rates for the above mentioned curing methods.

c) **Curing compound**

The use of membrane curing compounds will be allowed on vertical faces or steeply inclined faces (i.e. steeper than 45 to the horizontal) of cast-in-situ members of the structures subject to the Contractor producing sufficient, satisfactory cube crushing strength test results where the crushing strength of cubes which have been cured with the proposed curing membrane and left exposed to the elements are compared with those of an equal number of water cured cubes. The crushing strength of cubes cured with the proposed curing membrane shall be at least 85% of the crushing strength of the water cured cubes.

Before any membrane curing compound is used, each batch shall be tested on a trial surface to ensure that it forms a satisfactory membrane and any compound which is unsatisfactory, in the opinion of the Project Manager, shall be rejected. Curing membranes will be disallowed if discoloration of the concrete takes place. Surfaces where curing membranes are used shall be treated in such a manner that the final concrete texture and colour blends in with the rest of the concrete work. Furthermore, the Project Manager shall, at his discretion require the Contractor immediately to adopt an effective alternative means of curing any area of the structure to which a membrane has been applied, which in the opinion of the Project Manager is unsatisfactory. The curing compound used shall be to the approval of the Project Manager. Wax based curing compounds will not be permitted.

The curing compound shall be applied immediately as formwork is progressively stripped. It shall preferably be applied by spraying and the rate of application shall be strictly in accordance with the manufacturer's recommendations. A method of monitoring the area to which curing compound has been applied and the application rate shall be as approved by the Project Manager's Representative and rigidly applied by the Contractor.

PSGA 5.4.8 **Concrete Surfaces**

PSGA 5.5.8.2 **Add the following to sub clause 5.5.8.2:**

(1) **Wood-floated Finish**

When a wood-floated finish is specified, the surface shall first be treated as specified in sub clause 5.5.8.1, and after the concrete has hardened sufficiently, it shall be floated to a uniform surface free from trowel marks.

The levelled surface shall be wood floated either by hand or by machine only, to remove trowel marks.

PSGA 5.4.10 Defects

5.4.10.1 Add the following to sub clause 5.5.10.1:

All defects to the concrete shall be attended to, in full, as soon as possible after the formwork is removed. Further concreting of the element concerned may be prohibited by the Project Manager until he is satisfied that this remedial work has been satisfactorily attended to.

5.4.10.2 Add the following sub clause 5.4.10.2:

The method of repair of defects in the concrete shall be by approved epoxy primer, epoxy and filler applied strictly according to the manufacturer's specification or such other methods acceptable to the Project Manager. Cementitious mortar may not be used for such remedial works. All repair materials shall be of an equivalent thermal and structural elasticity to concrete.

PSGA 5.4.11 Adverse Weather Conditions (New clause)

The temperature of the concrete when deposited shall not be allowed to exceed 25°C.

PSGA 5.4.13 Records (New clause)

Add the following sub clauses:

- (d) The quality, proportions, water content and test results of each cast.

The records shall be kept up to date, be readily available for inspection and shall be submitted as soon as possible.

PSGA 6 TOLERANCES

PSGA 6.4 General

In general, Degree of Accuracy II shall apply except that abrupt changes in a continuous surface shall not be more than 3 mm.

PSGA 7 TESTS

PSGA 7.1.2. Frequency of Sampling

PSGA 7.1.2.3 Omit sub clause 7.1.2.3 and replace with the following:

The structural concrete shall be designed to meet its specified strength at 28 days after casting. A set of 6 cubes shall be taken from each simultaneous casting of concrete and from at least every 50 m³ of placed concrete, of which 3 are to be tested at 7 days and 3 at 28 days. Thus if the contractor cast concrete on more than

one structure in a day, a set of 6 cubes shall be taken from the concrete of each structure.

PSGA 7.2 Testing

PSGA 7.2.1 General

Add the following:

The Contractor shall allow for all the costs for testing in his rates.

PSGA 8 MEASUREMENT AND PAYMENT

PSGA 8.1 Measurement and Rates

PSGA 8.1.1 Formwork

No separate payment will be made for chamfers and fillets 25 mm or less in size.

PSGA 8.1.2.1 Reinforcement

The rate shall cover the cost of supply, cutting, bending, placing in position, and fixing of the reinforcing and supporting steel scheduled, and the provision of all spacer devices and binding wire, as well as the cost of tests in terms of SANS 920. The rate for welded mesh shall cover the supply, cutting and placing of mesh, as well as the cost of all waste due to laps.

PSGA 8.1.4 Concrete Complete with Formwork

In addition to the items specified under Sub clause 8.1.4, the rates for concrete complete with formwork shall cover the costs of:

- (i) the preparation of design mixes by an approved laboratory,
- (ii) Using one of the curing methods specified in PSGA 5.4.7,

PG FENCING

PG 1 SCOPE

PG 1.1 This specification covers the supply of material and erection of security fencing stock-proof fencing or jackal proof fencing and gates at the location and in accordance with the dimensions shown on the drawings or as directed by the Project Manager.

PG 2 INTERPRETATIONS

PG 2.1 SUPPORTING SPECIFICATIONS

Where this specification is required for a project the following specifications shall, inter alia, form part of the contract document:-

- (a) Project Specification;
- (b) SANS 1200 A or SANS 1200 AA, as applicable;
- (c) SANS 1200 C;
- (d) SANS 1200 D or SANS 1200 DA, as applicable;
- (e) SANS 1200 G or SANS 1200 GA. as applicable.

PG 2.2 APPLICATION

Interpretations of and Variations to this specification are set out in Portion 2 of the Project Specification which precedes this specification in the contract document.

PG 2.3 DEFINITIONS

For the purpose of this specification the definitions and abbreviations given in the applicable specifications listed in 2.1(b), (c), (d) and (e) shall apply.

PG 3 MATERIALS

PG 3.1 APPLICABLE STANDARDS

PG 3.1.1 Metal Posts

All metal posts, straining posts, standards and stays shall be standard iron or steel sections to the size, shape, dimensions, weights and spacing as shown on the Drawings or as directed by the Project Manager and shall conform to the requirements of CKS 82. Galvanized steel shall be used when shown on the drawings.

All metal gate posts, straining posts, standards, stays and gates shall be suitably drilled in accordance with specified requirements and painted with two coats of anti-corrosive paint applied over a suitable primer.

PG 3.1.2 Wooden Poles and Droppers

Wooden poles and droppers for use in the construction of either stock proof or jackal proof fencing shall comply with the requirements of SANS 457.

PG 3.1.3 Wire

- PG 3.1.3.1 Plain Wire shall be galvanized soft wire of a minimum thickness of No. 8 (eight) gauge.
- PG 3.1.3.2 High Strain Wire shall be galvanized high strain steel shire of a minimum thickness of No 12 (twelve) by No. 14 (fourteen) gauge oval wire and shall conform to SANS 675.
- PG 3.1.3.3 Barbed fencing wire shall consist of standard Iscor two-strand twisted No. 12¹/₂ (twelve and one-half) gauge galvanized steel wire spaced at 150 nun intervals in accordance with SANS 675.
- PG 3.1.3.4 Binding wire shall consist of No. 14 (fourteen) gauge soft galvanized wire.
- PG 3.1.3.4 Diamond Mesh shall consist of soft galvanized wire with mesh size and gauge as detailed on the drawings and shall conform to the requirements of SANS 1373: Chain Link Wire Fencing.

PG 3.1.4 Gates

Gates for the use in stock proof or jackal proof fences shall conform to the requirements of CKS 146.

PG 3.1.5 Security Fences

In general the construction of security fences consisting of diamond mesh and barbed wires shall conform to the requirements of CKS 451.

PG 3.2 UNACCEPTABLE MATERIAL

PG 3.2.1 General

All material not conforming to the specified requirements shall be removed from site and shall be replaced by the Contractor at his own cost.

PG 4 PLANT

4.1 GENERAL

Not applicable.

PG 5 CONSTRUCTION

PG 5.1 GENERAL

Security fencing shall be of metal posts standard sections and droppers throughout with wire mesh and barbed wire as shown on the Drawings. Gates shall be of the size and materials as shown on the drawings and shall be covered with wire mesh and barbed wire overhangs as for the fence.

Stock proof and jackal proof fences shall be of either metal posts, stays standards and droppers or wooden poles and droppers as detailed on the drawings or as specified in the project specifications.

PG 5.2 CLEARING

The fence line shall be sufficiently cleared over a width of not less than 600 mm on each side of the centre line of the fence and surface irregularities shall be graded so that the fence will conform to the general contour of the ground. Clearing shall include the removal of all trees, shrubs, stumps, rocks and other obstructions which will interfere with proper construction of the fence. Stumps within the cleared space shall be grubbed or excavated. All excavations shall be backfilled to ground level.

PG 5.3 INSTALLING POSTS AND STANDARDS

PG 5.3.1 General

PG 5.3.1.1 All posts and standards shall be firmly planted into the natural ground, be it soil, gravel or rock, to such depths and at such spacing as shown on drawings. Straining posts shall be erected at all ends and corners or beds in the line and at all junctions, with other fences. Straining posts shall be spaced, in the case of security fences, at not more than 60 metres centres and in the case of stock proof or jackal proof fences not more than 300 metre centres.

Standards shall be spaced at not more than the spacing shown in the drawings or as directed by the Project Manager.

PG 5.3.1.2 All posts, stays and standards shall be set in dug holes. Holes shall be dug to full specified depth, even in rock where blasting may prove necessary to obtain required depth. All metal posts and stays shall be set in concrete bases, to the dimensions shown on the drawings. Excavation for concrete bases shall be accurate and the entire excavation shall be filled with concrete, unless otherwise permitted by the Project Manager. All holes for metal posts and stays shall be concreted up to 70 mm above ground level.

PG 5.3.1.3 Corner, gate and straining posts shall be properly strutted and stayed, as shown on the drawings, or as directed by the Project Manager. In the case of metal posts, the stays shall be bolted to posts.

PG 5.3.1.4 After posts and standards have been firmly set in accordance with the foregoing requirements, the fence wire shall be attached thereto at the standard spacing shown on the drawings, or as directed by the Project Manager.

PG 5.4 ATTACHING WIRE

PG 5.4.1 The wire shall be carefully stretched and hung without sag and with true alignment, care being exercised not to stretch the wire so tightly that it will break or that an end, corner, straining or gate post be pulled up. All fencing wire shall be securely fastened in correct position to each standard with No. 14 gauge soft galvanized binding wire. In the case of iron standards, the binding wire for each horizontal fence wire shall pass through a hole in the standard to prevent slipping of the fence wire in a vertical direction.

PG 5.4.2 The stretched fencing wire strands shall be secured to each post and standard to prevent slipping out of line or becoming loose. At end, corner, straining and gate posts the fencing wire shall be securely wrapped and anchored twice around the posts from inside and secured against slipping by tying the ends with snug tight twists, provided however, that on spans of less than 30 metres between posts only one end need be wrapped and tied in this manner. Spaces in fence wire will not be permitted.

PG 5.5 ATTACHING WIRE MESH

PG 5.5.1 Wire netting shall be securely fixed to the fence so that the netted height above the ground shall not be less than that shown on the drawings or directed by the Project Manager.

PG 5.5.2 In the case of security fences vermin shall be prevented from creeping under the fence by embedding the bottom 100 mm of mesh in a continuous concrete strip footing to the dimensions shown on the drawings.

In the case of jackal proof fences the mesh shall generally be buried in the ground to a depth of 150 mm or in sandy formations to 450 mm. Alternatively the mesh shall be folded back and retained by stone packing with stones of at least 2.5 Kg mass or buried 300 mm deep at a skew angle.

PG 5.6 INSTALLING GATES

Gates shall be installed in the positions shown on the drawings or indicated by the Project Manager. The gates shall be hung on gate fittings in accordance with the requirements shown on the drawing. Gates shall be so erected as to swing in a horizontal plane at right-angles to the gate posts, clear of the ground in all positions. All gates shall be provided with locking devices as detailed on the drawings.

PG 5.7 PAINTING

Where shown on the drawings or when directed by the Project Manager the security fencing or any other fencing shall be coated with at least two coats of bituminous aluminum paint of approved manufacture or as shown on the drawings. Painting shall be done with brushes and shall cover all surfaces thoroughly. Each coat of paint shall be not less than 75 micron dry film thickness. No painting of any part of the fence shall be done until the whole fence including all posts, standards, droppers and wires have been thoroughly cleaned of all greases, dirt, rust and mill scale.

PG 6 TOLERANCES

Not applicable.

PG 7 TESTING

Not applicable.

PG 8 MEASUREMENT AND PAYMENT

PG 8.1 MEASUREMENT AND RATES

PG 8.1.1 General

All items covered by this specification, and as detailed hereunder and in the Schedule of Quantities shall be measured as specified hereunder and payment shall be made in accordance with the bid price per unit of the particular item which shall include for procuring, preparation, manufacturing, storage, transporting, erection, painting, finishing as well as for all plant, equipment, labour, materials, temporary structures, supervision, profit and indirect costs required to carry out the work as specified and approved by the Project Manager.

PG 8.1.2 Fencing

Fencing shall be measured by the length erected and completed in accordance with the specifications and as detailed on the drawings or as directed by the Project Manager and shall include for all excavations and concreting.

PG 8.1.3 Gates

Gates shall be measured by the number of a particular size installed in accordance with the specifications and as detailed on the drawings or as directed by the Project Manager and shall include for locking mechanisms, slam blocks and drop bolts as detailed.

PE STANDARD SPECIFICATION FOR THE SUPPLY OF VALVES, WATERMETERS AND OTHER PIPELINE ACCESSORIES FOR CIVIL WORKS

PE 1 SCOPE

This specification covers the design, manufacture and supply of isolating valves, non-return valves, air valves, float valves, stopcocks, bib taps, water meters, flexible couplings and pressure gauges.

This specification is a supplement to the relevant SABS specifications and will in no way relieve the Supplier or Contractor of the requirements of the relevant SABS specifications.

Where this specification is required for a project the following specifications, including this one, shall inter-alia, form part of the contract document.

- a) Project Specifications
- b) SABS 1200 L

PE 2 GENERAL REQUIREMENTS

PE 2.1 Design Pressure

Each valve, water meter and coupling shall have a working pressure as stated on the drawings and in the Bid document.

PE 2.2 Flanges

Flanges shall be drilled off-centre to suit mating flanges drilled to SABS 1123

PE 2.3 Bolts, Nuts, Washers and Gaskets

PE 2.3.1 If specified, flanged valves or any other item shall be supplied complete with bolts, nuts, washers and graphite gaskets for jointing up to adjacent fittings

PE 2.3.2 All bolts, nuts and washers to be hot dip galvanized to SABS 763

PE 2.3.3 All bolts and nuts shall be ISO metric with hexagon heads to SABS 135

PE 2.3.4 Bolts shall be of sufficient length for at least two screw threads to protrude outside nuts when assemblies are fully tightened.

PE 2.3.5 One washer will be supplied per stud/nut or bolt/nut combination

PE 2.4 Painting of Valves and other Accessories

Valve bodies from ferrous metals and the jointing faces thereof shall be given a protective coating of suitable paint.

PE 2.5 Spares
Spares shall be easily procurable

PE 6 BALL VALVES

PE 6.1 Medium duty

PE 6.1.1 Valves shall be of the full flow in-line ball valve type, ITAP or equivalent

PE 6.1.2 The valve bed shall be nylon-lined

PE 6.2 Heavy duty

PE 6.2.1 Valves shall be of the full flow in-line ball valve type, Glen or equivalent

PE 6.2.2 360 ° rotation of the handles shall be possible

PE 6.2.3 The valve bed shall be rubber-lined

PE 6.2.4 The handle shall be manufactured from mild steel

PE 7.1.4 Unless otherwise specified, valves shall be fitted with gearboxes and hand wheels

PE 8 NON-RETURN VALVES

PE 8.1 Valves shall be of the resilient seated wafer type, and shall comply with SABS 1551

PE 8.2 Valves shall have a spring-loaded single or double disc

PE 8.3 The disk shall be manufactured from bronze or stainless steel

PE 8.4 Valves shall have a soft seat for the disc

PE 9 AIR VALVES

PE 9.1 A-type

PE 9.1.1 25 mm NB to 50 mm NB

Valves shall be of the double action type, have a full stainless-steel body, easily dismantled for maintenance (VENT-O-MAT series RBX)

PE 9.1.2 80 mm NB and Larger

Valves shall be of the double action type, have a full stainless-steel body, easily dismantled for maintenance (VENT-O-MAT series RBX)

PE 9.2 B-type

Valves shall be of the double action type, have a plastic UV resistant body, easily dismantled for maintenance (DOWSON & DOBSON or)

PE 15 MALLEABLE CAST IRON FITTINGS

Malleable cast iron fittings shall conform to SABS 1190

PE 16 PRESSURE GAUGES AND GAUGE COCKS

PE 16.1 Pressure gauges shall be of the bourbon tube design

PE 16.2 Gauges shall be glycerin-filled

PE 16.3 Gauges shall be accurate to 5 %

PE 16.4 The size of the face shall be 100 mm

PE 16.5 The size of the connection shall be 10 mm BSP

PE 16.6 Gauges shall be calibrated in meters water head

PE 16.7 If specified, gauges shall be supplied with marking pointers

PE 16.8 Gauge cocks shall be of the three-way type allowing venting to atmosphere

PE 17 REQUIREMENTS TO BE SPECIFIED

In addition to the nominal bore, working pressure and flange table, the following requirements are to be specified on the drawings or in the Bid document:

PE 17.1 General Requirements

Whether nuts, bolts, washers and gaskets, etc. are to be supplied (applicable to supply-and-delivery Bids only)

PE 17.2 Valves

- a) Flanged, spigotted, socketted or wafter type
- b) With or without gearbox and with or without hand wheel or cap top

PE 17.3 Float Valves

Low-or high-pressure rating

PE 17.4 Water Meters

If nominal bore larger than 40 mm: multi-jet fan wheel or full flow type

PE 17.5 Pressure Gauges

- a) Range of gauge
- b) Whether marking pointers are required

PE 18 MEASUREMENT AND PAYMENT

- PE 18.1 All items shall be measured as set out in Clause 8 of SABS 1200L.
- PE 18.2 The unit of measurement shall be as specified in the Schedule of Quantities and shall be the number of items supplied and installed, inclusive all nuts, bolts, washers, rubbers and gaskets needed. In manufacture, supply and deliver Contracts it will be measured by the number items supplied at point of delivery.
- PE 18.3 The Bidding rate shall include for the fabrication, testing, lining and coating, protection, transport to site, off-loading storing and installation, where applicable, all in accordance with the relevant clauses of the specifications.
- PE 18.4 All items manufactured, tested, lined and coated, in accordance with the specifications and transported and delivered to Site, stored and accepted and installed where applicable on Site, will be measured for payment purposes under this section and shall include for supplementary protection material required.
- PE 18.5 Payment will be made in accordance with the Bid price per unit of the particular item.

PH DENSO TAPE' WRAPPING

PH 1 SCOPE

This specification covers the protection of buried steel pipes, specials and couplings by means of petrolatum impregnated tape, Denso, Petro Tape, or equivalent.

PH 2 GENERAL REQUIREMENTS

The corrosion protection system shall be based on a specially formulated cold-applied high temperature petrolatum tape for corrosion protection of steelwork and pipelines.

PH 3 PROTECTION OF STEEL PIPES AND SPECIALS

Wire brush all pipe surfaces to remove loosely adhering corrosion product and other dirt. Prime bare metal surfaces with Denso Primer, leaving a thin film. Wind Denso Tape circumferentially around the pipe, taking care to exclude air pockets. For pipes in excess of 80 NB, maintain 25 mm overlaps. Wind PVC outer wrap circumferentially over the Denso Tape, staggered with the overlaps of the Denso Tape. Secure the PVC outer wrap at the ends of the rolls by one complete turn of self-adhesive tape.

PH 4 PROTECTION OF COUPLINGS

Remove all sand and dirt from the pipe barrel and coupling. Apply Denso Priming Solution liberally to bolt heads and nuts and a thin film on all other bare metal surfaces. Apply Denso Mastic to cover bolt heads and nuts on outside of flanges, and between flanges, to give 13 mm cover on sleeve. Mould up to but not over bolts. Apply Denso Tape circumferentially over the mastic, taking care to exclude air pockets. Do not stretch the tape. One complete turn of tape is required, making an 80 mm overlap at the ends. Smooth the Denso tape over the mastic, pressing out any air pockets. Apply Lay flat sheeting circumferentially over the whole joint. Use two complete turns of sheeting and secure the ends onto the pipe barrel by means of self-adhesive PVC tape.

PJ CLEANING AND FINISHING

PJ 1 SCOPE

PJ 1.1 This Section covers the final finishing and cleaning up of the Works and Site, and the disposal of excess material at places approved by the Project Manager. Final finishing and cleaning will be done strictly according to the specifications stipulated in the EMP

This Section does not cover the disposal of unsuitable excavated material, the finishing of quarries or borrow pits, the finishing of any backfill, the cleaning and finishing of concrete and other finishes described elsewhere in the specification or for which separate payment clauses exist.

PJ 2 INTERPRETATIONS

Not applicable to this specification

PJ 3 MATERIALS

Not applicable to this specification.

PJ 4 PLANT

Not applicable to this specification.

PJ 5 CONSTRUCTION

PJ 5.1 Precautions

PJ 5.1.1 Safety

The requirements of Sub clause 5.1.1 of SABS 1200 D or SABS 1200 DA (as applicable) shall apply.

PJ 5.2 Methods and Procedures

PJ 5.2.1 General

After completion of the work which is to be executed under this Contract, the Works and the Site shall be finally and neatly cleaned and finished off by means of suitable machines and equipment and hand labour where required until a neat and clean appearance is obtained. The Contractor shall ensure that completed and approved work is not damaged during the cleaning up operations. If any part is damaged it shall immediately be rectified to comply with the required specification for the particular part of the Works. Camping Sites shall be neatly cleaned and all rubbish shall be disposed at places approved by the Project Manager.

PJ 5.2.2 Cleaning

Loose stones, felled trees, roots and all other rubbish on fill or on the sides of streams shall be removed to give the site a neat appearance. Storm water drains shall be cleaned of debris, soil, silt and other material.

Concrete floor panels from temporary buildings and any excess concrete dumped on the site shall be broken up and disposed of in areas approved by the Project Manager and covered over to the satisfaction of the Project Manager.

PJ 5.2.3 Finishing

Permanent access roads required for future use by the Employer and other permanent roads in the general works area shall be graded so as to remove all corrugations and all imperfections made good in such a way that the specified shape is maintained and the surface is not loosened. Dragging, pushing or scraping waste material along across these roads will not be permitted.

Care shall be taken not to damage culvert headwalls and drains when doing this work. All cutting, fills and drains shall be trimmed and finished to the original lines and grades or as required by the Project Manager. All intersecting slopes shall be neatly rounded. Excess debris or other waste material adjacent to culverts and drainage structures shall be removed and trimmed as directed by the Project Manager.

PJ 6 TOLERANCES

PJ 6.1 After the completion of cleaning and finishing as described in this specification, all work shall be within the tolerances required by the relevant specification for each portion of the work.

PJ 7 TESTING

Not applicable to this specification.

PJ 8 MEASUREMENT AND PAYMENT

PJ 8.1 Cleaning and Finishing Unit: Lump sum

Payment shall be a lump sum to provide for all expenses in connection with this work. The Bidding lump sum shall be a fixed amount and shall not be subject to any variation as far as quantity is concerned.

PG 8.2 SCHEDULED ITEMS

PG 8.2.1 Supply Material and Erect Security Fencing Unit: m

Distinction shall be made between the different types, heights and widths as detailed on the drawings.

PG 8.2.2 Supply Materials and Erect Stock-proof Fencing Unit: m

PG 8.2.3 Supply Materials and Erect Jackal proof Fencing Unit: m

PG 8.2.4 Supply and Install Fence Gates Unit: No

PG 9 APPLICABLE STANDARDS

Reference is made to the latest issue of the following standards:-

- CKS 82 : Steel posts, stays, standards and droppers for strained wire fences
- SANS 675 : Barbed wire (galvanized)
- SANS 1373 : Chain Link wire fencing (diamond mesh)
- CKS 451 : Anti-intruder fences
- SANS 457 : Wooden poles and Droppers
- SANS 675 Galvanized fencing wire.

PSL PIPE LAYING WORKS

PSL 1 SCOPE

PSL 1.1 This specification covers the supply and installation of pipelines of diameter up to 1000 mm, Complete with ancillary works, for transporting water and sewage under working pressures of up to 2.5 MPa.

PSL 2 INTERPRETATIONS

PSL 2.1 SUPPORTING SPECIFICATIONS

Where this specification is required for a project the following specifications shall, inter alia, form part of the contract document:-

- a) Project specification;
- b) SANS 1200 A or SANS 1200 AA, as applicable;
- c) SARS 1200 D or SANS 1200 DA, as applicable;
- d) SARS 1200 DB;
- e) SAHS 1200 G or SANS 1200 GA, as applicable;
- f) SANS 1200 1.B;
- g) SANS 1200 LK.

PSL 2.2 APPLICATION

This specification contains clauses that are generally applicable to medium-pressure pipelines. Interpretations and variations of this specification are set out in Portion 2 of the project specification which precedes this specification in a contract document.

PG 2.3 DEFINITIONS

For the purpose of this specification the definitions and abbreviations given in the applicable specifications listed in 2.1(b)- (g) and the following definitions shall apply.

Fitting

- (a) A special or Valve
- (b) Any process of jointing (except welding) straight pipes to one another and to specials and valves.

Special. Any pipe other than a straight pipe.

NOTE: Under this definition are included all sizes of specials such as bends, tees, crosses, angle branches, reducers, and tapers.

Straight pipe A straight pipe of uniform bore and of standard or non-standard length.

PSL 3 MATERIALS

PSL 3.1 GENERAL

Pipes and fittings shall be of the types specified in the schedule or in the project

specification and, unless otherwise required in terms of the project specification, they and their couplings shall be capable of withstanding the applicable test pressure specified in 7.3.1. All pipes and fittings shall be supplied complete with couplings and jointing material. Satisfactory temporary end covers shall be provided for the protection of threads, flanges, and prepared ends of plain-ended pipes and fittings, and to prevent damage to internal lining during transportation and during handling on Site. Pipeline materials shall be so transported, stored, and handled that pipes are not overstressed at any time and fittings are not damaged in any way. All thin-walled, flexible, and soft-coated pipes shall be handled with particular care and shall be so stored that they are not subject to concentrated pressure from stones or other objects. Pipes damaged or cracked in any way shall be removed from the Site.

PSL 3.7 Pipes

PSL 3.7.2 Polyethelene Pipes

PE100 type pipes and compression fittings shall be used and must meet all the requirement of SANS 4427 and conform to the ISO 9001 Quality Management system.

The pipes shall carry the SANS mark.

PSL 4 PLANT

4.1 HANDLING AND RIGGING

The plant and rigging equipment used by the Contractor for the handling and placing of pipes shall be such that no pipe shell is over-stressed during any operation covered by the specification.

4.1 Setting out

The Contractor may use any acceptable device, including one incorporating a laser beam, to control the alignment and laying of the pipeline.

4.1 Testing

The Contractor shall provide all the equipment, materials, tools, and fittings required for the performance of the test given in clause 7.

PSL 5 CONSTRUCTION

PSL 5.1 LAYING

PSL 5.1.1 General

A pipeline shall be laid and bedded (see SANS 1200 LR) to even grades and to the levels and alignments shown on the drawings or as directed. It shall be laid centrally in the trench in such a manner that the side allowance conforms to the applicable value specified in Clause B of SANS 1200 DB. For ease of inspection and testing the pipes shall be laid with the manufacturer's class and quality identification marks visible from the top of the trench, unless, in the case of large pipes, the position of lifting eyes renders this impracticable.

Control of laying and bedding shall be by means of boning rods and sight rails or an acceptable laser beam device. Sight rails shall be painted black and white and shall be fixed securely and accurately.

PSL 5.1.2 Damage

Each pipe and each fitting shall be thoroughly cleaned and carefully examined for damage and defects immediately before laying. Should any damaged or defective pipe or fitting be laid, it shall be removed and replaced at the Contractor's expense and to the satisfaction of the Project Manager.

PSL 5.1.3 Keeping pipes clean

Every reasonable precaution shall be taken to prevent the entry of foreign matter and water into the pipe (s). At the close of each day's work or at any time when work is suspended for a significant period, the last laid section of each pipe shall be plugged, capped, or otherwise tightly closed until laying is recommenced. During laying and jointing of pipes and until the pipeline (s) has/have passed the required acceptance tests and the trenches have been backfilled, all trenches shall be kept in a state which, in the opinion of the Project Manager, is reasonably dry.

PSL 5.1.4 Depth and cover

5.1.4.1.

Unless otherwise shown on the drawings or required in terms of the project specification, or order, the depth of excavation for trenches for medium-pressure pipelines shall not exceed 1.5m.

5.1.4.2.

Pipes shall be laid to even grades with the specified cover. Were so required, the cover may be increased gradually by deflection at pipe joints, but the deflection shall not be greater (and should generally be less) than the deflection recommended by the manufacturer of the pipe (e.g. the deflection shall not exceed 1.5° in the case of AC pipes).

5.1.4.3.

The minimum clearance between the outside of a pipeline being laid and the outside of any that it crosses shall be 150 mm. Where this requirement conflicts with the requirements for cover over the pipeline the Contractor shall ask the Project Manager for written instructions and shall carry out the work in accordance with those instructions.

PSL 6 TOLERANCES

Not applicable.

PSL 7 TESTING

PSL 7.1 GENERAL

As the work proceeds, pipelines shall be tested in convenient lengths by means of test equipment supplied by the Contractor (see 4.3). In the case of steel pipelines butt-welded in the field, joints shall be tested in accordance with 7.2 immediately after being made. Each test shall be carried out in the presence of the Project Manager or his representative. The Contractor shall be responsible for carrying out all tests and for all expenses incurred in this connection (see 8.2). When carrying out the hydraulic test (see 7-31, the Contractor shall ensure that all valves, tees, and bends are properly secured and shored to prevent movement of pipes and fittings and, should any such movement occur, the Contractor shall, at his own expense, reposition and, if necessary, repair the pipes and fittings and the securing means. Until each section of the pipeline has been subjected to the hydraulic test and has complied with the applicable requirement for leakage rate given in 7.3.3, the pipeline will not be accepted. The hydraulic test shall be repeated until the Project Manager is satisfied that the section under test complies with the said requirement.

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.1. General

Excavation and backfilling of trenches, and laying of medium-pressure pipelines, will be measured separately under SANS 1200 DB and 8.2, respectively. Attention is drawn particularly to 5.1.4.1, in terms of which no payment will be made for depths of excavation in excess of 1, 5 m unless a greater depth is shown on the drawings, or is required in terms of the project specifications, or has been ordered in writing by the Project Manager.

PSL 8.2 Scheduled item

PSL 8.2.1. Lay and bed pipes complete with coupling

Pipelines will be measured by length over all lengths as laid. No deduction will be made for specials and valves. Separate items will be scheduled for each diameter and each type and class of pipe laid. The handling, inspecting, transporting, bedding, laying, jointing, cutting, testing and, when relevant, disinfecting of the pipes and the joints. (See 8.2.4.)

PSLB **BEDDING (pipes)**

PSLB 3 **MATERIALS**

PSLB 3.3 **Bedding**

Add the following to paragraph 3.3:

For uPVC, GRP and HDPE pipes the bedding detail for flexible pipes shall be used.

PSLB 5 **CONSTRUCTION**

PSLB 5.1 **General**

PSLB 5.1.3
& **5.1.4** **Placing and Compaction**

Placing and compaction of the pipe bedding shall be regarded as the most critical phase of the backfilling operation. The installation and bedding requirements of the pipe manufactures will be adhered to in all situations.

As soon as possible after the trench bottoms have been inspected and approved by the Project Manager, material forming the bedding cradle shall be placed, compacted and trimmed to the required grade and level over the full width of the trench. Before laying the pipe, joint pockets for the couplings shall be excavated to ensure that the pipe is supported on the trench bottom over its full length and not on the coupling. The joint pocket shall be deep enough so that the coupling is at least 50 mm from the trench bottom. Under no circumstances may bricks, stones or pieces of timber be used for the supporting of the pipes in the trench.

Backfilling beyond the bedding cradle and thereafter the selected fill blanket shall only proceed after approval by the Project Manager.

Bedding material shall be placed and compacted evenly at both sides of the pipe, compaction to be done by hand or mechanical tamping. The method adopted shall be subject to the Project Manager's approval. Whatever method is adopted and approved, great care shall be exercised at all time to prevent damage to the pipe or disturbance to the pipe level or grade. The top of the completed bedding shall form a level surface completely filling the space between the pipe and trench walls, including any cavity that might exist in the trench walls.

If compaction is by hand or mechanical tamping, compaction shall be in layers not exceeding 150mm measured in the loose and watered to optimum moisture content and compacted to the specified density. The material in the "wedges" formed by the curvature of pipe bottoms shall be compacted by hand punning horizontally and obliquely.

The Contractor may use his discretion as to whether he will backfill around joints before the pipeline is hydrostatically tested. The Contractor shall be responsible for the location and repair of any leaks on the pipeline under hydrostatic test and no extra payment will be made for any re-excavation and subsequent reinstatement which may be necessary to locate and remedy leaks. Should the Contractor elect to leave joint holes open until after the hydrostatic test, he shall provide at his own expense effective and approved barricades and fences around each hole for the

protection of persons and animals. In built-up areas, barricades shall be clearly marked at night time with red warning lights.

PSLB 6 TOLERANCES

PSLB 6.1 Moisture Content and Density

Degree of accuracy II shall be applicable to bedding material.

PJ CLEANING AND FINISHING

PJ 1 SCOPE

PJ 1.1

This Section covers the final finishing and cleaning up of the Works and Site, and the disposal of excess material at places approved by the Project Manager. Final finishing and cleaning will be done strictly according to the specifications stipulated in the EMP

This Section does not cover the disposal of unsuitable excavated material, the finishing of quarries or borrow pits, the finishing of any backfill, the cleaning and finishing of concrete and other finishes described elsewhere in the specification or for which separate payment clauses exist.

PJ 2 INTERPRETATIONS

Not applicable to this specification

PJ 3 MATERIALS

Not applicable to this specification.

PJ 4 PLANT

Not applicable to this specification.

PJ 5 CONSTRUCTION

PJ 5.1 Precautions

PJ 5.1.1 Safety

The requirements of Sub clause 5.1.1 of SANS 1200 D or SANS 1200 DA (as applicable) shall apply.

PJ 5.2 Methods and Procedures

PJ 5.2.1 General

After completion of the work which is to be executed under this Contract, the Works and the Site shall be finally and neatly cleaned and finished off by means of suitable machines and equipment and hand labour where required until a neat and clean appearance is obtained. The Contractor shall ensure that completed and approved work is not damaged during the cleaning up operations. If any part is damaged it shall immediately be rectified to comply with the required specification for the particular part of the Works. Camping Sites shall be neatly cleaned and all rubbish shall be disposed at places approved by the Project Manager.

PJ 5.2.2 Cleaning

Loose stones, felled trees, roots and all other rubbish on fill or on the sides of streams shall be removed to give the site a neat appearance. Storm water drains shall be cleaned of debris, soil, silt and other material.

Concrete floor panels from temporary buildings and any excess concrete dumped on the site shall be broken up and disposed of in areas approved by the Project Manager and covered over to the satisfaction of the Project Manager

PJ 5.2.3 Finishing

Permanent access roads required for future use by the Employer and other permanent roads in the general works area shall be graded so as to remove all corrugations and all imperfections made good in such a way that the specified shape is maintained and the surface is not loosened. Dragging, pushing or scraping waste material along across these roads will not be permitted.

Care shall be taken not to damage culvert headwalls and drains when doing this work. All cutting, fills and drains shall be trimmed and finished to the original lines and grades or as required by the Project Manager. All intersecting slopes shall be neatly rounded. Excess debris or other waste material adjacent to culverts and drainage structures shall be removed and trimmed as directed by the Project Manager.

PJ 6 TOLERANCES

PJ 6.1

After the completion of cleaning and finishing as described in this specification, all work shall be within the tolerances required by the relevant specification for each portion of the work.

PJ 7 TESTING

Not applicable to this specification.

PJ 8 MEASUREMENT AND PAYMENT

PJ 8.1 Cleaning and Finishing

Unit: Lump sum

Payment shall be a lump sum to provide for all expenses in connection with this work. The bid lump sum shall be a fixed amount and shall not be subject to any variation as far as quantity is concerned.

Specifications and Compliance Sheet Authorised By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:		Company	

DRAWINGS

Drawing No.	Description
-------------	-------------

- PAVING -1: SCHEME PAVING DETAILS

SECTION IV: PRICED ACTIVITY SCHEDULE

Procurement Reference Number: **W/RFQ/NW-010/2027**

*[Complete the unit and total prices for each item listed below. Authorise the prices quoted in the signature block below.]
The quantities shown below are approximate and not subject to re-measurement for payment purposes.*

LOT 1 – OUTAPI SCHEME

Item No.	Payment Clause	Description	Unit	Quantity	Rate	TOTAL
					N\$	N\$
		-				
		<u>SECTION 1 : PRELIMINARY AND GENERAL</u>				
	SANS					
	1200 A	<u>GENERAL</u>				
1.1	8.3	<u>FIXED CHARGE ITEMS</u>				
1.1.1	8.3.1	<u>Contractual Requirements (Including Health and Safety requirements)</u>	Sum	1		
		-				
	8.3.2	<u>Prepare a comprehensive safety file in line with NamWater Health and Safety requirements</u>	Sum	1		
		-				
1.1.2	8.3.3	<u>Establish Facilities on the Site:</u>	Sum	1		
		-				
	8.3.2.1	<u>Facilities required by the Project Manager:</u>				
1.1.4	e)	Survey Equipment	Sum	1		

Initials.....

-						
CARRIED FORWARD_						
Item No.	Payment Clause	Description	Unit	Quantity	Rate	TOTAL
					N\$	N\$
<u>BROUGHT FORWARD</u>						
-						
1.1.5	8.3.2.2	<u>Facilities required by the Contractor</u>				
-						
1.1.5.1	a)	Offices and storage sheds	Sum	1		
1.1.5.2	b)	Workshops	Sum	1		
1.1.5.3	c)	Fully equipped laboratory or independent lab for testing	Sum	1		
1.1.5.5	e)	Ablution and latrine facilities	Sum	1		
1.1.5.6	f)	Tools and equipment	Sum	1		
1.1.5.7	g)	Water supplies, electricity power and communications	Sum	1		
1.1.5.8	h)	Dealing with water (when required)	Sum	1		
1.1.5.9	i)	Access (See SANS 1200 A Subclause 5.8)	Sum	1		
1.1.6	8.3.3	General responsibilities and other fixed charges obligations	Sum	1		
1.1.7	8.3.4	<u>Removal of site establishment</u>	Sum	1		
-						
CARRIED FORWARD_						

Initials.....

Item No.	Payment Clause	Description	Unit	Quantity	Rate	TOTAL
					(N\$)	(N\$)
		<u>SECTION 2 : PROVISIONAL SUMS</u>				
	SANS					
	1200 A	<u>GENERAL</u>				
		<u>SUMS STATED PROVISIONALLY BY Project Manager</u>				
2.1		<u>Dayworks</u>				
2.1.1	8.7	Allow provisional sum to cover the cost of material ordered by the Project Manager	Sum	10,000.00	1	10,000.00
2.1.2	8.5 (b) (2)	Percentage to be added to item 2.1.1	%			
2.1.3	8.7	Allow provisional sum to cover the cost of work done by labour ordered by the Project Manager	Sum	5,000.00	1	5,000.00
2.1.4	8.5 (b) (2)	Percentage to be added to item 2.1.3	%			
2.1.5	8.7	Allow provisional sum to cover the cost of work done with plant and equipment ordered by the Project Manager	Sum	5,000.00	1	5,000.00
2.1.6	8.5 (b) (2)	Percentage to be added to item 2.1.5	%			
CARRIED FORWARD TO SUMMARY						

Item No.	Payment Clause	Description	Unit	Quantities	Rate	Total
		<u>SECTION 3: WORKS</u>				
		-				
		Drawings No. BUNW SCHEMES PAVING 1, 2 AND 3				
	SANS					
1.0	1200 D	SITE CLEARANCE				
	8.3.1.1	<u>Clear site for to prepare for excavation</u>	m ²	6259		
	SANS					
2.0	1200 D	<u>EARTHWORKS</u>				
		<u>Bulk Excavation</u>				
		<u>Excavate in all materials and use for backfill or dispose of as ordered for:</u>				
		-				
		Scarify 150mm top layer and dispose of material	m ³	939		
		Wet and Compact subgrade to 93% Mod AASHTO	m ³	939		
		-				
		Import, place, wet and compact to 95% Mod AASHTO G7 150mm sub-base course	m ³	939		
		Import, place, wet and compact to 95% Mod AASHTO G5 150mm base course	m ³	939		
		Import and place 50mm screed layer of sand	m ³	313		

Initials.....

		Supply and install 150mmx450mmx175mm standard concrete curbs	m	403		
		Procure and place Black Polyethelyne 250 micron	m ²	6259		
3.0		<u>PAVING</u>				
		Load, Transport and Offload 0.75x0.85m concrete tiles from NamWater Olushandja to Outapi (Transport rate to be inclusive of the number of trips required. Only the Total contained herein shall be paid to the contractor)	Km	45		
		Supply and install 250 micron black polyethelyne sheeting	m ²	6259		
		Place 0.75x0.85m tiles and apply class 2 mortar between the tiles	m ²	6259		
		Cleaning and housekeeping	Sum	1		
		All other works and consumable required to ensure completion of work	Sum	1		
CARRIED FORWARD TO SUMMARY						

SECTION	DESCRIPTION	AMOUNT N\$
1	PRELIMINARY AND GENERAL	
2	PROVISIONAL SUMS	
3	WORKS	
	SUB-TOTAL	

10% CONTINGENCIES	
TOTAL EXCLUDING VAT	
15% V.A.T	
TOTAL INCLUDING VAT	

Priced Activity Schedule Authorised By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:	Company		

LOT 2 – OSHAKATI SCHEME

Item No.	Payment Clause	Description	Unit	Quantity	Rate	TOTAL
					N\$	N\$
		-				
		<u>SECTION 1 : PRELIMINARY AND GENERAL</u>				
	SANS					
	1200 A	<u>GENERAL</u>				
1.1	8.3	<u>FIXED CHARGE ITEMS</u>				
1.1.1	8.3.1	<u>Contractual Requirements (Including Health and Safety requirements)</u>	Sum	1		
		-				
	8.3.2	<u>Prepare a comprehensive safety file in line with NamWater Health and Safety requirements</u>	Sum	1		
		-				
1.1.2	8.3.3	<u>Establish Facilities on the Site:</u>	Sum	1		
		-				
	8.3.2.1	<u>Facilities required by the Project Manager:</u>				
		-				
1.1.4	e)	Survey Equipment	Sum	1		
		-				
CARRIED FORWARD_						
Item No.	Payment Clause	Description	Unit	Quantity	Rate	TOTAL
					N\$	N\$

Initials.....

		<u>BROUGHT FORWARD</u>				
		-				
1.1.5	8.3.2.2	<u>Facilities required by the Contractor</u>				
		-				
1.1.5.1	a)	Offices and storage sheds	Sum	1		
1.1.5.2	b)	Workshops	Sum	1		
1.1.5.3	c)	Fully equipped laboratory or independent lab for testing	Sum	1		
1.1.5.5	e)	Ablution and latrine facilities	Sum	1		
1.1.5.6	f)	Tools and equipment	Sum	1		
1.1.5.7	g)	Water supplies, electricity power and communications	Sum	1		
1.1.5.8	h)	Dealing with water (when required)	Sum	1		
1.1.5.9	i)	Access (See SANS 1200 A Subclause 5.8)	Sum	1		
1.1.6	8.3.3	General responsibilities and other fixed charges obligations	Sum	1		
1.1.7	8.3.4	<u>Removal of site establishment</u>	Sum	1		
		-				
CARRIED FORWARD_						

Item No.	Payment Clause	Description	Unit	Quantity	Rate	TOTAL
					(N\$)	(N\$)
<u>SECTION 2 : PROVISIONAL SUMS</u>						

Initials.....

	SANS					
	1200 A	<u>GENERAL</u>				
		<u>SUMS STATED PROVISIONALLY BY Project Manager</u>				
2.1		<u>Dayworks</u>				
2.1.1	8.7	Allow provisional sum to cover the cost of material ordered by the Project Manager	Sum	10,000.00	1	10,000.00
2.1.2	8.5 (b) (2)	Percentage to be added to item 2.1.1	%			
2.1.3	8.7	Allow provisional sum to cover the cost of work done by labour ordered by the Project Manager	Sum	5,000.00	1	5,000.00
2.1.4	8.5 (b) (2)	Percentage to be added to item 2.1.3	%			
2.1.5	8.7	Allow provisional sum to cover the cost of work done with plant and equipment ordered by the Project Manager	Sum	5,000.00	1	5,000.00
2.1.6	8.5 (b) (2)	Percentage to be added to item 2.1.5	%			
CARRIED FORWARD TO SUMMARY						

Item No.	Payment Clause	Description	Unit	Quantities	Rate	Total
		<u>SECTION 3: WORKS</u>				
		-				
		Drawings No. BUNW SCHEMES PAVING 1, 2 AND 3				
	SANS					
1.0	1200 D	SITE CLEARANCE				
	8.3.1.1	<u>Clear site for to prepare for excavation</u>	m ²	4393		
	SANS					
2.0	1200 D	<u>EARTHWORKS</u>				
		<u>Bulk Excavation</u>				
		<u>Excavate in all materials and use for backfill or dispose of as ordered for:</u>				
		-				
		Scarify 150mm top layer and dispose of material	m ³	659		
		Wet and Compact subgrade to 93% Mod AASHTO	m ³	659		
		-				
		Import, place, wet and compact to 95% Mod AASHTO G7 150mm sub-base course	m ³	659		
		Import, place, wet and compact to 95% Mod AASHTO G5 150mm base course	m ³	659		
		Import and place 50mm screed layer of sand	m ³	220		
		Supply and install 150mmx450mmx175mm standard concrete curbs	m	262		
		Procure and place Black Polyethelyne 250 micron	m ²	4393		

3.0	<u>PAVING</u>				
	Load, Transport and Offload 0.75x0.85m concrete tiles from NamWater Olushandja to Oshakati (Transport rate to be inclusive of the number of trips required. Only the Total contained herein shall be paid to the contractor)	Km	140		
	Supply and install 250 micron black polyethelyne sheeting	m ²	4393		
	Place 0.75x0.85m tiles and apply class 2 mortar between the tiles	m ²	4393		
	Cleaning and housekeeping	Sum	1		
	All other works and consumable required to ensure completion of work	Sum	1		
CARRIED FORWARD TO SUMMARY					

SECTION	DESCRIPTION	AMOUNT N\$
1	PRELIMINARY AND GENERAL	
2	PROVISIONAL SUMS	
3	WORKS	
	SUB-TOTAL	
	10% CONTINGENCIES	
	TOTAL EXCLUDING VAT	
	15% V.A.T	
	TOTAL INCLUDING VAT	

Priced Activity Schedule Authorized By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:	Company		

Initials.....

Initials.....

SECTION V: SPECIFICATIONS AND COMPLIANCE SHEET

Procurement Reference Number: W/RFQ/NW-010/2027

[Bidders should complete columns C and D with the specification of the goods offered. Also state “comply” or “not comply” and give details of any non-compliance/deviation to the specification required. Attach detailed technical literature if required. Authorise the specification offered in the signature block below

Specifications and Performance Required	Compliance of Specifications and Performance Offered	Details of Non-Compliance/ Deviation (if applicable)
<i>B*</i>	<i>C</i>	<i>D</i>
PSC – Site Clearance Pg 12		
PSD – Earthworks & PSDA – Earthworks (small works) Pg 14-15		
PSGA – Concrete (small works) Pg 16		

** Columns A and B to be completed by Public Entity.*

Specifications and Compliance Sheet Authorised By:

Name:		Signature:	
Position:		Date:	
Authorised for and on behalf of:	Company		

SECTION VI: GENERAL CONDITIONS OF CONTRACT AND CONTRACT AGREEMENT

Any resulting contract shall be placed by means of a Purchase Order/Letter of Acceptance and shall be subject to the General Conditions of Contract (GCC) for the Procurement of Goods (Ref. **W/RFQ-GCC**) available on the website of the Public Entity (www.namwater.com.na) except where modified by the Special Conditions below

SECTION VIII SPECIAL CONDITIONS OF CONTRACT

Procurement Reference Number: W/RFQ/NW-010/2027

The clause numbers given in the first column correspond to the relevant clause number of the General Conditions of Contract.

GCC Clause Reference	Special Conditions
Employer GCC 1.1(r)	Namibia Water Corporation Ltd
Intended Completion Date GCC	The intended completion date is: Three (3) months after official site handover
Project Manager GCC 1.1(y)	The Project Manager is: NamWater Maintenance Manager for BUNW
Site GCC 1.1(aa)	The Site is located at various schemes as indicated in the Lots
Start Date GCC 1.1(dd)	The Start Date shall be: The date of issue of Purchase Order
The Works GCC 1.1(hh)	The Works consist of: Paving of various schemes in NamWater BUNW
Interpretation GCC 2.2	The project will be completed in the following sections: N/A
Interpretation GCC2.3	The following additional documents shall form part of the contract: Contractor supporting documentation.
Language and Law GCC 3.1	The language of the contract is English The law that applies to the Contract is the law of Namibia.
Project Manager's Decisions 4.1	The Project Manager shall obtain specific approval from the Employer before carrying out any of his duties under the Contract, which in the Project Manager's opinion will cause the amount finally due under the Contract to exceed the Contract Price or will give entitlement to extension of time. This requirement shall be waived in an emergency affecting safety of personnel or the Works or adjacent property.
Delegation GCC 5.1	The Project Manager may delegate his/her duties.
Notices GCC 6	Any notice shall be sent to the following addresses: For the Employer, the address shall be as given on the page 2 of this Bidding Document and the contact name shall be:

GCC Clause Reference	Special Conditions
	<p>NamWater Procurement Management Unit bids@namwater.com.na Tell no: 061712041 Private Bag 13389 Windhoek, Namibia.</p> <p>For the Contractor, the address shall be as given on the first page of the Purchase Order/Letter of Acceptance and the contact name shall be _____</p>
<p>Insurance GCC 13.1</p>	<p>Except for the cover mentioned in (d)(i) hereunder, the other insurance covers shall be in the joint names of the Contractor and the Employer and the minimum insurance amounts shall be:</p> <ul style="list-style-type: none"> (a) for the Works, Plant and Materials: for the full amount of the works including removal of debris, professional fee etc. (b) for loss or damage to Equipment: for the replacement value of the equipment that the contractor intends to use on site until the taking over by the Employer. (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract for an amount representing the value of the properties that are exposed to the action of the contractor in the execution of the works. It will extend to the property of the Procuring Entity as well). (d) for personal injury or death: <ul style="list-style-type: none"> (i) of the Contractor’s employees: The Contractor shall take an adequate insurance cover for its employees for any claim arising in the execution of the works. (ii) of other people: This cover shall be for an adequate amount for Third Party extended to the Employer and its representatives. (e) for loss or damage to materials on-site and for which payment have been included in the Interim Payment Certificate, where applicable. <p>The Contractor shall choose to take the insurance covers indicated above as separate covers or a combination of the Contractor’s All Risks</p>

GCC Clause Reference	Special Conditions
	coupled with the Employer's liability and First Loss Burglary, after approval of the Employer. All insurance covers shall be of nil or the minimum possible deductibles at sole expense of the contractor.
Site Data GCC 14.1	The site Data shall be: The coordinate for each site:
Possession of the Site GCC 20.1	The Site Possession Date shall be: The date of issue of Purchase Order
Procedure for Disputes GCC 24	No Adjudicator shall be appointed under the contract and arbitration shall not apply. If any dispute arises between the Employer and the Contractor in connection with or arising out of the Contract, the parties shall seek to resolve any such dispute by amicable agreement. If the parties fail to resolve such dispute by amicable agreement, within 14 days after one party has notified the other in writing of the dispute, then the dispute shall be referred to court by either party.
Program GCC 25.1	The Contractor shall submit for approval a Program at the signing of the contract or issue of Purchase Order Agreement.
GCC 25.3	Program updates Shall be required.
Defects Liability Period GCC 33.1	The Defects Liability Period is: N/A
Payment Certificates GCC 39.7	"Monthly Payment shall be made as per progress of works with payment for materials on site".
Payments GCC 40	The amount certified by the Project Manager shall be paid in full within 30 days of receipt by the Employer of an invoice, supported by: (a) the payment certificate; and
Adverse weather Conditions GCC 41.1 (l)	Adverse rainfall during rainy season exceeding average rainfall for area
Price Adjustment GCC 44.	The Contract is not subject to price adjustment.
Retention GCC 45.	(i) 0% of the amount shall be retained from any payment. Half of the retention money will be released after formal taking over of the Works and the remaining shall be released after the Defect Liability Period subject to the Contractor making good all defects.
Liquidated	The liquidated damages for the whole of the Works are 0.5 per day.

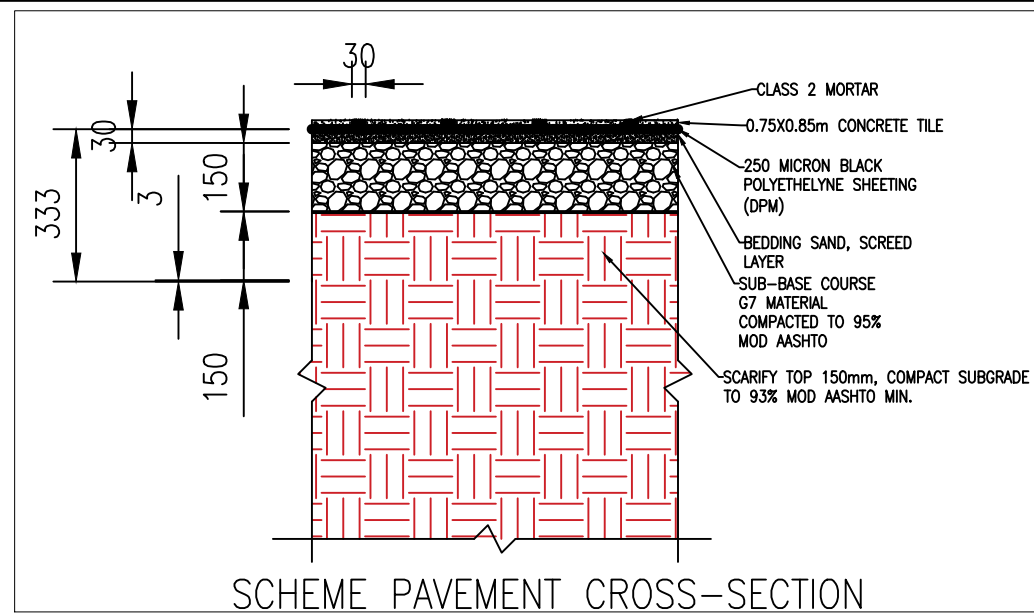
GCC Clause Reference	Special Conditions
Damages GCC 46.1	The maximum amount of liquidated damages for the whole of the Works is 10% of the contract value.
Bonus GCC 47.1	The rate for the Bonus per calendar day is: Not Applicable
Advance Payment GCC 48.1	(i) No advance payment shall be made.
Performance Security GCC 49.1	(i) No Performance Security is required.
GCC 56.1	“As built” drawings or operating and maintenance manuals are required.
GCC 59.1	The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is: 20% twenty percent.

QUOTATION CHECKLIST SCHEDULE

Procurement Reference No.: W/RFQ/NW-010/2027

Description	Attached	Not Attached
Quotation Letter		
List of Goods and Price Schedule		
Specification and Compliance Sheet		
Evidences for conformity of Goods		
Valid company Registration Certificate Copy from Ministry of Trade and Industry		
Original valid good standing Tax Certificate from Inland Revenue or a valid certified copy of an original certified by the Namibian Police of good standing Tax Certificate		
Valid good Standing Certificate from Social Security Commission or a valid certified copy of an original certified by the Namibian Police of good standing Tax Certificate		
Valid Affirmative Action Compliance Certificate, proof from Employment Equity Commissioner that bidder is not a relevant employer, or exemption issued in terms of Section 42 of the Affirmative Action Act, 1998;		
Company Profile		
Reference letters and or completion certificate indicating similar work done		
Submit a Work Delivery Schedule		
Methodology for site management and safety in executing this work, taking cognizance of the heavy equipment and tools to be used		
Submit a comprehensive method statement indicating/focusing on the following areas; (Design, Site layout, Integration into the existing scheme, Anticipated water quality expected, Installation methodology & Operational and maintenance methodology)		
Submit comprehensive CV's of the Key employees allocated to this particular project		

***Disclaimer:** The list defined above is meant to assist the Bidder in submitting the relevant documents and shall not be a ground for the bidder to justify its non-submission of major documents for its quotation to be responsive. The onus remains on the Bidder to ascertain that it has submitted all the documents that have been requested and are needed for its submission to be complete and responsive.*



NOTES :

1. 483mm OF TOPSOIL TO BE REMOVED.
2. ALL MATERIALS SHOULD BE APPROVED.
3. COMPACT EACH LAYER TO THE SPECIFIED DENSITY BEFORE PLACING THE NEXT LAYER
4. SAND SHOULD BE TREATED WITH BIFENTHRIN 1/T 7.9F



AREA TO BE PAVED – OUTAPI



AREA TO BE PAVED – OSHAKATI

0	ISSUED FOR BID PURPOSE ONLY		S.I
NO.	AMENDMENTS	DATE	BY



SCHEME
 VARIOUS NAMWATER SCHEMES

DRAWING
 SCHEME PAVING DETAILS

SURVEYED	DRAWN	TRACED
INGRID EKANDJO	INGRID EKANDJO	AUTOCAD
DESIGNED CIVIL	DESIGNED ELEC.	DESIGNED MECH.
INGRID EKANDJO	INGRID EKANDJO	INGRID EKANDJO
CHECKED CIVIL	CHECKED ELEC.	CHECKED MECH.
HOSEA HASHILI	HOSEA HASHILI	HOSEA HASHILI
APPROVED CIVIL	APPROVED ELEC.	APPROVED MECH.

MANAGER: CIVIL DESIGN

DATE	SCALE	SHEET NO.
06/2026		

REGISTRATION NO.
 PAVING – 1