

**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

Item No	Quantity	Rate	Amount
<b><u>SECTION No.1</u></b>			
<b><u>BILL NO. 1 PRELIMINARIES</u></b>			
<b><u>BUILDING AGREEMENT AND PRELIMINARIES</u></b>			
<p>The <b>JBCC</b> Principal Building Agreement (March 2014 Edition 6.1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described</p> <p>The <b>JBCC</b> Principal Building Agreement <b>contract data</b> form an integral part of this <b>agreement</b></p> <p>The Preliminaries revision 1 (February 2016) published by the Association of South African Quantity Surveyors for use with the <b>JBCC</b> Principal Building Agreement Edition 6.1 shall be deemed to be incorporated in these <b>bills of quantities</b>, amended as hereinafter described</p> <p>The <b>contractor</b> is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause</p> <p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p> <p>Where any item is not relevant to this <b>agreement</b> such item is marked N/A signifying "not applicable"</p> <p><u>User note</u></p> <p><i>A provision/clause in Edition 6.1 of the JBCC Principal Building Agreement may have unintended consequences. The following is relevant:</i></p> <p><i>Within the contract data document there is space to insert changes made to the JBCC documentation. Quantity surveyors have generally up to now merely inserted in this space "Refer to Bill No. 1"</i></p>			
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*Below the abovementioned space the following note has been inserted:*

**"Note : The amendments contained herein or in the single referenced Annexure constitute the only amendments to the standard JBCC Agreement that will apply. No other amendments shall be of any force or effect"**

*Should quantity surveyors wish to adhere to the system of inserting amendments, modifications, corrections or supplements to the JBCC documentation under the listed clause headings in Bill No. 1 (Preliminaries) then it is suggested that the following clause be inserted in the space provided in the contract data where changes made to the JBCC documentation are to be recorded:*

*"It is specifically agreed that the note below calling for amendments to the standard **JBCC** Agreement to be listed in the space provided in the **contract data** or recorded in 'the single referenced Annexure' shall not apply. Where standard clauses or alternatives are not entirely applicable to this **agreement** such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading in Bill No 1 (Preliminaries) and such amendments, modifications, corrections or supplements shall take precedence notwithstanding the note below and notwithstanding the provisions of clause 5.6 of the **JBCC** Principal Building Agreement"*

***Not doing as suggested above when adhering to the system generally used by quantity surveyors up to now may result in any amendments within Bill No. 1 (Preliminaries) being considered null and void, which could then lead to major claims***

*The following paragraph should in addition be inserted*

*? Where standard clauses or alternatives are not entirely applicable to this **agreement** such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents ?*

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**PREAMBLES FOR TRADES**

User note

*The Model Preambles for Trades 2008 published by the Association of South African Quantity Surveyors is designed to support and extend the abbreviated descriptions utilised in these bills of quantities by inter alia referring to SANS construction standards. **Where such model preambles are not applicable** (eg where BS or Euro construction standards are applicable or the design consultants provide other preambles/specifications for insertion), users are to ensure that the abbreviated descriptions when read in conjunction with the Standard System of Measuring Building Work (seventh edition) for works within South Africa or the Standard Method of Measuring Building Work for Africa 2015 (first edition) for works elsewhere in Africa, represent the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications*

*Note that the text of the Standard System of Measuring Building Work (seventh edition) and that of the Standard Method of Measuring Building Work for Africa 2015 (first edition) is the same*

The Model Preambles for Trades 2008 as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these **bills of quantities** and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

Supplementary preambles and/or specifications are incorporated in these **bills of quantities** to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the Model Preambles

The **contractor's** prices for all items throughout these **bills of quantities** shall take account of and include for all of the obligations, requirements and specifications given in the Model Preambles and in any supplementary preambles and/or specifications

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**STRUCTURE OF THIS PRELIMINARIES BILL**

Section A : A recital of the headings of the individual clauses of

the aforementioned **JBCC Principal Building Agreement**

Section B : A recital of the headings of the individual clauses of

the aforementioned Preliminaries document

Section C : Any special clauses to meet the particular circumstances of the project

**PRICING OF PRELIMINARIES**

Should the **contractor** select Option A in the **contract data** for the adjustment of **preliminaries**, the amounts entered against the relevant items in these **preliminaries** are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

**SECTION A: PRINCIPAL BUILDING AGREEMENT**

**Interpretation (A1-A7)**

1 Clause 1.0 - Definitions and interpretation

**Definition of agreement**

The definition of **agreement** is replaced with the following definition :

**"AGREEMENT** : The **JBCC** Principal Building Agreement, the completed **JBCC** PBA contract data, the **contract drawings**, the **priced documents** and any other documents reduced to writing and signed by the **parties**"

**Pricing of bills of quantities**

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The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this **agreement**. Value Added Tax (VAT) is to be separately stated on the summary page of these **bills of quantities**

Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained

Prices for all **construction equipment**, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary

**Abbreviated descriptions**

The items in these **bills of quantities** utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the **contractor** shall, before submission of his tender, call for a written directive from the **principal agent**, failing which it shall be assumed that the **contractor** has allowed in his pricing for materials and workmanship in terms of international best practice

**Legal status of contractor**

If the **contractor** constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:

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1. These persons are deemed to be jointly and severally liable to the **employer** for the performance of this agreement
2. These persons shall notify the **employer** of their leader who has authority to bind the **contractor** and each of these persons
3. The **contractor** shall not alter its composition or legal status without the prior written consent of the **employer**

**Errata by JBCC**

Omit from definition of **construction period** the words : "excluding annual holiday periods"  
Omit from definition of **preliminaries** the word : "priced"

F:..... V:.....  
T:.....

- 2 Clause 2.0 - Law, regulations and notices

**User note**

*Insert the following where a health and safety specification is not yet available*

**? Health and safety**

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Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specification [2.1] ?

User note

*Insert the following where a health and safety specification is available*

**? Health and safety**

Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** (refer to Annexure ? for a copy of the relevant specification) and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification [2.1] ?

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The **contractor** shall:

1. Comply with the health and safety specification for the **works**
2. Prepare and agree with the health and safety consultant the health and safety plan for the **works**
3. Co-operate with the health and safety consultant in all respects
4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification
5. Conform to the conditions contained in the **employer's** health and safety specification

User note

*Insert one of the following for residential developments only*

**? NHBRC levies**

The **employer** shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The **contractor** warrants that he is registered and will maintain registration with the NHBRC for the duration of this **agreement** [2.1] ?

**? NHBRC levies**

The **contractor** shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The **contractor** warrants that he is registered and will maintain registration with the NHBRC for the duration of this **agreement** [2.1] ?

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T:.....

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3 Clause 3.0 - Offer and acceptance  
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4 Clause 4.0 - Assignment and cession  
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T:.....

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5 Clause 5.0 - **Contract documents**

**Value Added Tax**

Provision is made in the summary page of these **bills of quantities** for the inclusion of Value Added Tax (VAT)

User note

*The contract drawings are to be listed in the contract data. If insufficient space is available for such listing or for any other reason then reference should be made in the contract data as to where the contract drawings are listed. One of the following clauses may be used*

*Insert the following where only a few **contract drawings** are applicable*

**? Contract drawings**

The **contract drawings** are as listed on the contents page of the **bills of quantities** [5.1] ?

*Insert the following where numerous **contract drawings** are applicable*

**? Contract drawings**

Refer to Annexure ? for a list of the **contract drawings** [5.1] ?

**Priced document as specification**

Clause 5.3 is deemed to be deleted

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The **principal agent** shall decide which portion of the **priced document** may be used as a specification of **materials and goods** or methods, if any

User note

*Insert the following where applicable*

**? Electronic issue of drawings**

All drawings for this project will be issued electronically and the **contractor** shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.5] ?

**Precedence**

Clause 5.6 is deemed to be deleted. The provisions of this Bill No. 1 (Preliminaries) shall take precedence over any other documents which constitute this **agreement** [5.6]

F:..... V:.....  
T:.....

6 **Clause 6.0 - Employer's agents**

**? Delegated authority**

The authority of the **principal agent** to issue **contract instructions** and perform duties for specific aspects of the **works** is delegated to **agents** as follows [6.2]: ?

User note

*Add delegated authority as may be required for other relevant consultants not listed hereinafter*

**? 1. Architect**

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

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*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

1.1 Duties :

The architect is responsible for the architectural design, functional design and quality inspection of the **works**

1.2 **Contract instructions** [17.0] :

1.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

1.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

1.2.3 The **site** [13.2.4]

1.2.4 Compliance with the **law**, regulations and bylaws [2.1]

1.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

1.2.6 Opening up of work for inspection, removal or re-execution

1.2.7 Removal or re-execution of work

1.2.8 Removal or substitution of any **materials and goods**

1.2.9 Protection of the **works**

1.2.10 Making good physical loss and repairing damage to the **works** [8.0]

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- 1.2.11 Rectification of **defects** [21.2]
  
- 1.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
  
- 1.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**
  
- 1.2.14 Appointment of a **subcontractor** [14.0; 15.0]
  
- 1.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]
  
- 1.2.16 Work by (a) **direct contractor(s)** [16.0]
  
- 1.2.17 Access by other or previous contractors to remedy defective work
  
- 1.2.18 Removal from the **site** of any person employed on the **works**
  
- 1.2.19 Removal from the **site** of any person not engaged on or connected with the **works**
  
- 1.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]
  
- ? 2. Quantity surveyor

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User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

2.1 Duties :

The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the **works**

2.2 **Contract instructions** [17.0] :

2.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

2.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

2.2.3 The **site** [13.2.4]

2.2.4 Compliance with the **law**, regulations and bylaws [2.1]

2.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

2.2.6 Opening up of work for inspection, removal or re-execution

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<p>2.2.7 Removal or re-execution of work</p> <p>2.2.8 Removal or substitution of any <b>materials and goods</b></p> <p>2.2.9 Protection of the <b>works</b></p> <p>2.2.10 Making good physical loss and repairing damage to the <b>works</b> [8.0]</p> <p>2.2.11 Rectification of <b>defects</b> [21.2]</p> <p>2.2.12 A <b>list for practical completion</b> specifying outstanding or defective work to be rectified to achieve <b>practical completion</b> and a <b>list for completion</b> and a <b>list for final completion</b> specifying outstanding or defective work to be rectified to achieve <b>final completion</b></p> <p>2.2.13 Expenditure of <b>budgetary allowances, prime cost amounts</b> and <b>provisional sums</b></p> <p>2.2.14 Appointment of a <b>subcontractor</b> [14.0; 15.0]</p> <p>2.2.15 Termination of a nominated <b>n/s subcontract agreement</b> [27.2.8]</p> <p>2.2.16 Work by (a) <b>direct contractor(s)</b> [16.0]</p> <p>2.2.17 Access by other or previous contractors to remedy defective work</p> <p>2.2.18 Removal from the <b>site</b> of any person employed on the <b>works</b></p> <p>2.2.19 Removal from the <b>site</b> of any person not engaged on or connected with the <b>works</b></p>	
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2.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials** and **goods** [29.0]

? 3. Civil and structural engineer

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

3.1 Duties :

The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the **works**

3.2 **Contract instructions** [17.0] :

3.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

3.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

3.2.3 The **site** [13.2.4]

3.2.4 Compliance with the **law**, regulations and bylaws [2.1]

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<p>3.2.5 Provision and testing of samples of <b>materials and goods</b>, of finishes and assemblies of elements of the <b>works</b></p> <p>3.2.6 Opening up of work for inspection, removal or re-execution</p> <p>3.2.7 Removal or re-execution of work</p> <p>3.2.8 Removal or substitution of any <b>materials and goods</b></p> <p>3.2.9 Protection of the <b>works</b></p> <p>3.2.10 Making good physical loss and repairing damage to the <b>works</b> [8.0]</p> <p>3.2.11 Rectification of <b>defects</b> [21.2]</p> <p>3.2.12 A <b>list for practical completion</b> specifying outstanding or defective work to be rectified to achieve <b>practical completion</b> and a <b>list for completion</b> and a <b>list for final completion</b> specifying outstanding or defective work to be rectified to achieve <b>final completion</b></p> <p>3.2.13 Expenditure of <b>budgetary allowances, prime cost amounts</b> and <b>provisional sums</b></p> <p>3.2.14 Appointment of a <b>subcontractor</b> [14.0; 15.0]</p> <p>3.2.15 Termination of a nominated <b>n/s subcontract agreement</b> [27.2.8]</p> <p>3.2.16 Work by (a) <b>direct contractor(s)</b> [16.0]</p> <p>3.2.17 Access by other or previous contractors to remedy defective work</p>	<p><b>Carried to Collection</b></p>	<p>R</p>
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3.2.18 Removal from the **site** of any person employed on the **works**

3.2.19 Removal from the **site** of any person not engaged on or connected with the **works**

3.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials** and **goods** [29.0]

? 4. Mechanical engineer

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

4.1 Duties :

The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the **works** and, where appointed by the **employer** for quantity surveying services in respect of the mechanical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions?

4.2 **Contract instructions** [17.0] :

4.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

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- 4.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**
- 4.2.3 The **site** [13.2.4]
- 4.2.4 Compliance with the **law**, regulations and bylaws [2.1]
- 4.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**
- 4.2.6 Opening up of work for inspection, removal or re-execution
- 4.2.7 Removal or re-execution of work
- 4.2.8 Removal or substitution of any **materials and goods**
- 4.2.9 Protection of the **works**
- 4.2.10 Making good physical loss and repairing damage to the **works** [8.0]
- 4.2.11 Rectification of **defects** [21.2]
- 4.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 4.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

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- 4.2.14 Appointment of a **subcontractor** [14.0; 15.0]
- 4.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]
- 4.2.16 Work by (a) **direct contractor(s)** [16.0]
- 4.2.17 Access by other or previous contractors to remedy defective work
- 4.2.18 Removal from the **site** of any person employed on the **works**
- 4.2.19 Removal from the **site** of any person not engaged on or connected with the **works**
- 4.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]

? 5. Electrical engineer

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

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5.1 Duties :

The electrical engineer is responsible for all aspects of electrical engineering design and quality inspection of the **works** and, where appointed by the **employer** for quantity surveying services in respect of the electrical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions?

5.2 **Contract instructions** [17.0] :

5.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

5.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

5.2.3 The **site** [13.2.4]

5.2.4 Compliance with the **law**, regulations and bylaws [2.1]

5.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

5.2.6 Opening up of work for inspection, removal or re-execution

5.2.7 Removal or re-execution of work

5.2.8 Removal or substitution of any **materials and goods**

5.2.9 Protection of the **works**

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- 5.2.10 Making good physical loss and repairing damage to the **works** [8.0]
- 5.2.11 Rectification of **defects** [21.2]
- 5.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 5.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**
- 5.2.14 Appointment of a **subcontractor** [14.0; 15.0]
- 5.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]
- 5.2.16 Work by (a) **direct contractor(s)** [16.0]
- 5.2.17 Access by other or previous contractors to remedy defective work
- 5.2.18 Removal from the **site** of any person employed on the **works**
- 5.2.19 Removal from the **site** of any person not engaged on or connected with the **works**
- 5.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]
- ? 6. Wet services engineer

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User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

6.1 Duties :

The wet services engineer is responsible for all the aspects of wet services engineering design and quality inspection of the **works**

6.2 **Contract instructions** [17.0] :

6.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

6.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

6.2.3 The **site** [13.2.4]

6.2.4 Compliance with the **law**, regulations and bylaws [2.1]

6.2.5 Provision and testing of samples of **materials and goods**, of finishes and assemblies of elements of the **works**

6.2.6 Opening up of work for inspection, removal or re-execution

6.2.7 Removal or re-execution of work

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6.2.8 Removal or substitution of any **materials and goods**

6.2.9 Protection of the **works**

6.2.10 Making good physical loss and repairing damage to the **works** [8.0]

6.2.11 Rectification of **defects** [21.2]

6.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion** and a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**

6.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

6.2.14 Appointment of a **subcontractor** [14.0; 15.0]

6.2.15 Termination of a nominated **n/s subcontract agreement** [27.2.8]

6.2.16 Work by (a) **direct contractor(s)** [16.0]

6.2.17 Access by other or previous contractors to remedy defective work

6.2.18 Removal from the **site** of any person employed on the **works**

6.2.19 Removal from the **site** of any person not engaged on or connected with the **works**

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6.2.20 On termination, protection of the **works**,  
removal of  
**construction equipment** and surplus **materials**  
**and**  
**goods** [29.0]

? 7. Fire consultant

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

7.1 Duties :

The fire consultant is responsible for all aspects of rational fire design and quality inspection of the **works**

7.2 **Contract instructions** [17.0] :

7.2.1 Rectification of discrepancies, errors in descriptions or omissions in **contract documents** other than this **agreement**

7.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

7.2.3 The **site** [13.2.4]

7.2.4 Compliance with the **law**, regulations and bylaws [2.1]

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<p>7.2.5 Provision and testing of samples of <b>materials and goods</b>, of finishes and assemblies of elements of the <b>works</b></p> <p>7.2.6 Opening up of work for inspection, removal or re-execution</p> <p>7.2.7 Removal or re-execution of work</p> <p>7.2.8 Removal or substitution of any <b>materials and goods</b></p> <p>7.2.9 Protection of the <b>works</b></p> <p>7.2.10 Making good physical loss and repairing damage to the <b>works</b> [8.0]</p> <p>7.2.11 Rectification of <b>defects</b> [21.2]</p> <p>7.2.12 A <b>list for practical completion</b> specifying outstanding or defective work to be rectified to achieve <b>practical completion</b> and a <b>list for completion</b> and a <b>list for final completion</b> specifying outstanding or defective work to be rectified to achieve <b>final completion</b></p> <p>7.2.13 Expenditure of <b>budgetary allowances, prime cost amounts</b> and <b>provisional sums</b></p> <p>7.2.14 Appointment of a <b>subcontractor</b> [14.0; 15.0]</p> <p>7.2.15 Termination of a nominated <b>n/s subcontract agreement</b> [27.2.8]</p> <p>7.2.16 Work by (a) <b>direct contractor(s)</b> [16.0]</p> <p>7.2.17 Access by other or previous contractors to remedy defective work</p>	<p><b>Carried to Collection</b></p>	<p>R</p>
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7.2.18 Removal from the **site** of any person employed on the **works**

7.2.19 Removal from the **site** of any person not engaged on or connected with the **works**

7.2.20 On termination, protection of the **works**, removal of **construction equipment** and surplus **materials** and **goods** [29.0]

? 8. Health and safety consultant

User note

*Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the **principal agent***

*Note that the contract instructions hereinafter are those listed in clause 17.0 of the JBCC PBA*

8.1 Duties :

The health and safety consultant is responsible for all aspects of health and safety of the **works**. Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the **works**:

8.1.1 Act as the **employer's agent** in terms of Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993

8.1.2 Prepare and update the health and safety specification for the **works**

8.1.3 Agree with the **contractor** the health and safety plan for the **works**

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8.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the Act and Regulations

8.1.5 Stop the execution of the **works** where the agreed specification or plan is not adhered to

F:..... V:.....  
T:.....

Item

7 Clause 7.0 - Design responsibility

F:..... V:.....  
T:.....

Item

**Insurance and security (A8-A11)**

8 Clause 8.0 - **Works** risk

F:..... V:.....  
T:.....

Item

9 Clause 9.0 - Indemnities

F:..... V:.....  
T:.....

Item

10 Clause 10.0 - Insurances

F:..... V:.....  
T:.....

Item

11 Clause 11.0 - **Security**

User note

*If it is deemed advisable, the extent of any security for payment may be stated as follows:*

? **Security for payment**

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The **employer** shall provide to the **contractor** security for payment in the amount of ?

.....  
..... Rand (R.....) ?  
[11.4.1,11.10] ?

User note

*Where it is expected of the contractor to waive his lien in terms of clause 11.10, the waiver of lien may be extended to subcontracts as follows:*

**? Extension of waiver of lien**

The **contractor** shall ensure that a waiver of lien is included in all subcontracts and that the **works** executed on the **site** are kept free of all liens and other encumbrances at all times [11.10] ?

**Errata by JBCC**

Clause 11.5 Replace "ten (10)" with "five (5)"

F:..... V:.....  
T:.....

**Execution (A12 - A17)**

12 Clause 12.0 - Duties of the **parties**

**Provisions of clauses 12.1.2 to 12.1.6 and 12.2.18**

Refer to the **contract data**, the Preliminaries document and "Section B : Preliminaries" of this Bill No. 1 with reference to the provisions of clauses 12.1.2 to 12.1.6 and 12.2.18 of the **JBCC** Principal Building Agreement

**? Office accommodation**

The **contractor** shall provide, maintain and remove on **practical completion** air conditioned office accommodation with suitable tables and chairs for meetings to be held on the **site**. Such offices shall be kept clean and fit for use at all times [12.2.18] ?

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**? Notice board**

The **contractor** shall erect in a position approved by the **principal agent**, maintain and remove on **practical completion** a notice board recommended by the South African Institute of Architects and as approved by the **principal agent** listing the names and logos of the **employer**, the **contractor**, and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the **principal agent** for such notice boards to be erected [12.2.18] ?

User note

*Clause 12.1.5 requires the employer to identify access to water, sewer, stormwater and/or electricity connections to the site. Should such information be available then it is to be stated here or in the contract data in detail with a suitable heading in bold. Reference as [12.1.5]. The user should, however, note that clauses 8.1 and 8.2 of the Preliminaries state that the employer does not warrant that any water or electricity supplies that may exist are adequate for the proper execution of the works. Any ambiguity in this respect is to be dealt with*

*Should access to water, sewer, stormwater and/or electricity connections not be identifiable due to such information not being available or the specific requirements of the contractor cannot be determined, then the following clause may be considered in which event a qualified tender may be expected*

**? Access to water, sewer, stormwater and electricity connections**

The **employer** is not in a position to identify access to water, sewer, stormwater and/or electricity connections to the **site** as may be suitable for the execution of the **works**. The **contractor** is to allow what he considers to be required and is to qualify his tender in detail in this regard, failing which it shall be taken that the **contractor** has allowed what will be required for the execution of the **works**. In such case no claims for additional cost or loss shall be entertained [12.1.5] ?

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**Statutory and other notices**

User note

*Statutory and other notices which the contractor must submit and/or comply with before possession of the site can be given are to be stated here or in the contract data. Reference [12.1.6]*

*If specific information is not available then the user may consider a clause along the following lines*

? The **contractor** shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the **works** by the **contractor**. The **contractor** shall pay all deposits or fees in this regard [12.1.6]

It is, however, specifically recorded that the **employer** shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto ?

**Errata by JBCC**

Clause 12.2.17 Omit the words "[CD] within ten (10) **working days**"

F:..... V:.....  
T:.....

Item

13 Clause 13.0 - Setting out

F:..... V:.....  
T:.....

Item

14 Clause 14.0 - Nominated **subcontractors**

**Errata by JBCC**

Clause 14.1.4 Reference should read "[17.1.14]"  
 Clause 14.6 Reference should read "[17.1.15; 27.1.8]"  
 Clause 14.7.2 Reference should read "[27.1.8]"  
 Clause 14.7.3 Reference should read "[27.2.8]"

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	F:..... V:..... T:.....		
15	Clause 15.0 - Selected <b>subcontractors</b>  <b>Errata by JBCC</b>  Clause 15.2 Reference should read "[17.1.14]" Clause 15.7.2 Reference should read "[27.1.8]" Clause 15.7.3 Reference should read "[27.2.8]"  F:..... V:..... T:.....	Item	
16	Clause 16.0 - <b>Direct contractors</b>  <b>Attendance on direct contractors</b>  In respect of <b>direct contractors</b> the <b>contractor</b> shall:  1. Designate an area for the <b>direct contractor</b> to establish a temporary office and workshop and storage of equipment and materials  2. Allow the use of personnel welfare facilities, where provided  3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation  4. Permit the <b>direct contractor</b> to use erected scaffolding, hoisting facilities, etc provided by the <b>contractor</b> , in common with others having the like right, while it remains erected on the <b>site</b> [16.1]  <b>Errata by JBCC</b>  Clause 16.1.3 Reference should read "[26.5]"	Item	
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	F:..... V:..... T:.....		
17	Clause 17.0 - <b>Contract instructions</b>  ? <b>Site instructions</b>  Instructions issued on <b>site</b> are to be recorded in a site instruction book which is to be supplied and maintained on <b>site</b> by the <b>contractor</b> ?  <b>Errata by JBCC</b>  Clause 17.1.3 Reference should read "[13.2.4]"  F:..... V:..... T:.....	Item	
18	Clause 18.0 - Interim completion  F:..... V:..... T:.....	Item	
19	Clause 19.0 - <b>Practical completion</b>  <b>User note</b>  <i>List with a suitable heading in bold any special requirements for practical completion here or in the contract data. Reference as [19.3.1]</i>  F:..... V:..... T:.....	Item	
20	Clause 20.0 - Sectional completion  <b>User note</b>  <i>If sectional completion is applicable, then a clause with a suitable heading in bold should be inserted, or drawing(s) annexed, to define the various sections. Reference as [20.1]</i>		
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	<p><b>Errata by JBCC</b></p> <p>Clause 20.2.2 Reference should read "[21.6.2]"</p> <p>F:..... V:..... T:.....</p>			
21	<p>Clause 21.0 - <b>Defects</b> liability period and <b>final completion</b></p> <p><b>Errata by JBCC</b></p> <p>Clause 21.1 Delete the word "final" in the second last line Reference should read "[21.6.1]" Clause 21.9 Reference should read "[21.4 ; 21.6.1]"</p> <p>F:..... V:..... T:.....</p>			Item
22	<p>Clause 22.0 - <b>Latent defects</b> liability period</p> <p>F:..... V:..... T:.....</p>			Item
23	<p>Clause 23.0 - Revision of date for <b>practical completion</b></p> <p><b>Substitution of materials and goods</b></p> <p>The removal or substitution of any <b>materials and goods</b> which do not conform to the specification or the <b>contract drawings</b> shall not constitute grounds for the extension of the <b>construction period</b> nor for the adjustment of the <b>contract value</b> [17.1.8, 23.1 &amp; 2]</p> <p><b>Errata by JBCC</b></p> <p>Clause 23.2 Reference should read "[26.7]" Clause 23.2.1 Reference should read "[12.1.7]"</p> <p>F:..... V:..... T:.....</p>			Item
24	<p>Clause 24.0 - <b>Penalty</b> for late or non-completion</p> <p>F:..... V:..... T:.....</p>			Item
	<b>Carried to Collection</b>			R
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25	<p><b><u>Payment (A25 - A27)</u></b></p> <p>Clause 25.0 - Payment</p> <p><b>Materials and goods prematurely on site</b></p> <p><b>Materials and goods</b> brought onto the site prematurely shall not be authorised for payment [25.3.2]</p> <p><u>User note</u></p> <p><i>Insert <u>one</u> of the following two clauses</i></p> <p><b>? Materials and goods stored off site</b></p> <p><b>Materials and goods</b> stored off <b>site</b> shall not be authorised for payment [25.3.2] ?</p> <p><b>? Materials and goods stored off site</b></p> <p><b>Materials and goods</b> stored off <b>site</b> shall be authorised for payment subject to a <b>guarantee for advance payment</b> being provided to the <b>employer</b> [25.3.2] ?</p> <p><b>? Fluctuations in costs</b></p> <p>All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the <b>contractor</b> [25.3.4] ?</p> <p><b>Prices submitted</b></p> <p>Where prices are submitted by the <b>contractor</b> or <b>subcontractor</b> during the progress of the <b>works</b> in respect of <b>contract instructions</b> or in regard to a claim under the terms of this <b>agreement</b> and notwithstanding the fact that such prices may be used in an interim <b>payment certificate</b>, there is to be no presumption of acceptance. Should the <b>principal agent</b> wish to accept any such prices prior to the issue of the <b>certificate of final completion</b>, it shall be in writing</p>			
	<b>Carried to Collection</b>		R	
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**Errata by JBCC**

Clause 25.2 The word : "final" in bold in the second line  
 Clause 25.10.3 Reference should read "[25.13 ; 26.10]"  
 New clause 25.12.4 Add the words : "Terminate the **agreement** [29.14.7] where the listed options [25.12.1-3] have failed"

F:..... V:.....  
 T:.....

26 Clause 26.0 - Adjustment of the **contract value** and **final account**

User note

*Insert the following where tenant installations/users requirements may be delayed or omitted*

**? Tenant installations/users requirements delayed**

There is a possibility that certain works related to tenant installations/users requirements may have to be delayed and may consequently not be executed prior to **practical completion**

The **employer** reserves the right to omit such work without compensation to the **contractor** for loss of profit or any other loss which the **contractor** may suffer as a result of such omission

Should the **contractor** be instructed to do so he shall execute this work under the conditions pertaining to this **agreement** on the basis that a separate amount for **preliminaries** appurtenant to this work (if applicable) is agreed to between the **contractor** and the **principal agent** and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of **practical completion** of the **works** ?

Item

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**Cost of claims**

All costs incurred by the **contractor** in the preparation of claims shall be borne by the **contractor**. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this **agreement** [30.6,7] from making a determination on costs

The **contractor** shall review, assess and adjudicate any claims received by him from any **subcontractor** and thereafter submit same to the **principal agent** with a recommendation in order to assist the **principal agent** in adjudicating the claim [26.6]

**Errata by JBCC**

Clause 26.4.2 Omit the entire clause and renumber thereafter  
New clause 26.4.3 "Other proven or unavoidable costs"

F:..... V:.....  
T:.....

Item

27 Clause 27.0 - Recovery of expense and/or loss

F:..... V:.....  
T:.....

Item

**Suspension and termination (A28 - A29)**

28 Clause 28.0 - Suspension by the **contractor**

**Errata by JBCC**

New clause 28.1.5 and renumber thereafter "Or where an **agent** has failed to act in terms of this **agreement** [6.4]  
Clause 28.2 Replace the word "defect" with "default" in the first line

F:..... V:.....  
T:.....

Item

29 Clause 29.0 - Termination

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**Errata by JBCC**

Clause 29.1.2 Delete the words : "within the period stated [CD]"  
 Clause 29.14.1 Change as follows : "Provide or maintain a **guarantee for payment**.....[11.4 - 5]"  
 Clause 29.14.2 Reference should read "[12.1.7]"  
 New clause 29.14.8 "Or where an **agent** has failed to act in terms of this **agreement** [6.4]"

F:..... V:.....  
 T:.....

Item

**Dispute resolution (A30)**

30 Clause 30.0 - Dispute resolution

F:..... V:.....  
 T:.....

Item

31 **Agreement**

The second sentence of the introduction where the **parties** sign the **agreement**, namely "Any provision in this **agreement**..... acceptance by such **subcontractor** at any time." is deemed to be deleted

The required information of the **parties** and the amount of the **contract sum** shall be inserted in the **agreement** for signature of the **agreement** by the **parties**

F:..... V:.....  
 T:.....

Item

32 **Contract data**

**Payment of preliminaries**

Where Option B is applicable and the initial **construction period** is extended the monthly charge shall be recalculated on the same basis as was initially applied but taking into account the revised **construction period** and the amounts already paid to the **contractor** [CD26.0]

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**Adjustment of preliminaries**

Where the adjustment of **preliminaries** is in terms of Option A, the **construction period** and the initial **construction period** shall be calculated in **working days** [CD 26.0]

Where the adjustment of **preliminaries** is in terms of Option A and sectional completion is required, the **contractor** shall provide the **principal agent** with the division of the categorised amounts into **sections**. Should the **contractor** fail to provide such information within the period stipulated, the categorised amounts shall be prorated to the value of each **section** [CD 26.0]

Where the adjustment of **preliminaries** is required in terms of Option B and sectional completion is required, the **contractor** shall provide the **principal agent** with details of the resources required for each **section** and those that are common to **sections**. Should the **contractor** fail to provide such information within the period stipulated, Option A shall apply [CD 26.0]

User note

*Where removal of lateral support insurance is required and stated as such in the contract data for the employer to insure, it is to be noted that it may appear under "no" for the employer to insure where the contractor is to take out the other insurances. In such a case the following clause is to be inserted*

**? Removal of lateral support insurance**

Whilst it is stated in clause 10.0 of the **contract data** that the **employer** will not be responsible for **works** and other insurances the **employer** shall nevertheless be responsible for the removal of lateral support insurance in the amount stated ?

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User note

*Refer to the user note on page 2 of this Bill No 1 (Preliminaries) and insert the proposed clause in the space provided in the contract data where changes made to the JBCC documentation is to be recorded should the user wish to adhere to the system of inserting amendments, modifications, corrections or supplements to the JBCC documentation under the listed clause headings in this Bill No 1 (Preliminaries)*

**Tenderer's selection**

Before submission of his tender the **contractor** is to complete the tenderer's selection in the **contract data**

User note

*All information for the above requires consultation with the contractor. The principal agent should not pre-select any of the alternatives available to the contractor*

**Note 4 on page 10 of the contract data**

Note 4 on page 10 of the **contract data** which relates to any benefit or right in favour of any **subcontractor** shall be deemed to be deleted

F:..... V:.....  
T:.....

**SECTION B: PRELIMINARIES**

**Interpretation (B1)**

33 Clause 1.1 - Definitions

F:..... V:.....  
T:.....

34 Clause 1.2 - Interpretation

F:..... V:.....  
T:.....

Item

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**Documents (B2)**

35 Clause 2.1 - Checking of documents

F:..... V:.....  
T:.....

Item

36 Clause 2.2 - Provisional **bills of quantities**

User note

*Check "wet trades" included in the bills of quantities and edit the following clause as may be necessary*

**? Multiple procurement**

These **bills of quantities** are in multiple procurement format ie the "wet trades" - earthworks, concrete, formwork and reinforcement, precast concrete, masonry, waterproofing and sub-surface drainage - are provisionally (fully?) measured and the subsequent trades are **budgetary allowances** and/or **provisional sums** ?

F:..... V:.....  
T:.....

Item

37 Clause 2.3 - Availability of **construction information**

**? Budgetary allowances and provisional sums**

The **budgetary allowances** ?and/or **provisional sums**? allocated for subsequent trades included in this **agreement** will be separately procured, based on multiple procurement of **subcontractors** during the **construction period** ?

F:..... V:.....  
T:.....

Item

38 Clause 2.4 - Ordering of **materials and goods**

F:..... V:.....  
T:.....

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**Previous work and adjoining properties (B3)**

39 Clause 3.1 - Previous work - dimensional accuracy

F:..... V:.....  
T:.....

Item

40 Clause 3.2 - Previous work - **defects**

F:..... V:.....  
T:.....

Item

41 Clause 3.3 - Inspection of adjoining properties

F:..... V:.....  
T:.....

Item

**The site (B4)**

42 Clause 4.1 - Defined **works** area

F:..... V:.....  
T:.....

Item

43 Clause 4.2 - Handover of **site** in stages

F:..... V:.....  
T:.....

Item

44 Clause 4.3 - Enclosure of the **works**

F:..... V:.....  
T:.....

Item

45 Clause 4.4 - Geotechnical investigation

F:..... V:.....  
T:.....

Item

46 Clause 4.5 - Encroachments

F:..... V:.....  
T:.....

Item

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47 Clause 4.6 - Existing premises occupied

F:..... V:.....  
T:.....

Item

48 Clause 4.7 - Services - known

F:..... V:.....  
T:.....

Item

49 Clause 4.8 - Protection of trees and/or relevant natural features

F:..... V:.....  
T:.....

Item

**Management of contract (B5)**

50 Clause 5.1 - Management of the **works**

F:..... V:.....  
T:.....

Item

51 Clause 5.2 - Progress meetings

F:..... V:.....  
T:.....

Item

52 Clause 5.3 - Technical meetings

F:..... V:.....  
T:.....

Item

**Samples, shop drawings and manufacturer's instructions (B6)**

53 Clause 6.1 - Samples of materials

F:..... V:.....  
T:.....

Item

54 Clause 6.2 - Workmanship samples

F:..... V:.....  
T:.....

Item

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55 Clause 6.3 - Shop drawings  
F:..... V:.....  
T:.....

Item

56 Clause 6.4 - Compliance with manufacturer's instructions  
F:..... V:.....  
T:.....

Item

**Deposits and fees (B7)**

57 Clause 7.1 - Deposits and fees  
F:..... V:.....  
T:.....

Item

**Temporary services (B8)**

58 Clause 8.1 - Water  
F:..... V:.....  
T:.....

Item

59 Clause 8.2 - Electricity  
F:..... V:.....  
T:.....

Item

60 Clause 8.3 - Ablution and welfare facilities  
F:..... V:.....  
T:.....

Item

61 Clause 8.4 - Communication facilities  
F:..... V:.....  
T:.....

Item

**Prime cost amounts (B9)**

62 Clause 9.1 - Responsibility for **prime cost amounts**

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User note

*Where details of materials included in prime cost amounts are not readily available and it is therefore not possible for the contractor to price for waste, the relevant prime cost amount shall be inserted in the bills of quantities as a lump sum with the contractor being given the opportunity to separately price his overheads and profit and for taking delivery, etc as called for in this clause 9.1 of the preliminaries. In such case the fixing only or installation only of the relevant materials shall be provisionally measured for the contractor to price and shall be re-measured upon completion*

*Where details of materials for which prime cost amounts are to be allowed are readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc*

F:..... V:.....  
T:.....

Item

**Attendance on subcontractors (B10)**

63 Clause 10.1 - General attendance

**User note**

*General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement*

F:..... V:.....  
T:.....

Item

64 Clause 10.2 - Special attendance

User note

*Insert details after the provisional sums (nominated or selected subcontract amount) for any special attendance where specifically required for each n/s subcontractor separately*

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*It is important to note that general attendance only requires the contractor to "permit the subcontractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right while it remains erected on the site" (refer to 12.2.13 of the JBCC n/s subcontract agreement). Many n/s subcontractors qualify their tenders to exclude scaffolding and/or hoisting facilities. Especially scaffolding could be an expensive item and it may be necessary in order to avoid claims to require the contractor to provide for the extended use of scaffolding for specific subcontracts within a description of "special attendance" in the applicable bill*

F:..... V:.....  
T:.....

Item

**General (B11)**

65 Clause 11.1 - Protection of the **works**

F:..... V:.....  
T:.....

Item

66 Clause 11.2 - Protection/isolation of existing/sectionally occupied **works**

F:..... V:.....  
T:.....

Item

67 Clause 11.3 - Security of the **works**

F:..... V:.....  
T:.....

Item

68 Clause 11.4 - Notice before covering work

F:..... V:.....  
T:.....

Item

69 Clause 11.5 - Disturbance

F:..... V:.....  
T:.....

Item

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	<p>Clause 11.6 - Environmental disturbance</p> <p>F:..... V:..... T:.....</p>			
70	<p>Clause 11.7 - <b>Works</b> cleaning and clearing</p> <p>F:..... V:..... T:.....</p>			Item
71	<p>Clause 11.8 - Vermin</p> <p>F:..... V:..... T:.....</p>			Item
72	<p>Clause 11.9 - Overhand work</p> <p>F:..... V:..... T:.....</p>			Item
73	<p>Clause 11.10 - Tenant installations by <b>direct contractors</b></p> <p>F:..... V:..... T:.....</p>			Item
74	<p>Clause 11.11 - Advertising</p> <p>F:..... V:..... T:.....</p>			Item
	<p><b><u>Preliminaries schedule (B12)</u></b></p>			
75	<p><b>Information for completion of the preliminaries schedule</b></p> <p>Information necessary for elections and completion of those clauses contained in the <b>preliminaries</b> schedule which are necessary for tender purposes is given hereunder. Where no information is given it shall mean that no specific requirements are expected or that the clause is not relevant to this specific contract</p>			
	<p><b>Carried to Collection</b></p>			
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**PROPOSED MECHANICAL WORKS  
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12.1 - Provisional **bills of quantities** [2.2]

The quantities are provisional ?  
Yes/No ?

12.2 - Availability of **construction information** [2.3]

**Construction documentation** is complete?  
Yes/No ?

12.3 - Previous work - dimensional accuracy [3.1]

12.4 - Previous work - **defects** [3.2]

12.5 - Inspection of adjoining properties [3.3]

12.6 - Defined **works** area [4.1]

User note

*Describe the restrictions to the site or areas that the contractor may not occupy. Reference as [PBA 12.1.4]*

12.7 - Handover of **site** in stages [4.2]

User note

*Describe in detail where handover of the site to the contractor is done in stages*

12.8 - Enclosure of the **works** [4.3]

12.9 - Geotechnical investigation [4.4]

User note

*Insert the following clause should a geotechnical investigation report be available and insert the relevant annexure*

? Refer to Annexure ? for the results of a geotechnical investigation report ?

12.10 - Existing premises occupied [4.6]

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User note

*If the existing premises are occupied state it here and describe the detail and/or specific requirements. Reference as [PBA 12.1.2]*

12.11 - Services - known [4.7]

User note

*Insert details should the contractor be responsible for the preservation of known services. Reference as [PBA 12.1.3]*

12.12 - Protection of trees and/or relevant natural features  
[4.8]

User note

*Expand clause 4.8 of the Preliminaries should there be specific requirements for the preservation of trees or relevant natural features. Reference as [PBA 12.1.3]*

12.13 - Water [8.1]

- Option A (by **contractor**) ?
- Yes/No ?
- Option B (by **employer** - free of charge) ?
- Yes/No ?
- Option C (by **employer** - metered) ?
- Yes/No ?

12.14 - Electricity [8.2]

- Option A (by **contractor**) ?
- Yes/No ?
- Option B (by **employer** - free of charge) ?
- Yes/No ?
- Option C (by **employer** - metered) ?
- Yes/No ?

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The **contractor** is to ensure that all roads which border the **site** and is used by the **contractor** during the execution of the **works** are kept clean and free of any dirt or debris caused by the execution of the **works** ?

**? Environmental management plan**

The **employer** has prepared an environmental management plan (EMP) (refer to Annexure ? for a copy of the relevant plan). The **contractor** shall price opposite this item for compliance with all the requirements of such EMP ?

F:..... V:.....  
T:.....

**SECTION C: SPECIFIC PRELIMINARIES**

User note

*Users shall avoid inserting in Section C items which may be construed as amending, modifying, correcting or supplementing the provisions of the JBCC Principal Building Agreement. Such amendments, modifications, corrections or supplements should be kept to the absolute minimum and should be inserted in the space provided in the contract data or in a single referenced annexure as stipulated in the contract data or, when taking into account the methodology suggested in the user note on page 2 of this Bill No. 1, should be inserted in Section A under the recited clause headings of the JBCC Principal Building Agreement in this Bill No. 1*

User note

*Selected examples of typical clauses are provided to indicate ways of describing such clauses. Users must delete, adapt or add to these examples to suit their particular circumstances*

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76 Warranties for materials and workmanship

Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the entity supplying the materials and/or doing the work and shall deliver same to the **principal agent** on the **final completion** of the contract

The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of **practical completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written **notice** to do so

The warranty will not be enforced if the work is damaged by **defects** in the execution of the **works**, in which case the responsibility for replacement shall rest entirely with the **contractor**

F:..... V:.....  
T:.....

Item

77 Overtime

Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the **contractor** unless the **principal agent** has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the **employer**

F:..... V:.....  
T:.....

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78 Co-operation of the **contractor** for cost management

It is specifically agreed that the **contractor** accepts the obligation of assisting the **principal agent** in implementing proper cost management. The **contractor** will be advised by the **principal agent** of all cost management procedures which will be implemented to ensure that the **contract value** does not exceed the budget

F:..... V:.....  
T:.....

Item

79 Overloading

The **contractor** shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the **works** or temporary works eg scaffolding, etc. The **contractor** shall submit details of his proposed loading, storage, plant erection, etc to the **principal agent** for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the **principal agent's** requirements in connection with the provision of temporary support work, etc. Any damage caused to the **works** by overloading shall be made good by the **contractor** at his sole expense

F:..... V:.....  
T:.....

Item

80 Propping of floors below

The **contractor** is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of **materials and goods** and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the **principal agent** and the cost thereof shall be borne by the **contractor**

F:..... V:.....  
T:.....

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81 Testing of flat roof waterproofing for watertightness

Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the **principal agent**, flooded with water and kept "ponded" for at least forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing

F:..... V:.....  
T:.....

Item

82 Green star building certification

User note

*Insert the provisions called for by the relevant green star consultant should it be a requirement that the project be submitted for green star certification*

F:..... V:.....  
T:.....

Item

83 Broad based black economic empowerment (BBBEE)

Tenders submitted will be evaluated taking into account their empowerment rating

The **employer** will be monitoring the broad based black economic empowerment (BBBEE) status of the **contractor** throughout the execution of the **works**

The **contractor** is to submit to the **principal agent** on an annual basis a schedule of spend, split into vendors engaged as **subcontractors** and suppliers indicating their BBBEE rating including proof of the said rating

F:..... V:.....  
T:.....

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84 Advertising rights

The **employer** may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The **contractor** shall not prevent such an arrangement and will assist in the facilitation of same. Position and type of advertising structure to be agreed with the **principal agent** so as not to hinder the **contractor** in meeting the obligations under this **agreement**

F:..... V:.....  
T:.....

Item

85 Confidentiality

The **contractor** undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all **subcontractors** and suppliers. Such information shall not be used in any way except in connection with the execution of the **works**

No information regarding this project shall be published or disclosed without the prior written consent of the **employer**

F:..... V:.....  
T:.....

Item

86 Media releases

All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the **employer**

The **contractor** together with his **subcontractors** shall not, without the prior written consent of the **employer**, cause any statement or advertisement connected with this project to be printed, screened or aired by the media

F:..... V:.....  
T:.....

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**SUMMARY OF CATEGORIES**

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Item No		Unit	Quantity	Rate	Amount
	<p><b><u>BILL NO 2</u></b></p> <p><b><u>OCCUPATIONAL HEALTH &amp; SAFETY</u></b></p> <p>The Contractor shall comply with all the requirements set out in the Construction Regulations, 2014, issued under Occupational Health and Safety Act (Act 85 of 1993) It is required of the Contractor to thoroughly study these Regulations and Health and Safety Specification that must be read together with and is deemed to be to be incorporated under this Section of the Bill of quantities. It is required of the Contractor to thoroughly study these Regulations and Health and Safety Specification that must be read together with and is deemed to be to be incorporated under this Section of the Bill of quantities.</p> <p>The Contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or non-compliance, the Principal Agent, reserve the right to delay issuing of any progress payment certificate payment until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest due to such delay of payment</p> <p>Provision of pricing of the Occupational Health and Safety Specification is made under this bill and it explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claim in this regard shall be entertained.</p> <p>Note: The file shall be a lever arch with original color document of acceptable standards. The file will be expanded during the project as and when required by the client</p> <p><b><u>OCCOPATIONAL HEALTH &amp; SAFETY</u></b></p> <p><b><u>PROGRAMME</u></b></p>				
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**PROPOSED MECHANICAL WORKS  
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**Set up a site and job specific Health and Safety Plan, including a Safety File on site to contain the following:**

**HEALTH AND SAFETY PERSONNEL**

1	Safety Officer (SACPCMP Registered)	Mnth	10		
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**HEALTH AND SAFETY ADMINISTRATION**

2	Copy of Occupational Health and Safety Act (Act 85 of 1993 – 24th version/edition) including Construction Regulations August 2014	No	1		
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3	Induction Training/ Re-induction/Re-fresher		Item		
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4	Health and Safety File (PRINCIPAL & SUBCONTRACTORS)	No	1		
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5	Medicals (Entry & EXit) (Including specialised work i.e Fire, Air conditioning, mechanical equipment, Ventilation, weigh bridge, air compressor and emergency elevator)	No	25		
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6	Health and Safety Administration, implementation and maintenance on site including the copies of DSTI, Toolbox Talks, Checklist/Inspection/Internal Audits, Reports, Minutes of the Safety Committee Meetings, Printer/photocopying machine & toner/ink/catrages (7 months)	Mnth	10		
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7	Multi-Safety Construction Site Signboard (Displaying mandatory PPE and Required PPE)		Item		
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**OCCUPATIONAL HEALTH AND SAFETY TRAINING**

8	Construction Health and Safety Supervision		Item		
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9	Health and Safety Representative Training		Item		
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10	First Aid Training		Item		
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11	Fire Fighting Training		Item		
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12	Incident Investigation/ Incident Management		Item		
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13	Hazard Identification Risk Assessment (HIRA)		Item		
	<b><u>FIRST AID/ EMERGENCY</u></b>				
14	First Aid box/kit		Item		
15	First Aid box refilling during the project	Mnth	10		
16	Airtime/ Data (Communication)		Item		
17	Identification Signage	No	4		
18	Fire Extinguishers	No	3		
	<b><u>SIGNAGE</u></b>				
19	Mandatory - Blue		Item		
20	Information - Green		Item		
21	Hazard Warning - Yellow		Item		
22	Prohibition - Red		Item		
	<b><u>PERSONAL PROTECTIVE EQUIPMENT (PRINCIPAL &amp; SUB-CONTRACTOR</u></b>				
23	Overalls with reflective stripe	No	25		
24	Steel-cap safety boots	No	25		
25	Safety goggles	No	25		
26	Hard Hat	No	25		
	<b><u>Hearing Protection</u></b>				
27	Ear plugs		Item		
	<b><u>Respiratory Protection</u></b>				
28	FFP 2 Dust mucks (Box of 20)	No	50		
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<b><u>Hand Protection</u></b>					
29	Suprlight Leather gloves	No	25		
<b><u>Hot-work PPE</u></b>					
30	Leather Aprons	No	3		
31	Long leather gloves	No	3		
32	Face shield	No	3		
33	Weldingspctecles	No	3		
<b><u>SPECIAL EQUIPMENT</u></b>					
34	Hand Soap 5L	No	3		
35	Multipurpose Cleaning Detergent 5L	Mnth	10		
36	Paper Towels - Box of 2000	Mnth	10		
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Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 1 Fire Protection</u></b>				
	<b><u>Supply, delivery, installation, commissioning and testing of Manually activated fire Alarm system, Fire Protection Equipments and Signage.</u></b>				
1	5 kg Carbon Dioxide Portable Fire Extinguishers	No	8		
2	4.5 kg DCP Portable Fire Extinguishers	No	25		
3	Wooden Fire Extinguisher Boards	No	200		
4	Supply, Delivery, and installation of fire protection signage. to Comply with SANS 1186-1			PS	30,000.00
	<b><u>Supply, Delivery, Testing and Commissioning of an Manually Operated Alarm System Complete to Comply with SANS 10139 and SANS 10400: T</u></b>				
5	4 Loop Addressable Fire Control Panel with Batteries	No	1		
6	2 Core PH 60 Cable, 1mm	m	3,500		
7	Addressible Manual Call Point	No	25		
8	Addressible Sounders and Strobes	No	25		
9	Galvanized Steel Conduit	m	300		
10	Fire Department Link - Remrad/SMS Communicator	No	1		
11	Servicing of Hydrants	No	3		
12	Testing, Commissioning and issuance of CoC's of all Fire Detection Installations		Item		
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Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 2 HVAC</u></b>				
	<b><u>Supply, delivery, installation, commissioning and testing of 7.0kW cooling capacity Round Flow Cassette Unit (Heat Pump, Inverter, R410) complete with insulated refrigerant piping, condensate drains, trunking, electric wiring and connection, remote controls and top-up refrigerant</u></b>				
1	Round Flow Cassette Unit, 7.0 kW cooling capacity with Heat Pump and Inverter (SABS Approved or Equivalent)	No	1		
2	Wired Controller	No	1		
3	Chord for Wired Controller	m	6		
4	Interface Adapter for Wired Controller	No	1		
5	Refrigerant piping - Liquid	m	15		
6	Refrigerant piping - Gas	m	15		
7	Discharge Gas (Φ 28.6mm) Flare Connection	m	15		
	<b><u>TEST &amp; COMMISSION</u></b>				
8	Test and Commission		Item		
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Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 3 Mechanical Equipments</u></b>				
	<b><u>Supply, delivery, installation, commissioning and testing of conveyors, gearbox (Shaft Mounted Speed Reducer)es, ventilation systems</u></b>				
	<b><u>ROAD INTAKE</u></b>				
	<b><u>HOPPER 3&amp;4</u></b>				
1	Recondition intake hopper pneumatic sliding valves (Strip, recondition and reinstall)	No	2		
2	Replace compressed air filter regulator	No	2		
3	Recondition Hopper (H3&4) conveyor belt gearbox (Shaft Mounted Speed Reducer)	No	1		
4	Replace Hopper (H3&4) solid woven 315 x 600mm wide conveyor belt	m	60		
5	Replace Hopper (H3&4) spiral conveyor belt pulley	No	2		
6	Replace Hopper (H3&4) conveyor belt HDPE rollers	No	55		
7	Replace Hopper (H3&4) conveyor belt troughing HDPE idlers	No	18		
8	Replace Hopper (H3&4) conveyor belt return HDPE rollers	No	8		
9	Replace Hopper (H3&4) conveyer belt guard	No	1		
10	Refurbish Hopper (H3&4) Conveyer belt guard	No	1		
11	Refurbish Hopper (H3&4) Conveyer belt sub-assembly		PS		35,000.00
	<b>Carried to Collection</b>			R	
	Section No. 2				
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

12	Replace Hopper (H3&4) conveyer belt tensioner	No	2		
	<u>HOPPER 1&amp;2</u>				
13	Recondition intake hopper pneumatic sliding valves (Strip, recondition and reinstall)	No	2		
14	Replace compressed air filter regulator	No	2		
15	Recondition Hopper (H1&2) conveyer belt gearbox (Shaft Mounted Speed Reducer)	No	1		
16	Replace Hopper (H1&2) spiral conveyer belt pulley	No	2		
17	Replace Hopper (H1&2) solid woven 315 x 600mm wide conveyer belt	m	40		
18	Replace Hopper (H1&2) conveyer belt HDPE rollers	No	30		
19	Replace Hopper (H1&2) conveyer belt troughing HDPE idlers	No	12		
20	Replace Hopper (H1&2) conveyer belt return HDPE rollers	No	6		
21	Refurbish Hopper (H1&2) Conveyer belt guard	No	2		
22	Refurbish Hopper (H1&2) Conveyer belt sub-assembly		PS		35,000.00
23	Replace Hopper (H1&H2) conveyer belt tensioner	No	2		
	<u>RECLAIMER</u>				
	<u>LEFT RECLAIMER</u>				
24	Replace Left reclaimer solid woven 315 x 600mm wide conveyer belt	m	180		
25	Replace Left reclaimer conveyer belt HDPE rollers	No	180		
26	Replace Left reclaimer conveyer belt troughing HDPE idlers	No	12		
	<b>Carried to Collection</b>				
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

27	Replace Left reclaimer conveyor belt return HDPE rollers	No	30		
28	Replace Left reclaimer conveyor belt tensioner	No	2		
29	Recondition conveyor belt gearbox (Shaft Mounted Speed Reducer)	No	1		
30	Refurbish Left reclaimer chute	No	5		
31	Refurbish Left reclaimer chute sliding gate valves, complete with manual spindles	No	5		
32	Replace reclaimer (250x250mm to 400x400mm) Actuator valve	No	10		
	<b><u>RIGHT RECLAIMER</u></b>				
33	Replace Right reclaimer solid woven 315 x 600mm wide conveyor belt	m	180		
34	Replace Right reclaimer conveyor belt HDPE rollers	No	180		
35	Replace Right reclaimer conveyor belt troughing HDPE idlers	No	12		
36	Replace Right reclaimer conveyor belt return HDPE rollers	No	30		
37	Replace Right reclaimer conveyor belt tensioner	No	2		
38	Recondition conveyor belt gearbox (Shaft Mounted Speed Reducer)	No	1		
39	Refurbish Right reclaimer chute	No	5		
40	Refurbish Right reclaimer chute sliding gate valves, complete with manual spindles	No	5		
41	Replace reclaimer (250x250mm to 400x400mm) Actuator valve	No	10		
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
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<u>BUCKET ELEVATOR</u>				
42	Replace 3m Long 300x300mm Grain elevator steel duct sections that where submerged under water		PS	300,000.00
43	Replace Gain Elevator buckets that where rebmerged under water		PS	60,000.00
44	Replace Bucket Elevator Bearings and Housing that where submerged in water	No	4	
45	Recondition Bucket Elevator gearbox (Shaft Mounted Speed Reducer)	No	2	
<u>DISTRIBUTION CONVEYORS</u>				
46	Recondition pneumatic sliding valves	No	4	
47	Replace compressed air filter regulator	No	4	
48	Recondition Distribution conveyor belt gearbox (Shaft Mounted Speed Reducer)	No	2	
49	Replace solid woven 315 x 600mm wide conveyor belt	m	500	
50	Replace spiral conveyor belt pulley	No	4	
51	Replace conveyor belt HDPE rollers	No	333	
52	Replace conveyor belt troughing HDPE idlers	No	100	
53	Replace conveyor belt return HDPE rollers	No	167	
54	Refurbish Hopper (H3&4) Conveyer belt guard	No	4	
55	Refurbish Hopper (H3&4) Conveyer belt sub-assembly		PS	100,000.00
56	Replace Hopper (H3&4) conveyor belt tensioner	No	4	
<u>CYCLONES</u>				
57	Replace cyclone air lock valves	No	4	
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
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	<u>GRAIN CLEANER</u>			
58	Decommission and transport to storage existing grain cleaner	PS		120,000.00
59	Supply, Delivery and installation of 15-18 Ton Grain cleaner complete with aspiration ductwork, electrical terminations and accessories	PS		3,500,000.00
	<u>SCADA SYSTEM</u>			
60	Allowed sprovisional sum for the provision and automation of the scada systems	PS		1,200,000.00
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Bill No.3 Mechanical Equipments

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Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 4 Ventilation</u></b>				
	<b><u>VENTILATION</u></b>				
	<b><u>Replacement, reconditioning and maintenance of ventilation systems.</u></b>				
1	Major service and balancing of blower/aspiration fans	No	4		
2	Reconditioning of aspiration ductwork (replace damaged ducting, hangers and supports)		PS		850,000.00
3	Supply delivery and installation of Ø500-800mm Fan Cowel, complete with mesh screens	No	4		
4	Refurbishment of Fibreglass Louvers	No	210		
5	Allowed provissional Sum for repainting, ducting, chutes and Fans		PS		350,000.00
	<b>Carried Forward to Summary of Section No. 2</b>				R
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NORTH WEST PROVINCE**

Item No		Unit	Quantity	Rate	Amount
	<b><u>SECTION No. 2</u></b>				
	<b><u>BILL No. 7 Compressed Air</u></b>				
	<b><u>Supply, Delivery, Installation and commissioning of compressed air system.</u></b>				
1	32 l/s @ 10 bar, LE oil-lubricated medium pressure piston compressor	No	1		
2	45 l/s, FX Refrigerant Air Dryer 50 Hz	No	1		
3	Compressed Air Filter Regulator	No	15		
4	Silo Air Blaster, complete with automation cabling and intergrated to scada system			PS	1,300,000.00
5	Replace corroded compresses air piping, complete with fittings and accessories			PS	180,000.00
6	Replacement of Pneumatic acuator piston			PS	80,000.00
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	Bill No.7 Compressed Air				
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
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Item No		Quantity	Rate	Amount
	<b><u>BILL NO. 1 WATER PIPE TRENCHES (PROVISIONAL)</u></b>			
	NOTE : E.P.W.P. : All the work in this trade " <b>marked as labour intensive</b> " shall be executed in accordance with the principles of Expanded Public Works Programme, that is, labour intensive methods shall be used			
	NOTE : Unless otherwise stated all items in this bill shall be deemed to fall into Work Group No. 146 for Haylett purposes			
	<b><u>SITE CLEARANCE</u></b>			
	<b><u>Site Clearance</u></b>			
1	Clear vegetation, rubble, bushes and trees up to 1 m of girth to a width of 1.5 m from the centre of the trench to either side as well as any other obstructions if instructed by the Engineer in writing, recorded in the site instruction book and forwarded with the relevant certificates for payment purposes. This item shall include the removal of the topsoil to a depth of 75 mm and a width of 3 000 mm, the maintenance thereof until it can be re-used and the re-laying and spreading upon the completion of the pipe line to the satisfaction of the Engineer	m2	480	
	<b><u>EXCAVATIONS</u></b>			
	<b><u>Excavate by machine in all materials for trenches, compact the trench base to 90% MOD AASHTO density, backfill by hand in 150mm thickness layers using excavated material, unless otherwise instructed by the Engineer in writing, compact the layers to 90% MOD AASHTO density, dispose of all surplus and / or unsuitable material within free haul at a place as shall be instructed by the Engineer for the 63mm and 75mm diameter pipes, for the following depths:</u></b>			
2	Excavation exceeding 0.0m up to and including 1.5m	m3	528	
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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
NORTH WEST PROVINCE**

3	Extra over excavations in hard rock material (as specified in SABS 1200D item 3.1.2c.1). Quantities with positions and dates must be recorded and agreed with Engineer on site <b>before any blasting commences.</b> Those records must accompany the certificates for payment purposes. Rate shall include the spoiling of unstable hard rock material within free haul distance	m3	53	
<b><u>EXCAVATIONS AND ANCILLARY ITEMS</u></b>				
4	Make up deficiency in backfill material due to spoiling of surplus, unsuitable and / or rock material from other necessary excavations on site within free haul distance (compaction of this material measured in excavations items), quantities must be agreed upon by the Engineer and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	72	
5	Make up deficiency in backfill material due to spoiling of surplus, unsuitable and / or rock material from designated borrow pits on within free haul distance (compaction of this material measured in excavations items), quantities must be agreed upon by the Engineer and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes	m3	72	
6	Compaction in road reserves to 95% MOD AASHTO density with soilcrete using a ratio of 1:10, rate shall include all materials and labour, positions, dates and quantities shall be recorded in the site instruction book and accompany the certificates for payment, (in each instance 4500mm from road centre line in both direction (9000mm length x trench width x trench depth less 300mm from street level must be cast), all trenches in street crossings must have soilcrete filling	m3	73	

**DEALING WITH EXISTING SERVICES**

Dealing with services that intersect or adjoin the pipe trenches involved in this contract

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NORTH WEST PROVINCE**

**Excavate by hand in soft material to expose existing services crossing the road or shoulder areas and provide permanent or temporary protection to be approved by the Engineer and recorded in the site instruction book, with position for the following items and forwarded with the relevant certificates for payment purposes, these items must be shown on the "record" drawings as well which are to be handed to the Engineers soffice at completion of the project**

7	Electrical cables crossing the new trenches	No	8
8	Post office cables and pipes crossing the new trenches	No	2
9	Other services not specified and / or not indicated on the relevant drawings but encountered during the road construction, each such item must be recorded by the Engineer in the site instruction book as to the positions and nature of such services and forwarded with the relevant certificates for payment purposes	No	5
10	Excavate by hand in soft material to expose existing services adjoining the new road and shoulder areas and provide permanent or temporary protection, length and position s to be confirmed by the Engineer and recorded in the site instruction book and fowarded with the relevant certificates for payment purposes	m3	20
<b><u>SURFACE FINISHING</u></b>			
11	Re-instate all surfaces encountered in the process of construction work, with all existing layer works as well as asphalt, concrete or paved block finishing to original conditions prior to the start of the contract, including the importation of material if necessary and the compaction thereof to 90% MOD AASHTO density	m2	100

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**PROPOSED MECHANICAL WORKS  
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NORTH WEST PROVINCE**

**PROVISION FOR BEDDING AND COVERING**

**Provision of bedding and covering material from other excavations with 0.5km on this site**

12	Selected granular material for bedding as specified for Class B bedding, placed and compacted in uniform layers as pipe barrel on both sides of the pipes for bedding cradle, ensuring that no stones are amongst the materials, the Engineer must inspect, approve and record each section of bedding in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	72	
13	Selected fill material for blanket as specified for Class A, B and C beddings, compacted uniformly in layers with light compaction directly over pipes, ensuring that no stones are amongst the blanket materials, the Engineer must inspect, approve and record each section of 300mm thick covering fill in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	72	

**Provision of bedding and covering material from designated borrow pits**

14	Selected granular material for bedding as specified for Class B bedding, placed and compacted in uniform layers as pipe barrel on both sides of the pipes for bedding cradle, ensuring that no stones are amongst the materials, the Engineer must inspect, approve and record each section of bedding in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	150	
15	Selected fill material for blanket as specified for Class A, B and C beddings, compacted uniformly in layers with light compaction directly over pipes, ensuring that no stones are amongst the blanket materials, the Engineer must inspect, approve and record each section of 300mm thick covering fill in the site instruction book and each approval must accompany the relevant certificates for payment purposes	m3	72	

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**PROPOSED MECHANICAL WORKS  
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NORTH WEST PROVINCE**

16 19mm Stones to be used for bedding if requested by the Engineer in writing in the site instruction book. Item shall cover the cost of acquiring the material regardless of the distance, delivering to points alongside the trenches and the disposal of material displaced by such importation

m3

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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
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Item No		Quantity	Rate	Amount
<b><u>BILL NO.3 WATER MAINS (PROVISIONAL)</u></b>				
NOTE : E.P.W.P. : All the work in this trade " <b>marked as labour intensive</b> " shall be executed in accordance with the principles of Expanded Public Works Programme, that is, labour intensive methods shall be used				
NOTE : Unless otherwise stated all items in this bill shall be deemed to fall into Work Group No. 146 for Haylett purposes				
<b><u>WATER PIPES</u></b>				
<b><u>Supply and lay, handle, bed on Class B (or as specified by the Engineer) bedding, joint test, cut pipes where necessary and disinfect various water pipes of the following sizes and types:</u></b>				
1	90mm diameter OD Class 9 uPVC water pipe	m	300	
2	75mm diameter OD Class 9 uPVC water pipe	m	250	
3	50mm Diameter OD type 4 HDPE Class 10 water pipes	m	150	
4	20mm Diameter OD type 4 HDPE Class 10 water pipes	m	100	
<b><u>SPECIALS AND FITTINGS</u></b>				
<b><u>Supply and lay, handle, bed on Class B (or as specified by the Engineer) bedding, joint test, cut pipes where necessary and disinfect the following items:</u></b>				
5	90 mm diameter x 90 mm equal tee	No	5	
6	75 mm diameter x 75 mm equal tee	No	4	
7	90 mm diameter x 75 mm unequal tee	No	3	
8	75 mm diameter x 50 mm unequal tee	No	2	
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9	90 mm diameter x 20 mm diameter Saddles	No	10
10	75 mm diameter x 20 mm diameter Saddles	No	10
11	90mm x 90 degree bend	No	16
12	75 mm x 90 degree bend	No	5
13	75 mm diameter AVK valve	No	6
14	50 mm diameter Gate valve	No	3
15	75 mm diameter x 50 mm Reducer	No	4
16	50 mm diameter x 20 mm Reducing Tee	No	10
17	Valve boxes for 90 mm and 75 mm diameter valves as indicated on the drawing	No	4
18	Construct a Valve Chamber for 90 mm Diameter control valves as indicated on purposes	No	3
<b><u>WATER ANCILLARY ITEMS</u></b>			
19	Break into and connect to existing water lines, at positions and levels indicated on the relevant plans, sections and details on the drawings. Make good all connections and ensure water tight sealing of the existing pipes after connection, the rate shall include all excavations, backfill and re-compaction, compaction to be 90% MOD AASHTO density	No	3
20	Anchor thrust blocks and pedestals using mass concrete of 15 Mpa mix strength where required by the pipe bends, tees and end-caps or where the Engineer requested and recorded in the site instruction book and forwarded with the relevant certificates for payment purposes, rate shall include the cost of concrete, reinforcement, formwork, excavation, backfill, compaction etc, for specification of thrust block sizes SABS 1 200 L drawings L3.2, L3.3 and L3.4	m3	15
21	Supply and install new 80mm diameter "Cosmos Meinecke" bulk water meter complete as per manufacturers specifications	No	1

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**PROPOSED MECHANICAL WORKS  
AT SPRINGBOK PAN SILOS  
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**CONCRETE HOUSING STRUCTURES**

22	Construct reinforced concrete borehole housing structures	No	1
23	Construct razor mesh fencing to secure the concrete housing structures yards and all amenities inside the yards (size 10,000 x 10,000mm)	No	1

**BOREHOLES**

24	Clean and test existing boreholes	No	1
25	Re-equip the existing boreholes with submersible pump and electrical motor	No	1
26	Construct Borehole Pump Cap	No	1

**WATER STORAGE**

27	Construct 65,000L pressed steel storage tank as supplied by Abeco Tanks or similar manufacturer including all inlet and outlet connections associated with the construction of the tank and pressure regulating pump to maintain a steady pressure of 3 bars at the pipe outlets	No	1
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**PROPOSED MECHANICAL WORKS  
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Item No		Unit	Quantity	Rate	Amount
	<b><u>BILL NO.3 SECURITY UPGRADES (PROVISIONAL)</u></b>				
	NOTE : E.P.W.P. : All the work in this trade " <b>marked as labour intensive</b> " shall be executed in accordance with the principles of Expanded Public Works Programme, that is, labour intensive methods shall be used				
	NOTE : Unless otherwise stated all items in this bill shall be deemed to fall into Work Group No. 146 for Haylett purposes				
	<b><u>ALUMINIUM WINDOWS RAILWAY OFFICE</u></b>				
1	Window size 900 x 900 (W01)	No	5		
2	Window size 1500 x 1200 (W02)	No	8		
3	Window size 900 x 1,200 (W03)	No	3		
4	Window size 1,511 x 1,854 (W03)	No	8		
	<b><u>DOOR</u></b>				
5	Double Volume Door	No	1		
6	Single Door	No	3		
7	Tunnel Entrance Door	No	2		
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	Bill No. 3				
	Bill No.3 Security Upgrades (Provisional)				
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	CONTINGENCY AT 10%		R
	SUB-TOTAL		R
	Add: VAT at 15%		R
	TOTAL		R
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