

SOUTH AFRICAN FARMERS DEVELOPMENT ASSOCIATION (SAFDA)

CONTRACT NO.: SAFDA-MP-0001 (2022/2023)

APPOINTMENT OF A CONTRACTOR FOR THE REHABILITATION OF MALELANE/NKOMATI SUGARCANE FARMS OFFICE BUILDINGS AND STORAGE FACILITIES INFRASTRUCTURE TO SUPPORT THE OPTIMUM OPERATIONALIZATION OF SUGARCANE FARMS WITHIN NKOMAZI MUNICIPALITY, EHLANZENI DISTRICT MPUMALANGA PROVINCE

PORTION 2: CONTRACT

PART C3: SCOPE OF WORK

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SCOPE OF WORK

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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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C3.1 DESCRIPTION OF THE WORKS

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C3.1 DESCRIPTION OF THE WORKS

3.1.1 Employer's objectives

The employer's objectives are to appoint the Contractor for the rehabilitation of Malalane/Nkomati FPSU's irrigation systems production infrastructure to support the optimum operationalization of sugarcane farms within Nkomazi Municipality, Ehlanzeni District, Mpumalanga Province

3.1.2 Description of the Works

The works to be carried out under this contract comprise of the rehabilitation of Malalane/Nkomati FPSU's irrigation farms offices and storage infrastructure to support the optimum operationalization of sugarcane farms within Nkomazi Municipality, Ehlanzeni District, Mpumalanga Province

3.1.3 Extent of the works

The work to be carried out entails:

The contractor shall also undertake the construction process as outlined in the bill of quantity for the completion of the project.

The works shall comprise of the following:

a) Site Establishment: Clear, stripped and grub all plant materials, trees' root and topsoil of existing formation only on designated site where there is any need of new development to take place;

b) Topographical survey: Conduct survey to facilitate runoff planning, bulk earthwork and structure elevation using dumpy level or Total Station where needed;

c) Construction and rehabilitation of on farm office buildings, storage facilities and machinery sheds inclusive of all the concrete work, steelwork erection, roofing and side cladding, access door & associated sundries;

d) Supply & installation of finishers to the structure including guttering, down pipes, tanks, tank stands & bases etc;

f) Rehabilitation of plumbing and water supply (connection with mains/pressure line, supply and erection of pressure tanks and connections to buildings);

g) Electrical Installation and providing a certificate of compliance for internal electrification inside the structure;

The description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor in this contract. Approximate quantities of each type of work are given in the schedule of quantities.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

3.1.4 Period of completion of works

The above works in entirety must be completed within the period of 4 **months**. It is therefore the contractor's responsibility to ensure that this will be achieved, failing which penalties will be charged at a rate according to latest document from DPW for **each calendar** day which the contractor falls behind, will be charged until such time that works are completed in full.

3.1.5 Location of the works

The project is located around Tonga area in the Nkomazi Local Municipality, Ehlanzeni District in the Mpumalanga Province. The locality map is attached as Annexure B. **Geographic location:** Latitude 25° 41' 14.2" S, Longitude 31° 46' 49.3" E

3.1.6 Temporary works

Contractor's offices, storage sheds, latrines, barricading of Works shall be located in an approved position and subject to the approval of all authorities concerned. Safety & Security of the contractor's temporary works shall be to his own discretion. The safety of the Employer and Employers representatives will also be the responsibility of the Main Contractor. All reasonable steps should be taken to ensure the safety of all persons on site.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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CONTRACT NO.: SAFDA-MP-0001 (2022/2023)

**APPOINTMENT OF A CONTRACTOR FOR THE
REHABILITATION OF MALELANE/NKOMATI SUGARCANE
FARMS OFFICE BUILDINGS AND STORAGE FACILITIES
INFRASTRUCTURE TO SUPPORT THE OPTIMUM
OPERATIONALIZATION OF SUGARCANE FARMS WITHIN
NKOMAZI MUNICIPALITY, EHLANZENI DISTRICT
MPUMALANGA PROVINCE**

C3.2 PROJECT SPECIFICATION

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

3.2.1 General (PART A)

3.2.1.1 APPLICATION OF CLAUSES

These Model Preambles for Trades, and any Supplementary Preambles, shall be read in conjunction with and shall form part of the descriptions of items in the bills of quantities.

Where descriptions or Supplementary Preambles in the bills of quantities differ from these Model Preambles for Trades, the descriptions or Supplementary Preambles in the bills of quantities shall take precedence. Where supplementary preambles differ from descriptions in the bills of quantities, the descriptions in the bills of quantities shall take precedence.

Except where otherwise stated, all preambles contained in any individual Trade Preamble shall apply equally to any work of a similar nature in all other trades.

3.2.1.2 ABBREVIATIONS

The following abbreviations shall apply:

AASHTO - American Association of State Highway and Transportation Officials

AISI - American Institute of Steel Industries

BS - British Standard

CKS - Co-ordinating Specifications issued by the Central Co-ordinating Committee under the auspices of the South African Bureau of Standards

CSIR - Council for Scientific and Industrial Research

SANS - South African Bureau of Standards and the number following shall refer to the relevant specification or code of practice as the case may be.

MATERIALS AND WORKMANSHIP

Materials and workmanship shall be the best of their respective kinds. Only new and undamaged materials shall be used in the Works. Materials to be permanently installed into the works shall not be used for any temporary purposes on site. Work shall be to the approval of the Principal Agent and shall be executed in accordance with the relevant manufacturer's written recommendations and instructions where applicable.

3.2.1.3 PROPRIETARY PRODUCTS

For the purposes of submission of tenders, rates for items described in the bills of quantities by trade names, catalogue references, etc. shall be for the particular type and manufacture specified.

The approval of the Principal Agent shall be obtained prior to any substitution and where products or materials, etc. other than those specified are used, adjustments in the rates will be made if necessary.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

3.2.1.5 ASSEMBLING

Rates for manufactured items shall include assembling complete and handing over in proper working order.

3.2.1.6 REFERENCES IN DESCRIPTIONS

Any references given in brackets at the end of certain descriptions shall refer to the relevant references on the drawings or schedules.

3.1.2.7 WATER

Water shall be clean and free from injurious amounts of acids, alkalis, organic matter and other substances and shall be suitable for its intended use.

3.1.2.8 APPLICATION OF THE NATIONAL BUILDING REGULATIONS

All work shall be executed in accordance with the requirements of SANS 0400.

3.1.2.10 ACCURACY IN BUILDINGS

The dimensional and positional accuracy of the buildings and their component parts shall comply with Grade II requirements of SANS 0155 unless otherwise stated.

3.1.2.11 REFERENCES TO OTHER DOCUMENTS

References in these "Model Preambles for Trades" to other documents, including SANS Specifications

C3.2.2 B Alterations

C3.2.2.1b ALTERATIONS

In taking down and removing existing work the utmost care shall be observed to prevent any structural or other damage to remaining portions of the building. The Contractor shall ensure the stability of all structures during alteration work.

Special care shall be exercised during the progress of the work to ensure that any electrical installations, water supply pipes, telephone and other services which may be encountered are not interfered with and notice shall be given to the Principal Agent if any disconnection or alterations become necessary.

The Contractor shall take all precautions necessary to prevent any nuisance from dust whilst carrying out the work.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C.3.2.2b MATERIALS FROM THE ALTERATIONS, CREDIT, ETC

Materials recovered from the alterations (except where described as to be re-used or to be handed over to the Employer) will become the property of the Contractor, who may allow credit in respect thereof where provided for in the bills of quantities. Such materials shall not be re-used in new work without written permission from the Principal Agent.

Materials described as “removed” shall be removed from the site immediately.

Materials described as “handed over to the Employer” shall be carefully dismantled where necessary, neatly stored under cover on the site where directed and protected from damage, until required.

Materials described as “set aside for re-use” shall be carefully dismantled where necessary, cleaned, neatly stored under cover and protected from damage until required for re-use. Any damage caused to such materials during removal, storage or refixing shall be made good at the Contractor's expense.

C3.2.3b DISPOSAL OF DEBRIS, ETC

The Contractor shall be responsible for the removal from the site of all materials, debris and rubbish resulting from the alterations.

C.3.2.4b MAKING GOOD DAMAGED WORK

The Contractor shall make good in all trades to existing work where damaged or disturbed through the alterations with all necessary new materials to match the existing.

C.3.2.5b FORMING NEW OPENINGS OR ALTERING OPENINGS IN EXISTING WALLS

Where new openings are formed or openings altered in existing walls, the wall above the opening shall be broken out and a new brick, in situ concrete or prestressed concrete lintel inserted, complete with all necessary reinforcement, formwork, turning piece, etc., the jambs and portions of openings as described shall be built up with new brickwork or blockwork properly toothed and bonded to existing, cavities of hollow walls shall be closed where necessary and finishes shall be made good all round and into reveals.

C3.2.6b BUILDING UP OPENINGS

Where existing openings are given in number as built up, the existing surfaces all round shall be prepared as necessary, brickwork or blockwork properly toothed and bonded to existing, wedged up to underside of existing lintel and finishes shall be made good on both sides.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.C Earthworks

C3.2.1c DEMOLITION

Nature and extent

Descriptions of demolitions give a rough guide only as to the scope of the work. Tenderers are therefore advised to visit the site before submitting a tender and to acquaint themselves with the nature and extent of the work to be done and the value of recoverable materials which are not to be re-used or handed over to the Employer. Unless otherwise stated, loose furniture, kitchen and other equipment, apparatus, machinery, etc shall remain the property of the Employer and the removal thereof does not fall within the scope of this Contract.

The Contractor shall completely demolish the buildings, etc in a careful, skilful, practical and safe manner down to 150mm below ground level.

Demolitions shall include breaking up and removing: all floors and surface beds; all external screen walls, steps, ramps, aprons, surface water channels, rainwater sumps, gulleys, etc attached to the building to be demolished; all services, manholes, etc in ground to a point not less than 1 m beyond the perimeter of the building including plugging off ends of all remaining pipes, drains, etc, filling in holes where necessary and ramming and levelling to ground level.

Where only a portion of a building is to be demolished, it shall be done without damage to the remaining portion of the building. Any such damage shall be made good by the Contractor at his own expense.

Notices, etc

The Contractor shall, before commencing work, obtain all necessary authorisation for carrying out the work, by whatever means including the use of pneumatic equipment or blasting, give all necessary notices and pay all charges and fees in connection therewith. He shall also comply with all regulations pertaining to rodent extermination and he shall obtain the requisite Rodent Extermination Clearance Certificate and pay all necessary fees. All receipts and certificates shall be left in the safekeeping of the Principal Agent. All the above mentioned charges and fees shall be paid by the Contractor and included in his prices.

The Contractor shall give ample notice to the Principal Agent and Local Authorities regarding any disconnections necessary prior to the removal or interruption of electrical or telephone cables, water and sanitary services, etc.

Loss

After the handing over of the site to the Contractor, the full risk of any loss or damage to buildings to be demolished shall be the responsibility of the Contractor and he shall take

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

such precautions as he deems necessary against such loss or damage.

Materials from the demolitions, credit, etc.

Materials recovered from the demolitions will become the property of the Contractor, who may allow credit in respect thereof where provided for in the bills of quantities. Such materials shall not be re-used in any new work without written permission from the principal Agent.

Disposal of debris, etc.

The Contractor shall be responsible for the removal from the site of all materials, rubble, debris and rubbish resulting from the demolitions.

C.3.2. MATERIALS

Soil insecticides shall comply with SANS Specification 1165.

C3.2.1.1d CODES OF PRACTICE

Work shall be carried out in accordance with “The application of soil insecticides for the protection of buildings” – SANS Code of Practice 0124.

C3.2.2.E FILLING, ETC.

C.3.2.2.1e Filling generally

Filling over site shall be spread, levelled, watered and consolidated in layers not exceeding 300mm.

C.3.2.F Specifications for Concrete Work Generally(PART F)

All in situ concrete work (plain and reinforced) shall comply with SANS 1200G supplemented by the following Project Specification. Where SANS 1200G and the Project Specification are in conflict, the Project Specification shall take precedence.

Wherever the term “Engineer” appears in SANS 1200G or in the following Project Specification this shall be deemed to mean the Principal Agent's representative responsible for this section of the Works.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.2 G FORMWORK

C3.2.1g Classification of Finishes

(a) Rough.

No treatment of the surface of the concrete will be required after the striking of the formwork. The finish of the concrete need not be more accurate than Degree of Accuracy III.

(b) Smooth.

Imperfections such as small fins, bulges, irregularities, surface honeycombing and surface discolorations shall be made good and repaired by Approved methods. The finish of the concrete shall be accurate to Degree of Accuracy II.

(c) Special

(i) Smooth and Fair

This class of finish requires the highest standard of concrete work, formwork, accuracy and technique.

Concrete placed in any one structure to give this finish shall be made from cement and aggregates from the same source. The grading of the aggregate shall be kept constant.

Formwork shall be metal, timber or other approved material in new condition designed and constructed to suit the particular job in hand and with shutter bolts and joints between panels in a regular pattern approved by the Principal Agent. Joints between panels shall be watertight, but the use of sealing tape which will mark the concrete shall not be permitted.

Designated joints shall be in the position and of the details shown upon the working drawings. Should the Contractor wish to incorporate further construction joints or amend the position of those shown to suit his own requirements or technique, this may be allowed provided that all design considerations are met, that the prior approval of the Engineer is obtained and that any extra costs are borne by the Contractor.

In the case of horizontal construction joints, the top edge of the concrete on the smooth and fair finished side shall be struck true and level with a trowel.

Special care shall be taken to ensure that forms are clean and free of all pieces of tying wire, nails and other debris at the time of concreting.

The standard of finish shall be such that upon removal of the formwork, no further treatment, other than treatment of bolt holes if required, shall be found necessary to provide a straight, smooth and uniform finish of good quality and consistent colour and texture, free of all honeycombing, etc. Any defect shall be made good by either removing or replacing the defective concrete or, in certain instances only, by patching.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C.3.1 H CONCRETE

C.3.2.1h Prescribed mix concrete

Where prescribed mix concrete is specified the proportions of constituents, the maximum size of coarse aggregate and the estimated minimum compressive strength shall be as specified in the following table:

Class of Concrete	Estimated minimum compressive strength in MPa at 28 days	Maximum nominal size of coarse aggregate in mm	Proportions of Constituents		
			Cement (Parts)	Fine aggregate (Parts)	Coarse aggregate (Parts)
A	7	37,5	1	4	8
B	15	19	1	3	5
C	20	19	1	2,5	3,5

Cement shall be ordinary CEM 1 32,5 cement.

Should cement and aggregates be mixed by volume, the contents of a 50 kg sack of cement shall be taken to be 0,033 m³

Notwithstanding the requirements contained in SANS 1200G, the Principal Agent may permit certain items of non-structural concrete to be mixed by hand.

If the concrete is mixed by hand, it shall first be mixed in a dry state on a clean non-absorbent surface until it is of uniform colour and consistency. Just enough water shall then be added to permit mixing and working, at which stage the concrete shall continue to be mixed until it is of uniform colour and consistency.

C3.2.2h Strength concrete

Where strength concrete is specified it shall be designated by its specified strength followed by the size of stone used in its manufacture, e.g. 30 MPa/19mm.

The water/cement ratio shall be as Table 5 of moderate exposure conditions.

C3.2.3h “No-Fines” concrete

“No-fines” concrete shall consist of one part cement to eight parts aggregate graded from minimum 6mm to maximum 13mm size. The quantity of water used shall be just sufficient to form a smooth grout which shall completely coat every particle of aggregate and also to ensure that the grout is just wet enough to form a small fillet at each point of contact between the stones. “No-fines” concrete mixed with excessive water, which results in a thin grout which drops off the aggregate, will be rejected.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

"No-fines" concrete shall be placed in its final position within 20 minutes of mixing and shall be placed in continuous horizontal layers. Concrete shall be spade worked sufficiently to ensure that it fills the forms but vibrating, tamping or ramming will not be permitted

C3.2.4h Ready-mixed concrete

The use of ready-mixed concrete and the acceptability of test results from a central concrete production facility shall be subject to the written approval of the Engineer.

C3.2.5h AGGREGATES OF LOW DENSITY

Aggregates of low density shall comply with SANS 794.

C3.2.6h SUPERVISION

A competent and experienced foreman shall superintend personally the whole of the concrete construction and pay special attention to:

- (a) The quality, testing and mixing of materials,
- (b) The placing and compaction of concrete,
- (c) The construction and removal of formwork and
- (d) The sizes and position of reinforcement

The Contractor shall obtain the permission of the Principal Agent before commencing concreting of foundations or reinforced structure.

No inspection, approval, authorisation to proceed, comment or instructions following from such an inspection, or failure of the Principal Agent to comment on any particular aspect of the work, shall be deemed to relieve the Contractor in any way from his obligation to ensure through his own supervision that the work is constructed in every way in accordance with the Drawings, Specification and Conditions of Contract, nor relieve him from his obligations to make good any fault or defect, nor shall it be deemed that there is any obligation on the Principal Agent to inspect all or any part of the Works or that such inspection is necessarily complete in every respect.

C3.2.7i GENERAL

C3.2.7.1i Concrete

Rates for concrete work shall include all "construction joints" other than "designated joints" as defined in SANS 1200G clause 2.4.3 which are measured separately, for the design of strength concrete mixes and all testing of concrete and materials other than compressive strength testing of concrete samples taken from concrete being placed in the Works. The Contractor shall only be entitled to payment for those samples and compressive strength tests called for by the Engineer and which pass the test requirements.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.7.2i Formwork

Formwork to slabs and beams shall be cambered where required.

Rates for formwork to soffits shall include propping not exceeding 3,5 m high unless otherwise described. Formwork to walls and columns is not exceeding 3,5 m high above bearing level unless otherwise described.

C3.2.7.3i Reinforcement

Standard fabric reinforcement shall be as included in Table 1 of SANS 1024 and shall have 300mm wide laps.

The mass of binding wire is not included in the mass of the reinforcement and the cost thereof shall be included in the rates for the reinforcement.

C3.2. J Precast Concrete

C3.2.1j MATERIALS

Materials shall comply with the following specifications and requirements:

C3.2.2j Material SANS Specification

Precast concrete paving slabs

Cement, water, aggregates and reinforcement shall be as described under D. CONCRETE, FORMWORK AND REINFORCEMENT.

C3.2.3j CONCRETE

Concrete shall be as described under D. CONCRETE, FORMWORK AND REINFORCEMENT and unless otherwise stated shall be prescribed mix concrete Class C but with coarse aggregate of an appropriate size.

C3.2.4j MOULDS

Before each casting, moulds shall be coated with a suitable release agent which will not in any way discolour the surface of the finished product or impair its strength. Where items are described as "finished smooth from the mould" or as "precast terrazzo", moulds shall be made to a high degree of accuracy and shall be such as to leave even and smooth surfaces.

C3.2.5j CASTING, ETC

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Items shall be suitably cured, shall not be handled whilst still green and shall not be built in within 21 days of casting.

C3.2.6j REINFORCEMENT

Unspecified reinforcement required for manufacturing, handling and erection purposes and for reinforcing projecting and other unwieldy portions of blocks shall be provided by the Contractor at his discretion.

C3.2.7j BEDDING, JOINTING AND POINTING

Blocks shall be bedded and jointed solidly in Class I mortar as described under F. MASONRY and shall be pointed with slightly keyed joints.

C.3.2.8j GENERAL

Precast concrete work shall include reinforcement required for manufacturing, handling and erection purposes, steel rod or wire hooks and/or mortices for lewis bolts required for handling and transporting, any necessary temporary propping and strutting and bedding, jointing and pointing.

C.3.2.9j Masonry

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

F.1 MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Type
Burnt clay masonry units	227	-
Calcium silicate masonry units	285	-
Lime for use in building	523	Hydrate bedding mortar lime
Sand for plaster and mortar	1090	-
Concrete masonry units	1215	-
Prestressed concrete lintels	1504	-
Burnt clay paving units	1575	-
Metal ties for cavity walls	28	-
Masonry cement	ENV 413-1	MC 12,5
	CKS Specification	
Concrete flooring tiles	208	
	SABS Code of Practice	
Concrete masonry construction	0145	
The structural use of masonry	0164	
Masonry walling	0249	

C3.2.10j SAND

Sand shall be washed where necessary and screened through a 2,4mm mesh sieve.

C3.2.11j IBURNT CLAY BRICKS

Burnt clay bricks shall be of nominal size 222 x 106 x 73mm unless otherwise stated.

Common bricks shall be General Purpose bricks.

Extra hard burnt bricks shall be General Purpose (Special) bricks.

Facing bricks shall exhibit a liability to efflorescence not in excess of "Slight" and water absorption when tested in conformity with the requirements of SANS 227 shall not exceed 14%.

Particular care shall be taken to preserve arises and faces of facing and paving bricks during transit and handling.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.12j CONCRETE BRICKS

Concrete bricks shall have a minimum compressive strength of 7 MPa.

C3.2.13j QUARRY TILES, ETC

Quarry, cement and similar tiles shall be of approved manufacture, even in shape and size, free from cracks, twists or blemishes and uniform in colour.

C3.2.14j WIRE TIES

Wire ties shall be of galvanized steel of the single wire type for solid walls and either the "Butterfly" or Modified PWD type for hollow walls. Ties shall be of sufficient length to allow not less than 75mm of each end to be built into brickwork or embedded in concrete.

C3.2.15j BRICKWORK REINFORCEMENT

Brickwork reinforcement shall be manufactured from hard drawn steel wire conforming to BS 785 and shall consist of two 2,8mm diameter main wires with 2,5mm diameter cross wires at 300mm centres welded at intersections.

Brickwork reinforcement shall be lapped not less than 300mm at end joints and for a length equal to the width of the widest reinforcement at intersections.

F.8 MORTAR

Mortar shall comply with the following table:

1	2	3	4
Mortar Class	Masonry Cement kg	Lime	Sand (measured loose and damp) max
I	50	0 – 10	130
II	50	0 – 40	200
III	50	0 – 80	300

Mortar shall be Class II unless otherwise specified.

Mortar plasticizers may only be used with the approval of the Principal Agent.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The materials shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated.

Mortar shall be produced in such quantities as can be used before commencement of set and no mortar that has set shall be used.

C3.2.16j COMPO MORTAR

Compo mortar shall be Class III mortar in accordance with clause F.8 but with a lime content of 80 l.

The lime and sand shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated.

Immediately before use, the cement shall be mixed in and the requisite amount of water added.

Compo mortar shall be produced in such quantities as can be used before commencement of set and no compo mortar that has set shall be used.

C3.2.17j BRICKWORK

Wherever practicable, brickwork shall be built in stretcher bond. Unless legitimately required to form bond, no false headers shall be used. English bond shall only be used where specifically so indicated or where stretcher bond is not practicable.

Brickwork, unless otherwise described, shall be built in Class II mortar.

Bricks shall be laid on a solid bed of mortar and all joints shall be grouted up solid.

The brickwork shall be carried up in a uniform manner, no part being raised more than 1,2 m above adjoining work.

Where necessary, bricks shall be wetted before being laid and the course of bricks last laid shall be well wetted before laying a fresh course upon it.

Walls in thicknesses of more than one skin shall have at least five wire ties per square metre. Linings to concrete, unless otherwise specified, shall be tied to the concrete with at least five wire ties per square metre.

Hollow walls, unless otherwise specified, shall be built of two half brick skins with cavity between, tied together with at least five wire ties per square metre.

The cavities shall be kept free of all rubbish, mortar droppings and projecting mortar.

Mortar joints to brickwork shall be not less than 8mm or more than 12mm thick.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.18j BLOCKWORK

Unless otherwise described, all blockwork shall be built in stretcher bond. Whole blocks shall be used except where bats or closers are required to form bond.

Blockwork, unless otherwise described, shall be built in Class II mortar.

Solid blocks shall be laid on a solid bed of mortar and all joints shall be grouted up solid.

Hollow blocks shall be laid in shell bedding, i.e. only the inner and outer shells of the blocks shall be covered with mortar. Vertical joints shall be similarly formed.

The blockwork shall be carried up in a uniform manner, no part being raised more than 1,2 m above adjoining work.

Clay blocks shall be wetted before being laid and the course of blocks last laid shall be well wetted before laying a fresh course upon it.

C3.2.18j CENTRES AND TURNING PIECES

Centres and turning pieces to soffits of arches and lintels shall be left in position for not less than 14 days.

C3.2.19j FACE BRICKWORK

Face brickwork shall be built in stretcher bond, unless otherwise specified, to a true and fair face. Perpend shall be vertically aligned.

Facing bricks shall be mixed to ensure that the proper blending of bricks within the colour range of each facing brick being used is obtained.

C3.2.20j PAVINGS, SILLS, COPINGS, ETC

Clay bricks and tiles shall be wetted before fixing and shall be solidly bedded and jointed in Class I mortar and pointed with slightly keyed joints.

C3.2.21j Waterproofing

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

G.1 MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Type and/or Additional Requirements
Bituminous damp-proof courses	248	Type FV
Polyolefin sheet in damp-proof courses to walls, sills, etc	952	Type B
Ditto, to floors and basements	952	Type C
Mastic asphalt for roofing	297	-
Mastic asphalt for damp-proof courses and tanking	298	-
Bituminous roofing felt	92	Type 60
Polyolefin sheet for the waterproofing of flat roofs	952	Type A
Chloroprene rubber sheet (for waterproofing)	580	At least 2,5 mm thick and 1200 mm wide
Sealing compounds with two-component polysulphide base	110	Type 2 Gun Grade
Sealing compounds with two-component polyurethane base	1077	-
	SABS Code of Practice	
The waterproofing of buildings	021	
The installation of profiled roof and side cladding	0237	

C3.2.22j WATERPROOFING TO ROOFS, BASEMENTS, ETC

Waterproofing to roofs, basements, etc shall be carried out by workmen who are experienced in this type of work.

C3.2.23j DAMP-PROOF COURSE TO WALLS

All joints in damp-proof course to walls shall be lapped a minimum of 150mm except at junctions and corners where the lap shall equal the full thickness of the wall.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.K Roof Coverings, etc.

C3.2.1K MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification
Concrete roofing tiles	542
Clay roofing tiles	632
Softwood bracker and battens	653
Fibre-cement sheets: profiled and flat	685
Aluminium alloy and toughened sheets	903
Zinc coatings	934
Polyethylene sheeting for roof underlay	952
Metal roofing tiles	1022
Glass reinforced polyester laminated sheets (profiled or flat)	1150
Fasteners for roof and wall coverings in the form of sheeting	1273
Materials for thermal insulation of buildings	1381
	BS Specification
Sheet zinc	849
Sheet lead	1178
Sheet aluminium	1470
Sheet copper	2870
	SABS Code of Practice
Fixing of concrete interlocking roofing tiles	062

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.2k GALVANIZED STEEL PROFILED SHEETS, ETC

Galvanized steel profiled sheets, ridge and hip coverings, etc shall be coated with a minimum of 275 g zinc per m² and shall be free of white rust.

C3.2.3K GALVANIZED SHEET IRON

Galvanized sheet iron shall be rolled steel sheet coated on both sides with a minimum of 275 g of zinc per m² and shall be free from white rust.

C3.1H.4 NAILING AND SCREWING

Where nailing and screwing is required:

- galvanized iron nails and screws shall be used for galvanized sheet iron and sheet zinc
- copper or copper alloy nails and screws for sheet copper and sheet lead
- aluminium alloy or stainless steel nails and screws for sheet aluminium.

C3.2.4k LAPS

Sheet metal flashings shall have 100mm laps and linings to valleys, secret gutters, etc 225mm laps.

C3.2.5k GENERAL

Rates for profiled sheet roofing and rolled edges, ridge and hip coverings, flashing pieces, etc of metal, fibre-cement, plastic, etc shall include fixing accessories.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2L Carpentry Joinery

C3.2.1L MATERIALS

Materials shall comply with the following specifications and requirements:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Contract: SAFDA-MP-0001 (2022/2023)
Part C3: Scope of Work
Section C3.1 Description of Works

Material	SABS Specification	Grade of Class
Softwood general structural timber	563	Stress grade 4
Softwood engineering timber	1245	As specified
Softwood studs for timber frames in buildings	1146	-
Softwood bracing and battens	653	-
Softwood flooring boards	629	Flooring grade Heavy flooring boards
Softwood joinery timber	1359	-
Hardwood joinery timber	1099	Knotty grade
Hardwood strip flooring	281	As specified
Wooden ceiling and panelling boards	1039	As specified
Laminated timber (glulam)	1460	As specified
Gypsum plasterboard	266	-
Wood fibreboard	540	As specified
Wood-wool panels (cement bonded)	637	-
Fibre-cement sheets: profiled and flat	685	As specified
Fibre-cement boards	803	As specified
Plywood and composite board	929	As specified
Particle board: highly moisture-resistant exterior and flooring type	1300	-
Particle board: interior type	1301	-
Decorative laminates	1405	High pressure
Wooden doors (flush)	545	Class 4 Dry interior quality
Materials of thermal insulation of buildings	1381	-
Mild steel nails	820	-
Metal screws for wood	1171	-
Creosote	538	As specified

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Softwood shall bear the relevant SANS mark and shall be ordered in the sizes in which it will be used as no scantlings of marked timber will be allowed. Should SANS marked timber be unavailable, the Principal Agent's prior permission shall be obtained before using unmarked timber.

C3.2.2L HARDWOODS

All hardwoods shall be specially selected, well-seasoned, free from sapwood and well kiln dried. Meranti shall be Red or Medium Brown Meranti, even in grain and colour, selected from "Standard and Better" quality from Malaysia.

All timber used on the site, whether for permanent or temporary work, shall be free of borer or other beetle and termite infection. If the work under this contract falls within an area designated under Government Notice R2577 of 1978-12-29, permanent softwood fixed in the building shall be treated against borer, etc in accordance with Government Notice R451 of 1969-03-28 using Class B or C preservative. The type of preservative used shall be appropriate to the use of the timber. Any prescribed treatment shall comply with SANS 05.

When treated timbers are cut, the cut surfaces shall be effectively brushed with at least two coats of preservative solution.

C3.2.3L CONSTRUCTION IN GENERAL

Where applicable, construction methods shall comply with SANS 082. Boarded floors shall be laid in accordance with SANS 043. Roof trusses shall be manufactured, erected and braced in accordance with SANS 0243.

C3.2.4L STRUCTURAL TIMBER

Timbers generally shall be in single lengths and jointing of timbers will only be permitted when the required length is unobtainable. Only the absolute minimum of joints to obtain a particular length will be permitted and such joints are to be evenly spaced along the length of the timber. Finger-jointing of structural timber will be permitted, in which case it shall be manufactured in accordance with SANS 096.

C3.2.5L PLATE NAILED TIMBER ROOF TRUSSES

Plate nailed timber roof trusses shall be of approved design and manufacture and constructed with softwood structural timber by a truss Fabricator holding a current Certificate of Competence awarded by the Institute of Timber Construction.

Each roof truss shall have all its members accurately cut and closely butted together and rigidly fixed by CSIR approved patented galvanized metal spiked connectors, precision pressed on both sides of each intersection by an approved method, all in accordance with the manufacturer's instructions.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The design, manufacture and transportation of the roof trusses, bracing, etc shall be under the control of a registered Structural Engineer in accordance with SANS 0160 and SANS 0163, who shall, after erection, provide a certificate confirming that the design, manufacture, transportation, erection and bracing has been carried out in accordance with this specification.

The design shall include for all live loads, wind loads and for dead loads imposed by roof covering, purlins, ceilings, etc.

Fully detailed shop drawings of all trusses, etc, indicating sizes, bracing, loading, etc, shall be submitted to the Principal Agent for approval prior to fabrication.

Unless specific erection instructions are given, erection shall be carried out in accordance with the procedures and recommendations of the manual "The Erection and Bracing of Timber Roof Trusses" published by the Institute for Timber Construction and the Council for Scientific and Industrial Research or as detailed by the designer.

Roof trusses and bracing shall include design and preparation of shop drawings.

C3.2.6L TONGUED AND GROOVED BOARDING

Tongued and grooved boards for floors, panelling, etc shall be in long varying lengths with joints tightly cramped up and secret nailed. Flooring boarding shall be flush jointed with staggered heading joints and machine sanded after fixing.

C3.2.7L JOINERY

Skirtings, cornices, rails, etc shall be in single lengths wherever practicable and shall have splayed heading joints where necessary. Skirtings shall be trenched at back.

All horns of door frames shall be checked and splayed back where frames are fixed projecting or flush with surface and built in.

Heads of screws in exposed faces of hardwood joinery shall be sunk and match pelleted.

Joinery shall have arras rounded angles and shall be blocked and planted on.

C3.2.8L VENEERS

All face veneers shall be of kiln dried timber, free from knots, cracks, patchwork, sapwood and other defects, selected and glued, dried and machine-sanded to a smooth finish. All veneers shall be applied under hydraulic pressure.

C3.2.9L DOORS

Flush doors shall have solid timber edge strips with concealed edges. Where doors are to be finished with a transparent finish, the veneer and the edge strips shall be timber of the same species and as far as possible of matching colour. Unless otherwise described all flush doors shall be of interior quality, but where exterior quality doors are specified the glue used shall be of the WBP type.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Framed and ledged batten doors described as filled in with V-jointed boarding shall be filled in flush on one side with tongued and grooved vertical boarding, V-jointed on one or both sides and of the thickness stated. The boarding shall be in narrow widths, closely cramped up, rebated or tongued on outer edges and housed to grooves in stiles and rails and twice countersunk brass screwed at each intersection with ledges and braces and the inner edges of the abutting stiles and rails shall be chamfered to form a V-joint at junction with the board.

Unless otherwise described double doors shall have rebated meeting stiles.

C3.2.10L FIXING

All nails and screws shall be of the size, length and type appropriate to their respective uses. All screws for hardwood joinery work shall be brass.

Items described as “plugged” shall be screwed to fibre, plastic or metal plugs at not exceeding 600mm centres. Where items are described as “bolted”, the bolts have been given separately.

C3.2.11L ADHESIVES

Adhesives shall comply with BS 1204 and 4071 where applicable. Adhesives used in the manufacture of external joinery exposed to excessive moisture (e.g. kitchen and laboratory worktops) shall be of the WBP type.

C3.2.M Ceilings, Partitions & Access Flooring

C3.2.1M .MATERIALS

Materials shall comply with the following specifications and requirements:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Material	SABS Specification	Grade of Class
Gypsum plasterboard	266	-
Fibreboard	540	As specified
Gypsum cove cornice	622	-
Wood-wood panels (cement-bonded)	637	-
Softwood brandering and battens	653	-
Fibre-cement boards	803	As specified
Plywood and composite board	929	As specified
Wooden ceiling and panelling boards	1039	As specified
Softwood studs for timber frames in buildings	1146	-
Materials for thermal insulation of buildings	1381	-
Expanded polystyrene thermal insulation boards	1508	-
Raised access flooring	1549	-

3.2.2M TONGUED AND GROOVED BOARDING

Tongued and grooved boarding for ceilings shall be in long varying lengths, V-jointed one side and with joints tightly cramped up and secret nailed.

C3.2.2.1M CEILINGS, ETC

C3.2.2.2M Brandering

Brander for ceilings and eaves soffit coverings shall be symmetrically arranged with necessary smaller panels. Main branders shall be at right angles to roof timbers, with cross branders cut in between and branders shall be fixed with galvanized wire nails driven in on skew alternately in opposite directions.

C3.2.2.3M Ceiling boards

Ceiling boards shall be in long lengths symmetrically arranged with necessary smaller panels, closely butted and secured at 150mm centres to brandering with galvanized or cadmium-plated clout-headed nails.

C3.2.2.4M GYPSUM SKIM PLASTER

Gypsum skim plaster shall be pure gypsum plaster finished with a steel trowel.

C3.2.2.5M EXPOSED TEE-SYSTEM SUSPENDED CEILINGS

The ceiling panels shall be as described in the items and the panels shall be stiffened at back as recommended by the manufacturer to prevent bowing or sagging.

The exposed surfaces of all ceiling panels and supporting members shall be uniform in colour and free from surface blemishes.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The suspension grid system shall be an approved patent suspension system comprising 38mm galvanized steel main and cross tee bearers spaced in both directions at centres to suit sizes of ceiling panels used, with the cross bearers fitted between and notched to form flush fit with main bear

The suspension grid system shall be an approved patent suspension system comprising 38mm galvanized steel main and cross tee bearers spaced in both directions at centres to suit sizes of ceiling panels used, with the cross bearers fitted between and notched to form flush fit with main bearers. The exposed flange of the tees shall be 25mm wide, covered with a rolled aluminium cap painted a low sheen satin white. Cornices, etc shall be as described in the items and shall be finished to match the exposed tees.

The main tee bearers shall have holes for cross tees at 300mm centres and holes for hangers at 50mm centres. In addition, main and cross tee bearers shall be holed as necessary for and provided with timber wedges or steel clips where recommended by the manufacturer to prevent ceiling panels from lifting.

The web of the exposed cross tee bearers shall extend to form a positive interlock with the main tee bearers and the lower flange shall be cut back to provide a joint free appearance.

All hangers shall be galvanized and shall be at centres to meet the requirements of the specification with one end fixed to the suspension grid main bearers and the other end fitted with suitable galvanized fixing cleat securely fixed to the structure. Fixing points shall be agreed to by the Principal Agent before any power shot fixings are made. Hangers shall not be suspended from air-conditioning ducts. Where recommended by the manufacturer, hangers shall be of the rigid type.

Component parts and fixings shall be non-corrosive and able to withstand atmospheric pollution. Surfaces of aluminium which are in contact with other materials when fixed, particularly metals, shall be suitably insulated to prevent electrolytic corrosion.

Ceilings shall comprise hangers, suspension grid system and ceiling panels, shall be constructed in a manner suitable for carrying air conditioning diffusers and light fittings in the positions required, shall be set out to layouts approved by the Principal Agent and shall have the standard suspension systems modified as necessary to work around any pipes or light fittings.

C3.2.2.6M FLUSH PLASTERED SUSPENDED CEILINGS

Gypsum plasterboard panels of the specified thickness generally in 1200mm widths and in long lengths shall be fixed grey side down with self-tapping screws to the suspension system with the joints between boards loosely butt jointed and covered with 50mm wide strips of self-adhesive fibre tape.

The plasterboard panels shall be finished with gypsum skim plaster trowelled to a smooth polished surface to the thickness, etc recommended by the manufacturer.

The suspension system shall be an approved patent concealed suspension system consisting of galvanized mild steel bearers suspended on approved non-rusting metal hangers spaced generally at 1200mm centres or to suit layout of air-conditioning ducts and other services, etc above ceiling with one end bolted to the bearer and the other end fitted with a galvanized fixing cleat securely fixed to the structure as required.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Fixing points shall be agreed to by the Principal Agent before any power shot fixings are made.
Hangers shall not be suspended from air-conditioning ducting.

Ceilings shall comprise hangers, suspension system, ceiling panels and plaster finish, shall be constructed in a manner suitable for carrying air-conditioning diffusers and light fittings in the positions required, shall be set out to layouts approved by the Principal Agent and shall have the standard suspension system modified as necessary to work around any pipes or light fittings.

C3.2N Floor Coverings Wall Linings etc.

C3.2.1N MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Material	SABS Specification	Grade of Class
Semi-flexible vinyl floor tiles	581	-
Resin modified vinyl floor tiles (thermoplastic)	586	-
Flexible vinyl flooring	786	-
Hardwood block flooring	281	Clear grade
Wood mosaic flooring	978	-
Textile floor coverings (pile construction)	1375	-
Textile floor coverings (needle-punched construction)	1415	-
Carpet underlays	1419	-
	BS Specification	
Sheet linoleum (calendered types), cork, carpet and linoleum tiles	810	-
Solid rubber flooring	1711	-
Felt backed linoleum	1863	-
	SABS Code of Practice	-
The laying of wood floors	043	
The installation of resilient thermoplastic and similar flexible floor coverings materials	070	
The installation of textile floor coverings	0186	

C3.2.2N LAYING OF MATERIAL

Floor tiles shall be laid with continuous joints in both directions.
Patterned floor coverings shall be matched at joints.

C3.2.3N GENERAL

Floor coverings, wall linings, skirtings, nosing, etc shall include all preparatory work to screened or plastered sur-faces, etc, priming coats and adhesives.
Floor coverings and wall linings shall be dressed around and into corners.
Wood block and wood mosaic flooring shall be sanded with a sanding machine and sealed with a coat of approved penetrating sealer.
Plastic handrails shall have welded and polished butt joints.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.20 Ironmongery

C3.2.1o MATERIALS

Material shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Locks, latches and associated furniture for doors	4	-
Kitchen cupboards of steel, composite board and timber	1385	-
Single action overhead door closers	1510	-
Padlocks	1533	-
	CKS Specification	
Vitreous enamelled chalkboards	36	-

Locks shall have the minimum possible number of interchangeable keys. Cylinder locks and locks described as “en suite” shall be clearly marked with consecutive numbers and each key shall be punched with the corresponding number of the relative lock.

C3.2.2o FIXING

Unless otherwise described, ironmongery is to be fixed to wood.

Items described as “plugged” shall be screwed to fibre, plastic or metal plugs.

Screws, bolts, etc for fixing of ironmongery shall be of matching metal and finish, except for aluminium ironmongery or ironmongery fixed to aluminium in which cases stainless steel screws may be used.

All necessary preparation of pressed steel door frames for the fixing of ironmongery to the frames has been included with the pressed steel door frames.

C3.2.3o KITCHEN CUPBOARDS

Steel cupboards shall be finished with baked enamel. Tops of floor cupboards shall have laminated plastic covering.

Cupboards shall be fitted with all necessary hinges, handles, catches, etc. Cupboards shall be securely fixed with all necessary screws and fibre, plastic or metal plugs.

Where cupboards are described as a “series”, tops shall be continuous and cupboards shall be bolted or screwed together, including bolts, screws, holes, etc.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.P Structural Steelwork

C3.2.1P SPECIFICATION

All structural steelwork shall comply with SANS 1200H or 1200HA as applicable.

Whenever the term “Engineer” appears in SANS 1200H or 1200HA or in the following Project Specification this shall be deemed to mean the Principal Agent's representative responsible for this section of the Works.

C3.2.2P PROJECT SPECIFICATION INCORPORATING AMPLIFICATIONS, ADDITIONS AND AMENDMENTS TO SANS 1200H AND 1200HA

SANS 1200H

C3.2.2.1p Grades of steel

The grade of mild steel shall be Grade 300 W complying with SANS 1431.

C3.2.2.2p Contractor provides shop details

The Contractor shall be responsible for the preparation of all shop detail drawings.

C3.2.2.3p Engineer provides shop details

This clause shall not apply.

C3.2.2.4p Protective treatment

Structural steelwork shall be cleaned and prepared by wire brushing in accordance with SANS 064 and all surfaces shall be treated with one coat of zinc chromate primer complying with SANS 679 to a minimum dry film thickness of 30 micrometres before leaving the workshop. Upon delivery to the site and again after erection all bared surfaces shall be made good with similar primer.

C3.2.3p: Metalwork

C3.2.3.1P. MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Material	SABS Specification
ISO metric bolts, screws and nuts	135
ISO metric precision hexagon-headed bolts and screws, and hexagon nuts	136
Expanded metal	190
Steel windows and steel doors	727
Hot-dip (galvanised) zinc coatings	763
Strongroom doors	949
Anodised coatings on aluminium	999
Steel door frames	1129
Mushroom- and countersunk-head bolts and nuts	1143
Chromium plating of metalwork	728
	CKS Specification
Adjustable glass-louved windows	413
	BS Specification
Aluminium sheet and strips	1470
Aluminium extruded tube and hollow sections	1474
Aluminium bars and sections	1476
	SABS Code of Practice
Welding of metalwork	044
The design and fabrication of articles for hot-dip galvanising	0214

C3.2.3.2P STEEL

Steel shall be mild steel of approved commercial quality. Steelwork shall be cleaned and prepared by wire brushing in accordance with SANS 064 and given one coat of primer complying with SANS 679 before leaving the workshop.

C3.2.3.3P Galvanizing of steel

Steelwork described as "galvanized" shall be galvanized by means of the hot-dip process after fabrication.

Where welding on site is unavoidable, such welded joints shall be cleaned down and cold galvanized to approval.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.3.4P STAINLESS STEEL

Stainless steel shall be AISI Type 304 stainless steel and shall be buffed to an even satin finish. Stainless steel screws shall be used for fixing stainless steel.

C3.2.3.5P ALUMINIUM

Aluminium extrusions shall be of 6063-T6 alloy and temper. Aluminium sheet and strips shall be of 1200-H4 alloy and temper.

Joints in all aluminium members shall be formed in an approved manner so that the joints are practically invisible. Screw heads, pins, rivets, etc shall be concealed as far as possible. 300 Series stainless steel screws and bolts shall be used for jointing and fixing aluminium work.

The surfaces of all aluminium which are in contact with other materials when fixed shall be suitably insulated with a non-absorbent insulating material to prevent corrosion. All aluminium work shall be suitably protected against damage, deterioration or discolouration caused by mortar droppings, paint, etc by taping with removable tape, covering with temporary casings or by covering with motor oil.

C3.2.3.6P Anodizing of aluminium

Aluminium described as “anodized” shall be treated with Grade 25 coating thickness for exterior use or Grade 15 for interior use as specified, to the required finish. All alloys to be anodized shall be suited to anodizing.

C3.2.3.7P BOLTS AND NUTS

Nuts shall be of at least the strength grade appropriate to the grade of bolt or other threaded element with which they are used.

C3.2.3.8P SCREWING OF METALWORK TO STEEL, WOOD, CONCRETE, ETC

Metalwork described as “screwed” to steel, wood, etc or “plugged” to brickwork, concrete, etc shall be fixed at not exceeding 500mm centres, with necessary holes, countersinking, threading, screws, set screws, self-tapping screws and fibre, plastic or metal plugs.

C3.2.3.9P BOLTING OF METALWORK

Where metalwork is described as “bolted” to steel, wood, brickwork, concrete, etc, the bolts are measured elsewhere.

C3.2.3.10P WELDING OF METALWORK

All welds shall be cleaned and filed or ground off smooth to approval. All welded joints shall be continuous.

C3.2.3.11P METALWORK GENERALLY

Metalwork shall have all sharp edges ground smooth. Tubular and pipe work shall include running joints. Rails, etc described as “continuous” shall be in long lengths with welded joints.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.3.12P PRESSED STEEL DOORS, FRAMES, ETC

C3.2.3.12.1P Door frames

Frames shall project not less than 20mm into floor finish. Except where described as galvanized, frames shall be treated with one coat of primer complying with SANS 679 before leaving the factory. Frames are to jambs and heads of openings. Frames for single doors shall be provided with two 100mm steel butt hinges and an adjustable striking plate for a mortice lock and frames for double doors shall be provided with four 100mm steel butt hinges. Butt hinges shall be steel butts with loose pins, welded to frames. Where necessary mortar caps shall be welded to frames and back plates shall be welded on behind tapping's for screws.

C3.2.3.12.2P Cupboard door frames

Cupboard door frames shall be as described in N.10.1, but with thresholds of unequal channel section, two 100mm steel butt hinges to hanging stiles, two 75mm steel butt hinges to hanging stiles above transoms, necessary striking plates for mortice locks and keeps for barrel bolts.

C3.2.3.12.3P Combination doors and frames

Combination doors and frames shall be manufactured of 1,6mm thick steel plate. Frames shall be as described in N.10.1. Doors shall be standard design and required profile, with a 44mm wide edge all round, vertical reinforcing ribs pressed in and with two reinforcing rails welded on. The door shall be provided with two lever mortice lock with lock box welded to inside. Doors shall be welded to steel butts.

C3.2.Q STEEL WINDOWS, DOORS, ETC

C3.2.1Q Windows, doors, etc.

All fittings to windows, doors, etc shall be chromium plated.

Fixed lights and opening sashes shall be in single squares. Windows, etc of single unit construction shall have weather bars at transoms above opening sashes.

Composite windows not of single piece construction shall be coupled with standard coupling mullions and transoms that correspond with the window section used.

Kicking plates and panels shall be 1,6mm metal plate fixed with standard metal glazing beads mitred at angles and countersunk screwed on at not exceeding 300mm centres with self-tapping screws.

Except where described as galvanized, windows, doors, burglar bars, etc shall be treated with one coat of primer complying with SANS 679 before leaving the factory.

C3.2.2Q Burglar bars and flyscreens

Where windows are described as fitted with burglar bars or flyscreens, these shall be standard type fitted over opening sashes.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.2.3Q ALUMINIUM WINDOWS AND DOORS

The foregoing preambles "N.3 – ALUMINIUM" shall apply to aluminium windows, doors, etc in all respects in so far as they are applicable. Aluminium windows and doors shall be manufactured from extruded aluminium members of 6063-T6, 6261-T6 or 6082-T6 alloy and temper.

Ancillary members such as sills, flashings, infill panels and the like formed from flat sheet material shall be of an appropriate alloy selected from 1200, 3004 or 5251 complying with BS 1470 of a temper suitable for the method of forming and a composition suitable for anodizing or painting as required.

Windows, doors, etc shall be of an approved standard system, manufactured by an approved firm experienced in this type of work, and shall meet with the minimum recommended performance requirements as set out by the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA) in the latest edition of the Selection Guide.

The fittings for all opening sashes shall be substantial and, unless otherwise described, shall be of high quality aluminium alloy finished to match the windows, doors, etc on which they occur. Samples of all fittings shall be supplied to the Principal Agent for approval.

Top, side and bottom hung opening sashes shall be hung on two aluminium hinges with 300 Series stainless steel pins, nylon bushes and stainless-steel washers. Side hung sashes shall have fasteners and sliding stays, top hung sashes shall have peg stays and bottom hung sashes shall have spring catches and concealed arms. VProjected out sashes shall have aluminium fasteners and concealed arms of a non-corrosive material compatible with aluminium.

The frames which are to be built into openings in brickwork shall be fitted with the manufacturer's standard type fixing lugs, not less than 20 x 3 x 150mm long, screwed to frame and placed one near each corner and intermediately not more than 450mm apart to sides, top and bottom and where fixed to concrete reveals, wood sub-frames or to pre-formed openings in brickwork shall have countersunk holes for screws, one near each corner and intermediately not more than 450mm apart to sides, top and bottom.

C3.2.4Q Glazing beads

Where so described, openings and sashes of windows and doors shall be fitted with approved channel section aluminium glazing beads sufficient in size and profile to suit the method of glazing employed, finished to match the windows, doors, etc and neatly mitred. Screws where necessary shall be of aluminium or

300 Series stainless steel and have pan or raised heads finished to match the beads.

C3.2.5Q Finishes

Windows, doors, etc described as "anodized" shall be treated with Grade 25 coating thickness.

Windows, doors, etc described as "factory painted" shall have an electrostatically applied oven baked polyester paint coating not less than 25 micrometres thick.

C3.2.6Q General

Aluminium windows, doors, etc shall include glass as described, fixing in position, sealing and protection against damage, deterioration or discolouration by taping with removable tape or covering with temporary casings or motor oil and removing same on completion.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.7Q STRONGROOM AND RECORD ROOM DOORS

Strongroom and record room doors shall not be built in as the work proceeds but shall be fixed later in the openings provided. The Contractor shall ensure that the lock or other important parts of the door are not tampered with. Should any such tampering occur, the Contractor will be held responsible and at the Principal Agent's discretion shall provide a new door or lock and keys at his own expense. The keys shall not be delivered together with the doors to the building site. The Contractor shall arrange for the manufacturer to send the keys direct to the Principal Agent per registered post. If these instructions are not complied with, a new lock and keys shall be provided by the Contractor at his own expense.

C3.2.8Q STEEL ROLLER SHUTTERS

Roller shutters shall be of approved manufacture comprising curtain, vertical channel guides and top mechanism. The curtain shall be constructed of 1mm thick machine-rolled galvanized interlocking slats with mild steel end locks spot welded to alternate strips. The bottom shall be provided with a galvanized rail riveted on and vertical edges shall slide in galvanized channel guides formed of steel not less than 2,5mm thick bolted to sides of openings.

The mechanism shall be covered in a galvanized sheet iron box. The ungalvanized sections shall be treated with one coat of primer complying with SANS 679 before leaving the factory.

C3.2R: Plastering

C3.2.1R MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Masonry cement	ENY 413-1	MC12,5
Lime for use in buildings	523	A2P
Sand for plaster and mortar	1090	-

C3.2.2R PREPARATORY WORK

Surfaces shall be clean and free of oil and thoroughly wetted directly before any plastering or other in situ-finishes are commenced. Concrete surfaces shall be slushed with a mixture of one-part cement and one part coarse sand or otherwise treated to form a proper key. Preparatory coats shall be thoroughly scored and roughened to form a proper key.

C3.2.3R CONSTITUENTS OF MIXES

All constituents shall be mixed by volume.

C3.2.4R RFINISH

All coats of paving and plastering shall be executed in one operation without any blemishes.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.2.5R SCREEDS

Screeds shall be composed of one part cement and four parts sand.

C3.2.6R CEMENT RENDER

Cement render shall be composed of one part cement and three parts sand finished with a steel trowel to a smooth polished surface and cured for at least seven days after laying.

Cement render finish shall be divided into panels not exceeding 6 m² with V-joints and deep trowel cuts.

C3.2.7R GRANOLITHIC

Granolithic shall be composed of one part cement, one part fine sand, two parts coarse sand and one part granite or other approved stone aggregate that will pass through a 5mm sieve, finished with a steel trowel to a smooth polished surface and cured for at least seven days after laying.

Coloured granolithic shall be carried out in two coats in one operation and shall be tinted to the required colour with approved colouring pigment mixed into the finishing coat. Under no circumstances is the pigment to be sprinkled on and trowelled in after the granolithic is laid.

Granolithic shall be divided into panels not exceeding 6 m² with V-joints and deep trowel cuts.

C3.2.8R SKIRTINGS

Skirtings shall not exceed 25mm thick and shall have a fair edge with arras or rounded external angle at top edge or V-joint to finish flush with plaster and coved or square junction with floor finish.

C3.2.9R THICKNESS OF PLASTER

All plaster, other than skim plaster, shall be not less than 10mm and not more than 20mm thick.

C3.2.10R CEMENT PLASTER

Cement plaster shall be composed of one part cement and five parts sand.

C3.2.11R COMPO PLASTER

Compo plaster shall be composed of one part cement, two parts lime and nine parts sand.

C3.2.12R GYPSUM SKIM PLASTER

Gypsum skim plaster shall be pure gypsum plaster finished with a steel trowel.

C3.2.13R TWO COAT PLASTER WITH GYPSUM FINISH

Two coat plaster with gypsum finish shall comprise an undercoat composed of one part cement and five parts sand finished with a wooden float and a finishing coat of gypsum skim plaster.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.14R ROUGH-CAST PLASTER

Rough-cast plaster shall be applied in two coats. The undercoat shall be composed of one part cement and five parts sand finished with a wooden float. The finishing coat shall be composed of one part cement and three parts stone aggregate that will pass through a 4mm sieve. The finishing coat shall be flicked on with a machine before the undercoat has set to obtain an even texture.

C3.2.15R FINE ROUGH-CAST PLASTER

Fine rough-cast plaster shall be as for rough-cast plaster, but the finishing coat shall be composed of one part cement and three parts coarse sand.

C3.2.16R GENERAL

Rates for plastering described as being on vertical surfaces of brickwork or blockwork shall include concrete columns, beams and lintels flush with the face of the wall.

C3.2S Tiling

C3.2.1S MATERIALS

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Glazed ceramic wall tiles and fittings	22	
Glazed and unglazed ceramic wall and floor tiles, fittings and bedding	1449	
Masonry cement	ENV 413-1	MC 12,5
Sand for plaster and mortar	1090	
	SABS Code of Practice	
The installation of ceramic tiling	0107	

C3.2.2S TILES, MOSAICS, ETC.

Tiles, mosaics, etc shall be even in shape and size, free from cracks, twists or blemishes and uniform in colour.

C3.2.3S PREPARATORY WORK

Surfaces shall be clean and free of oil and thoroughly wetted directly before any tiling is commenced. Concrete surfaces shall be slushed with a mixture of one part cement and one part coarse sand or otherwise treated to form a proper key.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.4S CERAMIC WALL AND FLOOR TILING

Where tiles are fixed to plaster or screeds with an adhesive, the adhesive shall be as recommended by the manufacturer of the tiles. Joints shall be straight, continuous and flush pointed with an approved grouting compound.

C3.2.5S GENERAL

Tiling described as "on walls" is on brick walls or block walls unless otherwise stated and shall include concrete columns, beams and lintels flush with the face of the wall.

C3.2T Plumbing and Drainage

C3.2.1T MATERIALS, ETC

Materials and workmanship shall comply with the following specifications and requirements:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

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Part C3: Scope of Work
Section C3.1 Description of Works

Sheet metal	BS Specification	
Sheet zinc	849	
Sheet aluminium	1470	
Sheet copper	2870	
Rainwater systems	SABS Specification	
Unplasticized polyvinyl chloride (UPVC) components for external rainwater systems	11	
Pipes and fittings	SABS Specification	Class or type
Steel pipes and fittings up to 150 mm nominal bore and suitable for screwing to ISO R7 pipe threads	62	Medium class, galvanized
Copper tubes for domestic plumbing services	460	Class 1 – above ground Class 2 – under ground
Hard drawn copper tubes	460	Class 0 – above ground
Malleable cast iron pipe fittings	509	Galvanized
Black polyethylene pressure pipes for cold water supply	533	–
Cast iron fittings for fibre-cement pressure pipes	546	–
Vitrified clay sewer pipes and fittings	559	–
Reinforced concrete pressure pipes	676	–
Concrete non-pressure pipes	677	SC Type; Class B
Cast iron pipes and pipe fittings for use above ground in drainage installations	746	Type B pipes
Unplasticized polyvinyl chloride (UPVC) sewer and drain pipes and pipe fittings	791	Normal duty, with socket and rubber ring type joint
Fibre-cement pipes and fittings for drains	819	Class 3
Pipes and fittings	SABS Specification	Class or type
Pitch-impregnated fibre pipes and fittings	921	Fittings shall be polypropylene
Unplasticized polyvinyl chloride (UPVC) pressure pipes and fittings for cold water supply	966	–
Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and pipe fittings for use above ground in drainage installations	967	–
Rubber joint (non-cellular) rings for pipes	974	–
Compression and capillary solder fittings for copper tubes	1067	–
Fibre-cement pressure pipes and couplings		
Contractor	Witness 1	Witness 2
		Employer
		Witness 1
		Witness 2

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Pipes and fittings	SABS Specification	Class or type
Pitch-impregnated fibre pipes and fittings	921	Fittings shall be polypropylene
Unplasticized polyvinyl chloride (UPVC) pressure pipes and fittings for cold water supply	966	–
Unplasticized polyvinyl chloride (UPVC) soil, waste and vent pipes and pipe fittings for use above ground in drainage installations	967	–
Rubber joint (non-cellular) rings for pipes	974	–
Compression and capillary solder fittings for copper tubes	1067	–
Fibre-cement pressure pipes and couplings (constant internal diameter type)	1223	–
Polypropylene pressure pipes	1315	–
Plastic and rubber traps	1321	–
Vent valves for drainage installations	1532	–
Pipes and fittings	BS Specification	
Heavy duty cast iron pipe fittings for drainage and gas and water supplies	78	
Lead pipes	602	
Cast iron pressure pipes for use in drainage and gas and water supplies	1211	
Stainless steel pipes for use with compression fittings	4127	
Sanitary fittings, etc.	SABS Specification	Remarks
Stainless steel sinks with draining boards (for domestic use)	242	–
Stainless steel wash hand basins	906	Each with two soap recesses
Stainless steel wash troughs	906	For installation against walls
Stainless steel sinks for institutional use	907	–
Stainless steel stall urinals	924	–
Sanitary fittings, etc	SABS Specification	Remarks
Acrylic resinous baths	1402	–
Glazed ceramic wash hand basins, sinks, washdown closet pans, urinals, cisterns and block channels	497	–
Hand operated W.C. flushing cisterns	821	–
Flushing devices for W.C. flushing cisterns	1509	–
Flush pipes for high level cisterns	821	Appendix X
Flush pipes for low level cisterns	821	–

s 1

Witness 2

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Section C3.1 Description of Works

Taps, valves, etc.	SABS Specification	Class
Taps (metallic)	226	Pillar taps, mixer taps and stoptaps shall be Class 2
Plastic water taps	1021	–
Single control mixer taps	1480	–
Float valves	752	–
Plastic ball floats for ball valves	1006	–
Functional control and safety valves	198	–
Cast iron gate valves	664	–
Automatic shut-off flush valves for water closets and urinals	1240	–
Check valves	1551	–
Portable rechargeable fire extinguishers	SABS Specification	
Dry powder	810	
Water	889	
Halogenated hydrocarbon	1151	
Other	SABS Specification	
Fixed electric storage water heaters	151	
Fire hose reels (with hose)	543	
Drainage covers, gratings, etc	SABS Specification	
Cast iron surface boxes and manhole and inspection covers and frames	558	
Cast iron gratings for gullies and stormwater drains	1115	
	BS Specification	
Cast iron step irons	1247	
	SABS Code of Practice	
The installation of polyethylene and unplasticized polyvinyl chloride pipes	0112	
Water supply and drainage for buildings	0252	

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.2T GENERAL

C3.2.2.1T Excavations

Excavations shall be deemed to be in "earth". Backfilling to excavations shall be executed in 300mm thick layers, watered and compacted. Surplus excavated material shall be spread and levelled over site as directed.

C3.2.2.2T Concrete

Unreinforced concrete shall be Class B prescribed mix concrete and reinforced and precast concrete shall be Class C prescribed mix concrete.

C3.2.2.3T Brickwork

Brickwork shall be of extra hard burnt bricks built in Class I mortar.

C3.2.2.4T Plaster

Plaster shall be 1:3 cement plaster finished smooth with a steel trowel. All angles shall be rounded.

C3.2.2.5T Diameters of pipes, etc

Diameters stated for pipes, traps, valves, etc are internal diameters except PVC, polyethylene, stainless steel and copper pipes and traps for which external diameters are stated.

C3.2.3T SHEET METAL WORK

Q.3.1 Galvanized sheet iron

Galvanized sheet iron shall be rolled steel sheet coated on both sides with Class C zinc coating complying with SANS 934. Sheets shall be free from white rust.

C3.2.4T EAVES GUTTERS

C3.2.4.5T Galvanized sheet iron gutters

Galvanized sheet iron gutters shall have beaded edges and all joints shall be riveted and soldered. Angles shall be strengthened with 50 x 0,6mm galvanized sheet iron strips soldered on over the internal faces of mitres.

Gutters shall be fixed with falls to outlets on 30 x 3mm galvanized mild steel brackets, bent to the shape of gutters, with front ends taken up to the underside of beaded edge of gutter and each screwed to roof timbers or bolted to fibre-cement fascias with 6mm galvanized gutter bolts. Gutters shall be bolted to brackets at front with 6mm galvanized gutter bolts, one to each bracket. Brackets shall be positioned at joints of gutters and intermediately at not exceeding 1,25 m centres.

C3.2.4.6T Fibre-cement gutters

Fibre-cement gutters shall have spigot and socket joints.

Gutters shall be fixed with falls to outlets on standard aluminium alloy brackets, screwed or bolted to roof timbers or fascias.

C3.2.4.7T Unplasticized polyvinyl chloride (UPVC) gutters

Gutters shall be fixed with falls to outlets on brackets as supplied by the manufacturer, screwed or bolted to roof timbers or fascias.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.4.8T Aluminium gutters

Aluminium gutters shall be roll formed on site to required lengths and profiles from 3003H14-3SH4 alloy strip not less than 0,7mm thick factory coated on both sides with baked enamel and two coats of silicone modified polyester to a total minimum thickness of 20 micrometres. Angles, stopped ends, etc shall be prefabricated units pop riveted to gutters with joints sealed with mastic. The guttering shall be in continuous lengths between angles, stopped ends, etc.

C3.2.5T RAINWATER PIPES

C3.2.5.1T Galvanized sheet iron pipes

Galvanized sheet iron pipes shall have seams at the back and shall be jointed with soldered slip joints.

Pipes shall be fixed to walls, etc with galvanized mild steel holderbats spaced at not exceeding 2 m centres with tails driven in or cut and pinned in 1:3 cement mortar.

C3.2.5.2T Fibre-cement pipes

Fibre-cement pipes shall have spigot and socket joints.

Pipes shall be fixed to walls, etc with standard aluminium alloy holderbats with tails driven in or cut and pinned in 1:3 cement mortar.

C3.2.5.3T Unplasticized polyvinyl chloride (UPVC) pipes

Pipes shall be fixed to walls, etc with patented UPVC or aluminium clips and holderbats as supplied by the manufacturer of the pipe.

C3.2.5.4T Aluminium pipes

Aluminium pipes and fixing straps shall be formed from 3003H14-3SH4 alloy strip not less than 0,7mm thick factory coated on both sides as described for aluminium gutters.

Pipes shall be in continuous lengths with formed angles, offsets, shoes, etc.

Pipes shall be fixed to walls, etc with 20 x 0,6mm straps at not exceeding 1,5 m centres screwed to 25 x 75 x 100mm hardwood chamfered and oiled blocks plugged to walls.

C3.2.6T STORMWATER CHANNELS

In-situ concrete stormwater channels shall be constructed of unreinforced concrete with segmental channel formed in top. Channels shall be laid to falls on a well rammed earth bottom and finished smooth on exposed surfaces.

Precast concrete channels shall be of 25 MPa concrete, generally in 1 m lengths, finished smooth from the mould on exposed surfaces, laid to falls on a well rammed earth bottom, jointed in 1:3 cement mortar and pointed with keyed joints.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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Part C3: Scope of Work
Section C3.1 Description of Works

Pipes	Joints
Fibre-cement, concrete, pitch-impregnated fibre and vitrified clay pipes for use underground in non-pressure pipe lines	Flexible joints in accordance with the manufacturer's caulking compound
Cast iron for use above ground	Spigot and socket joints with tarred rope yarn and caulking compound or Plain ended joints with stainless steel couplings with neoprene rubber sleeves
Cast iron for use below ground	Spigot and socket joints with tarred rope yarn and caulking compound
Galvanised mild steel	Joints of screwed galvanised steel sockets or bolted galvanised iron flanges Screwed joints with plastic jointing tape or hemp Flanged joints which shall be bolted and provided with rubber gaskets and with flanges screwed to pipes
Joints between pipes of different materials shall be as follows:	
Between cast iron and mild steel	Spigot and socket joints with tarred rope yarn and caulking compound
Between cast iron and clay	Spigot and socket joint with semi-dry cement caulking and 1:2 cement mortar fillet
Between mild steel or copper and clay	Spigot and socket joint with either bitumen or semi-dry cement caulking and 1:2 cement mortar fillet

Q.8 FIXING OF PIPES

Pipes shall be fixed as follows:

Q.8.1 Galvanised mild steel (except those stated in Q.8.3)	To walls with galvanised mild steel brackets for pipes not exceeding 80 mm diameter and with galvanised cast iron hinged holderbats with brass pins or bolts for pipes exceeding 80 mm diameter; both types with tails cut and pinned 1:3 cement mortar To woodwork with screw-on type galvanised mild steel holderbats
Q.8.2 Copper and stainless steel	To walls with brass holderbats or screw-on type two-piece spacing clips for pipes not exceeding 75 mm diameter and with purpose made holderbats for pipes exceeding 75 mm diameter; both types with tails cut and pinned in 1:3 cement mortar. To woodwork with screw-on type brass holderbats
Q.8.3 Cast iron and galvanised mild steel for soil, waste and vent pipes	To walls with hinged cast iron holderbats with brass bolts and with tails cut and pinned in 1:3 cement mortar To woodwork with screw-on type galvanised mild steel holderbats
Q.8.4 Polyethylene, polypropylene and patented UPVC or unplasticized polyvinyl chloride	To walls, woodwork, etc with aluminium clips and holderbats as supplied by the manufacturer of the pipes
Q.8.5 Fibre-cement	To walls with aluminium alloy holderbats with tails cut and pinned in 1:3 cement mortar
Q.8.6 Pipes fixed to ceilings	Fixed with holderbats and standard or purpose made hangers, with extended hangers for pipes to falls

Witness 1

Witness 2

C3.2.7T JOINTS

Joints of pipes not covered in SANS Specifications shall be as follows:

C3.2.8T PIPES LAID IN GROUND

C3.2.8.1T Water pipes, etc

Water pipes, gas pipes, etc laid in ground shall be at least 400mm deep from the crown of the pipe to the finished surface.

C3.2.8.2T Drain pipes

Excavations taken out too deep shall be filled in with selected soil and compacted.

Backfilling to sides and up to 300mm above plastic pipes shall be free from stone or hard substances which will not pass a 10mm mesh.

Q.10 CLEANING EYE LIDS

Cleaning eye lids for drain pipe fittings shall be fixed and sealed as follows:

Pipe fittings	Method of sealing and fixing
Fibre-cement	Sealed with synthetic rubber or bituminous mastic packing and fixed screws
Vitrified clay	Polypropylene lid sealed with synthetic rubber packing and pressed into position
Polypropylene and unplasticized polyvinyl chloride	Sealed with synthetic rubber packing and screwed on or pressed into position
Cast iron	Sealed with tallow or putty and fixed with non-ferrous metal screws
Galvanised malleable cast iron and cast brass	Sealed with synthetic rubber packing and screwed in

C3.2.9T CLEANING EYES

Cleaning eyes shall consist of cast iron frames and lids with letters "CE" (or "SO") cast in lids. The lids shall be secured with non-ferrous metal screws. Frames shall be jointed to vertical drain pipes. Cleaning eyes shall be encased in unreinforced concrete taken up to ground level and plastered on exposed surfaces.

C3.2.10T INSPECTION EYE MARKER SLABS

Inspection eye marker slabs shall be 350 x 350 x 50mm thick precast concrete finished smooth from the mould, with letters "IE" (or "IO") formed in top and placed flush in ground or paving.

C3.2.11T GULLEYS

Gulleys shall be built up of traps, vertical piping and gully heads with loose gratings, all encased in unreinforced concrete to finish flush with gully head top and taken up to at least 50mm above surrounding finished surfaces. The outer top edge of the concrete encasing shall be splayed and the exposed surfaces plastered.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.2.12T DISHED GULLEYS

Dished gulleys shall be built up of traps, vertical piping and gulley heads with loose gratings, all encased in unreinforced concrete and with dished unreinforced concrete hopper size 450 x 450mm overall around gulley head with rounded kerb 50mm wide to front and sides and 25mm wide at back, 100mm high above top of dishing and the hopper plastered on exposed surfaces. Top of hopper shall be taken up to at least 50mm above surrounding finished surfaces.

C3.2.13T SUMPS, CATCHPITS, INSPECTION CHAMBERS, ETC.

C3.2.13.1T Rainwater sumps

Rainwater sumps shall be built with half-brick sides on 100mm thick unreinforced concrete bottom, plastered internally on walls and with 80mm high unreinforced concrete kerb at top rebated for grating or cover and plastered on exposed surfaces.

C3.2.13.2T Stormwater catchpits and inspection chambers

Brick catchpits and inspection chambers shall be built with one-brick sides on 150mm thick unreinforced concrete bottom projecting 100mm beyond walls all round, plastered internally on walls and with 100mm thick reinforced concrete cover slab with opening rebated for frame of grating or cover and plastered on exposed surfaces.

Precast concrete catchpits and inspection chambers shall be constructed in accordance with the applicable details shown on Drawing LE-1 of SANS 1200LE. Precast concrete manhole sections and slabs shall comply with SANS 1294 and the requirements for pipes of SC type and Class A of SANS 677.

C3.2.13.3T Sewer inspection chambers

Brick inspection chambers shall be built as for brick stormwater inspection chambers and with the bottom of the chamber well benched around half round channels, bends, junctions, etc up to sides of chamber in unreinforced concrete finished smooth.

Precast concrete inspection chambers shall be constructed in accordance with the applicable details shown on Drawing LD-5 of SANS 1200LD. Precast concrete manhole sections and slabs shall comply with SANS 1294 and the requirements for pipes of SC type and Class A of SANS 677.

C3.2.13.4T Stormwater drain junction boxes

Junction boxes shall be formed of 150mm thick unreinforced concrete bottom and sides to suit the various sizes of the drain pipes and built after the pipes have been laid, with the sides taken up slightly higher than the highest pipe and finished level on top for and covered with a 75mm thick loose precast concrete slab.

C3.2.13.5T Step irons

Where inspection chambers exceed 1,2 m deep, cast iron step irons shall be provided, built into the wall at 300mm centres and staggered regularly in vertical rows spaced at 200mm centres horizontally.

C3.2.14T STOPCOCK AND METER BOXES

Stopcock and meter boxes shall be built with half-brick sides with a cast iron box and lid complying with SANS 558 set in 75mm wide unreinforced concrete kerb for the full depth of the cast iron box and plastered on exposed surfaces.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.15T VALVE CHAMBERS

Valve chambers shall be built with half-brick sides with 100mm thick unreinforced concrete kerb to top with rebate for cover and frame to finish flush with adjacent paving or finished ground level and plastered on exposed surfaces.

C3.2.16T CAST IRON COVERS, GRATINGS, ETC.

All cast iron covers, gratings, frames and surface boxes shall be coated with preservative solution. Frames shall be cast into concrete. Covers, except covers to stormwater drainage or electrical cable inspection chambers, shall be set in grease.

C3.2.17T CONCRETE ENCASING

Concrete encasing for pipes, bends, traps, gulleys, grease traps, etc shall be unreinforced concrete not less than 100mm thick all round.

C3.2.18T SANITARY FITTINGS

C3.2.18.1T General

Glazed ceramic, acrylic and porcelain enamelled sanitary fittings and component parts shall be white. Accessories for sanitary fittings shall be chromium plated brass. Waste outlets for baths, basins, etc shall comprise chromium plated brass waste union with grating, rubber washers and locknut, fitted with rubber or vulcanite plug on a chromium plated brass chain and stay.

C3.2.18.2T Stainless steel sanitary fittings

Stainless steel sinks and draining boards, basins, wash troughs and urinals shall be AISI Type 304 satin finished stainless steel.

All stainless steel fittings shall be treated on the back with a vermin proof sound deadening coating.

Sinks, basins and wash troughs shall be provided with 40mm diameter screwed waste outlets.

C3.2.18.3T Precast concrete wash troughs

Reinforced precast concrete wash troughs shall have a sloping front with ribbed rubbing surface and shall be finished smooth on exposed faces with top edges and inner angles rounded. Each compartment shall be fitted with a 40mm diameter waste outlet. Wash troughs shall each be supported on two reinforced precast concrete pedestals finished smooth on exposed faces.

C3.2.19.4T Steel baths

Steel baths shall be porcelain enamelled internally and painted externally and fitted with waste outlet and overflow grating with coupling.

C3.2.19.5T Acrylic resinous baths

Acrylic resinous baths shall be fitted with waste outlet and overflow grating with coupling.

C3.2.19.6T Acrylic resinous wash hand basins

Acrylic resinous wash hand basins and vanity units shall have a smooth high gloss finish, with outlet openings, soap recesses, tap-holes and integral overflow and shall be fitted with waste outlet and overflow grating with coupling.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.19.7T Glazed ceramic sanitary fittings

Sinks shall be provided with integral weir overflows.

Washdown closet pans shall have washdown action and be provided with smooth finished injection moulded polypropylene heavy duty double flap seats fixed with non-ferrous bolts.

Urinal channels shall be provided with outlet gratings fitted in bitumen.

C3.2.19.8T Flush and sparge pipes

Flush pipes for high level cisterns shall be of plastic or drawn galvanized steel.

Flushpipes for low level cisterns shall be of plastic.

Flush and sparge pipes for urinals with high level cisterns shall be of chromium plated copper piping and of the sizes recommended by the manufacturer of the urinal.

C3.2.20T INSTALLATION OF SANITARY FITTINGS

Sanitary fittings shall be installed as follows:

C3.2.20.1T Precast concrete wash troughs

Precast concrete wash troughs shall be bedded on top of pedestals which shall be bedded on floors in 1:3 cement mortar.

C3.2.20.2T Stainless steel wash troughs and wash hand basins

Stainless steel wash troughs and wash hand basins shall be fixed to walls on a pair of galvanized mild steel galleys brackets bolted to wall with 6mm diameter expanding bolts.

C3.2.20.3T Acrylic resinous wash hand basins

Acrylic resinous wash hand basins shall be fixed to walls on a pair of standard painted cast iron brackets screwed to underside of basin and bolted to wall with 6mm diameter expanding bolts.

C3.2.20.4T Ceramic wash hand basins

Ceramic wash hand basins shall be fixed to walls on a pair of standard painted steel or cast iron brackets bolted to wall with 6mm diameter expanding bolts.

C3.2.20.5T Acrylic resinous baths

Acrylic resinous baths shall be bedded in 1:5 cement mortar on three cross rows of bricks or bedded solid on a layer of dry river sand and fixed to wall with galvanized steel brackets under edges (in the middle of the sides against walls) bolted to wall with 6mm diameter expanding bolts and sealed along top against wall finishes with patent mildew resistant silicone rubber.

C3.2.20.6T Washdown closet pans and cisterns

Washdown closet pans shall be bedded on floors in 1:3 cement mortar. Cisterns shall be fixed to walls with 6mm diameter expanding bolts.

C3.2.20.7T Ceramic urinals

Ceramic stall and slab urinals shall be bedded on floors and against walls in 1:3 cement mortar. Slabs, channels, treads, etc shall be jointed in 1:3 cement mortar and pointed in white cement.

Ceramic bowl urinals shall be fixed to walls on standard steel brackets bolted to wall with 6mm diameter expanding bolts. Cisterns shall be fixed to walls on standard brackets bolted to wall with 6mm diameter expanding bolts.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.20.8T **Stainless steel urinals**

Stainless steel stall and slab urinals shall be bedded on floors in 1:3 cement mortar and with backs and sides against walls filled in with fine unreinforced concrete. Cisterns shall be fixed as cisterns for ceramic urinals.

C3.2.21T **FIRE HOSE REELS**

Fire hose reels shall each be fitted with a 30 m long hose of internal diameter not less than 19mm with a 4,8mm internal diameter chromium plated brass nozzle.

C3.2.22T **FIRE EXTINGUISHERS**

All fire extinguishers shall be fully charged.

C3.2.23T **TESTS**

Sewerage pipe lines, sanitary plumbing including fittings and hot and cold water supply and fire service shall be tested to the approval of the Principal Agent and Local Authority.

The Contractor shall provide all testing apparatus, material and labour required for the tests and inspections.

C3.2.U **Glazing**

C3.2.1U **MATERIALS**

Materials and workmanship shall comply with the following specifications and requirements:

Material	SABS Specification	Grade of Class
Glazing putty	680	-
Silvered glass mirrors	1236	A
Safety and security glazing materials	1263	-
Silicone-rubber-base sealing compounds	1305	-
	CKS Specification	
Glass for glazing	55	
	BS Specification	
Glass	952	
	SABS Code of Practice	
Installation of glazing materials in buildings	0137	

C3.2.2U **PUTTY, ETC.**

Glazing putty shall be Type I for wooden sashes and Type II for steel sashes. Putty for glazing to

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

unpainted hardwood shall be tinted to match the colour of the wood.

Back putty shall not exceed 3mm thick. Putty shall not be painted until it has formed a surface crust, and if the putty does not form a surface crust it shall be replaced.

Butyl putty shall be used where glass is to be fixed in aluminium sashes with glazing beads.

Non-setting compounds shall be used where laminated glass is fixed in sashes with glazing beads

C3.2.V Paintwork

C3.2.1 V MATERIALS

Materials shall comply with the following specifications and requirements:

Material	SABS Specification	Grade or Type
Matt or eggshell decorative paint for internal works	515	-
Decorative high gloss enamel paint for internal and exterior work	630	Grade I
Primers for wood for external work	678	Type I
Primers for wood for internal work	678	Type III
Zinc chromate primers for steel	679	Type I
Undercoats for paints (except emulsion paint)	681	Type I
Aluminium paint	682	Grade II
Roof paints	683	Type B
Structural steel paint	684	Type B
Wash primer (metal etch primer)	723	-
Varnish for interior use	887	Type I
Calcium plumbate primer	912	-
Emulsion paints	1586	-

C3.2.2V PREPARATORY WORK

C3.2.2.1V Plastered surfaces, etc.

Plastered surfaces shall be thoroughly inspected and, if necessary, washed down and brushed in order to remove any traces of efflorescence and allowed to dry completely before any paint finish is applied. Before any paint is applied, holes, cracks and irregularities in plaster and other surfaces shall be filled with a suitable filler and finished smooth. Unfinished concrete surfaces shall have all projections rubbed off and shall be thoroughly cleaned with a spirits-of-salts solution (1 part concentrated spirits-of-salts to 4 parts water).

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C3.2.2.2V Metal surfaces

Metal surfaces shall be sanded, where necessary, washed with a suitable cleaning agent and left smooth. Protective coatings applied by manufacturers to galvanized metal surfaces shall be removed with a suitable agent and the surfaces washed down. Rust, grease and defective factory primers on metal surfaces, as well as pitch on cast iron pipes, shall be removed.

C3.2.2.3V Wood surfaces

Knots in woodwork shall be treated with knotting. Minor blemishes shall be filled with a suitable filler. Wood surfaces shall be sanded smooth.

C3.2.3V APPLICATION OF PAINT

Primers to wood surfaces shall be applied by brush. Primers to other surfaces may be applied by roller with the approval of the Principal Agent. Undercoats and finishing coats may be applied by brush or roller. Paint shall not be sprayed on except in the case of cellulose and other special paints where spray painting is the accepted method of application.

Before subsequent coats of paint are applied the previous coat shall be properly dry and shall be sanded down where necessary.

C3.2.4V COLOUR SCHEME

A colour scheme comprising colours and the blending of colours approved by the Principal Agent shall be used for the paintwork. The tints of the undercoats shall closely match the finishing coat but nevertheless differ sufficiently to indicate the number of undercoats. Colour samples of the finishing coats shall be provided in all cases.

C3.2.5.V GENERAL

Paintwork shall include the preparation of surfaces, filling, stopping, sanding and priming of nail heads and screws.

Where windows, sashes, etc are to be painted, the rebates of the openings to be glazed shall be

The Contractor shall be responsible for carrying out all necessary process control tests on the density and moisture content of the compacted sub-grade, base course, etc to ensure that the required compaction is being attained.

C3.2.6 V FENCING, ETC

C3.2.7 V Materials

Materials and workmanship shall comply with the following specifications and requirements :

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Material	SABS Specification
Straining eye bolts, hinge bolts, bolts, nuts etc	135
Treated timber posts, stays and droppers	457
Galvanised fencing wire (plain and barbed)	675
Steel washers	1149
Prefabricated concrete components for fencing	1372
Galvanised and plastic coated chainlink fencing and its wire accessories	1373
	CKS Specification
Anti-intruder fences	451
Metal droppers and standards	451

C3.2.8V Galvanized wire

All galvanized wire shall be zinc coated wire with Class B zinc coating. Straining wire shall be 4mm diameter galvanized mild steel wire. Tie wire shall be 1,6mm diameter galvanized mild steel wire.

C3.2.9V Plastic coated wire

Plastic coated straining wire shall be 3,15mm diameter Class C galvanized mild steel wire plastic coated to an overall diameter of 3,95mm.

Plastic coated tie wire shall be 1,8mm diameter Class C galvanized mild steel wire plastic coated to an overall diameter of 2,5mm.

C3.2.10V Galvanized barbed wire

Galvanized barbed wire shall be 2,5mm diameter mild steel double strand reverse twist zinc coated barbed wire with Class A zinc coating.

C3.2.11V Galvanized wire mesh

Galvanized wire mesh shall be 50mm mesh chain link netting of 2,5mm diameter Class C galvanized mild steel wire.

C3.2.12V Plastic coated wire mesh

Plastic coated wire mesh shall be 50mm mesh chain link netting of 2,5mm diameter Class C galvanized mild steel wire plastic coated to an overall diameter of 3,25mm.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2.13V Galvanized welded wire mesh

Galvanized welded wire mesh shall be fabricated from pre-galvanized wires to rectangular pattern welded together at each intersection using a welding method which forms a zinc oxide protective coating at each intersection.

C3.2.14V Razor wire

Razor wire shall be fabricated from 2,5mm diameter galvanized high tensile steel wire fitted with razor barbs formed of 0,5mm galvanized steel strip clipped on at 37,5mm centres.

C3.2.15V Metal droppers and standards

Droppers shall be of ridged T section mild steel with a mass of not less than 0,55 kg/m. Standards shall be of I section mild steel with a mass of not less than 3 kg/m or of ridged edge Y section mild steel with a mass of not less than 2,5 kg/m, and shall be driven 600mm deep into the ground.

Droppers and standards shall have either galvanized, sprayed metal or painted finish as described in the items and in accordance with CKS 451. In addition, those surfaces of standards embedded in the ground shall be coated with bitumen.

C3.2.16V Metal posts and stays

Posts and stays shall comply with CKS 451 and shall be of black galvanized mild steel tubing as specified.

Straining posts shall be of 108mm outside diameter x 3mm wall thickness tubing, each with a 300 x 300 x 5mm thick mild steel sole plate and a steel cap welded on.

Intermediate posts shall be of 50mm outside diameter x 2,5mm wall thickness tubing, each with a

230 x 230 x 5mm thick mild steel sole plate and a steel cap welded on.

Stays for straining posts shall be of 50mm outside diameter x 2,5mm wall thickness tubing, each with a 230 x 230 x 5mm thick mild steel sole plate welded on and fixed raking with top end flattened, bent, holed and bolted to straining post with and including a 5mm diameter galvanized mild steel bolt with nut and washer.

Posts and stays shall have either galvanized or painted finish as described in the items and in accordance with CKS 451. In addition, sole plates and portions of posts and stays embedded in ground shall be coated with bitumen.

C3.2.17V Timber posts, stays and droppers

Timber posts shall be 125mm diameter, timber stays shall be 100mm diameter and timber droppers shall be 30mm diameter.

C3.2.18V Prestressed concrete posts and stays

Prestressed concrete posts and stays shall be finished smooth from the mould and uniformly stressed by means of high tensile longitudinal prestressing wires with concrete cover to wires of not less than 20mm.

Corner and straining posts shall be 100 x 100mm and intermediate posts and stays shall be 75 x

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

75mm. Stays shall be fixed raking with top end splayed and glued to posts with a suitable epoxy compound.

C3.2.19V Bolts, nuts and washers

Straining eye bolts, hinge bolts, bolts, nuts and washers shall be galvanized.

C3.2.20V Precast concrete fencing

Precast concrete fencing over sloping terrain shall be stepped to suit terrain, including the use of increased lengths of posts as necessary, excavation, etc.

C3.2.21V Concrete bases

Bases in ground for posts, stays, etc shall be of Class B prescribed mix concrete with tops 100mm below surface of ground.

Sizes of concrete bases for posts, stays, etc shall be as follows:

Straining and gate posts – 450 x 450 x 700mm deep
Intermediate posts – 300 x 300 x 600mm deep
Stays – 600 x 300 x 500mm deep

C3.2.22V Security overhangs

Where fencing is described as having a security overhang, the posts and standards shall have angular (single arm) extension arms.

Extension arms shall be attached to the posts and standards by welding in the case of steel and by spiking in the case of timber.

Concrete extension arms shall be cast integrally with the post or standard.

Barbed wire to security overhangs shall be tightly strained and wired at each intersection with extension arms and shall have barbed wire braces at 450mm centres between standards, posts, etc, wired onto the barbed wire and the top straining wire.

C3.2.23V Gates

Gates shall be formed of 40mm outside diameter x 2,5mm wall thickness mild steel tubular framework with welded joints, strongly braced as necessary and filled in with wire mesh as described above, properly strained and securely bound to framework with tie wire.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

PART 2 ELECTRICAL SPECIFICATIONS: NOTICE TO ELECTRICAL CONTRACTORS

Eligibility

The electrical sub-contractors shall also be registered with The Department of Labour. The company shall have a registered electrical installer for single phase installations.

PART 2: GENERAL SPECIFICATION FOR ELECTRICAL WORK

CONTENTS

- 1 TESTS
- 2 MAINTENANCE OF INSTALLATIONS
- 3 REGULATIONS
- 4 NOTICES AND FEES
- 5 SCHEDULE OF FITTINGS AND EQUIPMENT
- 6 QUALITY OF MATERIALS
- 7 WORKMANSHIP AND STAFF
- 8 CERTIFICATE OF COMPLIANCE
- 9 CABLE SLEEVE PIPES
- 10 DRAWINGS
- 11 BALANCING OF LOAD
- 12 MAINTENANCE OF ELECTRICAL SUPPLY
- 1 TESTS

After completion of the works and before first delivery is taken, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installations will be inspected and the Contractor shall make good, to the satisfaction of the Engineer, any defects which may arise.

The Contractor shall provide all instruments and equipment required for testing and any water, power and fuel required for the commissioning and testing of the installations at completion.

2 MAINTENANCE OF INSTALLATIONS

With effect from the date of the First Delivery Certificate the Contractor shall at his own expense undertake the regular servicing of the installation during the maintenance period and shall make all adjustments necessary for the correct operation thereof.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

If during the said period the installations is not in working order for any reason for which the Contractor is responsible, or if the installations develops defects, he shall immediately upon being notified thereof take steps to remedy the defects and make any necessary adjustments.

Should such stoppages however be so frequent as to become troublesome, or should the installations otherwise prove unsatisfactory during the said period the Contractor shall, if called upon by the Engineer, at his own expense replace the whole of the installations or such parts thereof as the Engineer may deem necessary with apparatus specified by the Engineer.

3 REGULATIONS

The installation shall be erected and tested in accordance with the Acts and Regulations as indicated in the scope of works

4 NOTICES AND FEES

The Contractor shall give all notices required by and pay all necessary fees, including any inspection fees, which may be due to the local Supply Authority.

On production of the official account, only the net amount of the fee charged by the Supply Authority for connection of the installation to the supply mains, will be refunded to the Contractor by the Client.

The Contractor shall issue all notices and make the necessary arrangements with Supply Authorities, Eskom and other authorities as may be required with respect to the installation.

5 SCHEDULE OF FITTINGS AND EQUIPMENT

In all instances where schedule of light, socket outlet and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the specification.

All equipment and fittings supplied must be in accordance with the appended specification, suitable for the relevant supply voltage and frequency and must be approved by the Engineer.

6 QUALITY OF MATERIALS

Only materials of first class quality shall be used and all materials shall be subject to the approval of the Engineer. Wherever applicable the material is to comply with the relevant South African Bureau of Standards, specifications, or to British Standard Specifications, where no SABS Specifications exist. Materials wherever possible, must be of South African manufacture.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

7 WORKMANSHIP AND STAFF

An accredited person shall exercise general control over all electrical installation work being carried out.

The workmanship shall be of the highest grade and to the satisfaction of the Client.

All inferior work shall, on indication by the Engineer, immediately be removed and rectified by and at the expense of the Contractor.

8 CERTIFICATES OF COMPLIANCE

On completion of the service, a certificate of compliance must be issued to the Engineer and the Client in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).

9 CABLE SLEEVE PIPES

Where cables cross under roadways, other services and where cables enter buildings, the cables shall be installed in asbestos-cement pipes, earthenware or high-density polyethylene pipes.

The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

10 DRAWINGS

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

11 BALANCING OF LOAD

The Contractor is required to balance the load as equally as possible over the multiphase supply.

12 MAINTENANCE OF ELECTRICAL SUPPLY

All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the Contractor, Engineer, user Client (Beneficiaries, the Local Municipality/Eskom).

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

1 GENERAL

1.1 This part of the specification should be read in conjunction with the Bills of Quantities and drawings as listed in this specification.

1.2 The latest edition, including all amendments up to date of tender of the following RSA specifications, publications and codes of practice shall be read in conjunction with this specification and shall be deemed to form part thereof:

1.2.1 Occupational Health and Safety Act of 1993

1.2.2 SANS 10142-1 – Wiring of premises

1.2.3 SABS 0400 – Building regulations

1.2.4 SABS 0313 – Earthing of structures

1.2.5 The standard specification as Part I of this document

1.2.6 Manufacturer's specifications and installation instructions

1.2.7 The Contractor shall ensure that all safety regulations and measures are applied and enforced during construction, refurbishment, repair and maintenance work on cabling, wiring, distribution boards, luminaires and power outlets.

1.2.8 Applicable SANS specifications and requirements with respect to installation of electrical material and workmanship.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

PROJECT SPECIFIC SPECIFICATION

FARM LIST AND LOCATIONS

The detailed project specification would be for the farms listed in the table below:

Feeder Mill	Farm No	Project	Latitude (S)	Longitude (E)
Komati Mill	1	Figtree A (HOYI)	25°49'19.55"S	31°49'45.37"E
	2	Figtree B	25°49'20.21"S	31°49'48.10"E
	3	Figtree C & Figtree D	25°47'31.53"S	31°50'53.74"E
	4	Lugedlane	25°46'08.61"S	31°48'02.47"E
	5	Shinyokane	25°47'05.40"S	31°49'19.30"E
	6	Madadeni	25°48'50.10"S	31°48'14.80"E
	7	Sikwahlane**	25°47'06.58"S	31°47'03.11"E
	8	Mbunu B	25°45'20.80"S	31°47'56.60"E
	9	Mfunfane, Mbunu C, Mangane	25°46'06.70"S	31°51'02.80"E
	10	Sibange	25°52'21.34"S	31°47'14.30"E
	11	Spoons 7, Spoons 7B	25°50'56.47"S	31°49'00.51"E
	12	Spoons 8	25°54'21.55"S	31°47'16.01"E
	13	Walda	25°42'50.40"S	31°47'41.96"E
	14	Magudu**	25°53'29.40"S	31°44'10.90"E
	15	Phiva**	No Contact Details	
	16	Mangweni (No Infrastructure)	25°43'53.1"S	31°47'38.2"E
	17	Mzinti**	No Contact Details	
	18	Ntunda**	No Contact Details	
	19	Ntunda B **	25°45'16.26"S	31°41'11.50"E
		TOTAL AREA		

Feeder Mill	Farm No	Project	Latitude (S)	Longitude (E)
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Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: SAFDA-MP-0001 (2022/2023)
Part C3: Scope of Work
Section C3.1 Description of Works

Malalane Mill	20	Boschfontein 1 & Boschfontein 2	25°45'26.44"S	31°36'37.69"E
	21	Buffelspruit (No Infrastructure)	25°40'27.1"S	31°31'55.4"E
	22	Langeloo I	25°39'41.89"S	31°35'43.36"E
	23	Langeloo II	25°39'41.8"S	31°35'43.8"E
	24	Middelplaas	25°41'54.14"S	31°32'23.94"E
	25	Ngogolo	25°40'50.8"S	31°33'27.3"E
	26	Nhlangu East and Mbongozi	25°41'33.9"S	31°35'49.2"E
	27	Nhlangu West	25°41'8.23"S	31°32'29.00"E
	28	Schoemansdal	25°42'28.3"S	31°31'10.1"E
	29	Tikhontele	No Contact Details	
	30	Vlakkult	No Contact Details	
	31	Zelpy (No Infrastructure)	25°39'40.17"S	31°32'4.90"E

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

1. BUILDING INTERIOR

1.1 Paint Work

In damaged areas Remove all Loose Material, Prepare Surface, Supply, and Apply Two Coats of Paint

- On internal walls (Semi-Gloss Paint)
- On window sills (Gloss Paint)
- On door frames (Gloss Paint)

1.2 Floor

Remove all Ceramic Tiles, Prepare Surface, Supply, and Install Tiles (incl. Skirting)

- Ceramic tile removal
- Prepare surface
- Supply and install ceramic tiles including skirting (tiling space: 2-3mm, length: 600mm, width: 600mm, thickness: 8mm, finish: shiny, type: porcelain, colour: client spec, quality: A grade, tile application: indoor, adhesive: superbond)

1.3 Doors

Remove and Install Doors

- Remove Door (2100 x 900mm)
- Supply and install door (2100 x 900mm)

1.4 Windows

Demolish/Remove, Supply and Install Glass Sheets and Window Blinds

- Demolish, remove damaged glass and putty from existing mild steel window frames
- Supply and install 4mm thick clear glass panes, including cutting and fixing in position using approved window putty
- Supply and Install 50mm aluminium venetian blinds to fit window

1.5 Ceiling

- Remove Damaged Ceiling Board, Supply, Paint and Install Ceiling Board
- Supply and install 6.4mm Rhino board and 70mm coved cornices (50mm cover strips of mesh scrim nailed over joints and the whole finished with 6mm minimum Crete stone gypsum skim plaster trowelled to smooth polished surface, ceiling must be fixed to 38 x 38mm sawn softwood branderling at 400mm centres fixed to timber trusses)

1.6 Cupboards

Supply and Install Cupboards

- Supply compartment pigeonhole steel cabinet (3x3) with doors: 900mm x 900mm x 450mm
- Supply compartment pigeonhole steel cabinet (3x3) with doors: 1800mm x 900mm x 450mm

1.7 Storage Facility

- Prepare Wall for Plaster, Plaster Wall, add Wall Primer and Paint
- Apply primer
- Apply two coats of paint

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Prepare Surface rehabilitate Floor
- Remove, Supply, and Install Doors
- Remove Door (2032 x 813mm)
- Install Door (2032 x 813mm)
- Supply, Paint and Install Ceiling Board: Supply and install 6.4mm Rhinoboard and 70mm coved cornices (50mm cover strips of mesh scrim nailed over joints and the whole finished with 6mm minimum cretestone gypsum skim plaster trowelled to smooth polished surface, ceiling must be fixed to 38 x 38mm sawn softwood bandering at 400mm centres fixed to timber trusses

1.8 Electrical Works

Main Distribution Board:

Supply, install, connect, and commission of a distribution board in steel box, isolated type, 36 circuits min. 15 Amp for each circuit.

Internal Lighting:

Supply and install internal lighting - led bulb light 18watt complete with frame in ceilings, the work includes necessary wiring and switch fixed inside plastic pipe 25mm with all accessories

Internal Plugs:

Supply and install G-2000 double plugs complete with cover and switches, the work includes necessary wiring and accessories

External Lighting:

Supply and install external light weatherproof outdoor type complete with frame, the work includes necessary wiring and switch fixed inside plastic pipe 25mm and all accessories"

Earthing System:

Supply, install and connect earthing system for the building consists of three copper rods, the length of each one of them 1.5 m and diameter 16 mm, connected together by main board and generator by copper wire

Supply and Install Aircons

Supply and install wall mounted air-conditioner back-to-back 12000BTU complete air conditioning unit with condenser.

Supply and install PVC drainpipe with accessories

Supply and install electrical cables with pipes and fittings

2. BUILDING EXTERIOR

2.1 Paintwork

Remove all Loose Material, Prepare Surface, Supply, and Apply Two Coats of Paint

- On exterior wall (acrylic paint)
- On door frames and burglar bars (gloss paint)

2.2 Aprons

- Demolish Existing Disintegrating Apron and Construct New Apron
- Demolish existing disintegrating apron
- Construct new apron

2.3 Clean Water Supply

Supply and Install Purification System

- Pressure reducing valve

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- Bag sand filter
- "3 Stage Big Blue Water Filtration System With 55W UV Sterilizer, Sediment Filters & Carbon Filter (Specifications: maximum pressure: 6bar, maximum flow rate: 2720lph, big blue filter housing port size: 25mm power consumption: 55watt)"
- "Booster pump (Specifications: maximum pressure: inlet and outlet diameter: 25 mm, 3.6bar, maximum flow rate: 2040lph, power consumption:0.37 kilowatt)"

Supply and Install Tank Stand and Tanks

- Erect 6m Tank Stand According to Design
- Supply and Install 5000 Litre Tank

2.4 Sewer System

- Remove damaged septic tank
- Supply 6000 litre x 3800mm x 1950mm x 1850mm x 400kg septic tank, 2 x manhole, fittings, and accessories
- Supply and install 50mm PVC pipe
- Supply and install 50mm PVC fittings
- Excavation for septic tank: excavate hole 20% larger than tank, tank bed must be 150mm with no sharp or solid protrusions
- Install 6000 litre x 3800mm x 1950mm x 1850mm x 400kg septic tank, fittings, accessories, manhole
- Fill tank 300mm whilst backfilling with preselected material “

2.5 French Drain

- Supply 100mm perforated drainage pipe and fittings
- Supply 200 gr/m2 geotextile polyester material
- Supply aggregate drain rock
- Excavate 500mm x 1000mm x6000mm trench, backfill with aggregate drain rock
- Install 100mm perforated drainage pipe and geotextile polyester material

2.6 Perimeter Fence for Facilities Area

- Remove existing fence and gates.
- Supply & erection of diamond mesh fence (1.8m x 50mm x 2.5mm lightly galvanized diamond Mesh) Corner posts
- Standards with post with 450mm overhang
- Intermediate post with 450mm overhang
- Barbed wire (4 strands on diamond mesh, 4 strands on overhang)
- 2.0mm lightly Galvanized wire : Tie wire
- Gate: 1 x 4m x 1.8m double leaf gate
- Gate: 1 x 1m x 1.8m single galvanized security gate

3. OTHER

Implement pest control measures for rats and wasps

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4. FARMS DESCRIPTION OF WORKS

4.1 Figtree A (HOYI)

The supporting farm structures at Figtree A consist of 6 offices, 2 boardrooms, female and male ablution areas, kitchen, and a storage facility. The whole building needs to be repainted; however, the structural integrity of the building is still intact. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Boardrooms <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall. 	Boardrooms <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
	Offices and Reception Area <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall. 	Offices and Reception Area <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Boardrooms <ul style="list-style-type: none"> Existing plastic tiles are torn and worn out. Existing plastic tiles are stained. 	Boardrooms <ul style="list-style-type: none"> Remove existing plastic tiles, cart away debris and dispose of site. Install new tiles.
	Offices and Reception Area <ul style="list-style-type: none"> Existing tiles are worn out 	Offices and Reception Area <ul style="list-style-type: none"> Replace worn out tiles.
Ceiling and Roof	<ul style="list-style-type: none"> Stained ceiling. Damaged ceiling due to rain. Rust on corrugated iron roof. Some offices do not have ceiling 	<ul style="list-style-type: none"> Repaint stained ceiling. Remove and replace damaged ceiling. Install ceiling in offices that do not have ceiling
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Electrical Installations	<ul style="list-style-type: none"> Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Mud building birds have built nests inside offices. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Figtree A does not have a tractor and storage shed 	<ul style="list-style-type: none"> Remove existing roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns. A tractor shed to be constructed.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. There is no tank to meet the water demands. 	<ul style="list-style-type: none"> Install purification system for drinking water. Install tank stand and tank to meet water demands at the farm

4.2 Figtree B

The supporting farm structures at Figtree B consist of two offices, a reception area, ablution facilities, and a kitchen. The whole building needs to be repainted; however, the structural integrity of the building is still intact. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	<p>Reception Area</p> <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall. 	<p>Reception Area</p> <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	Office Areas <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall.. 	Office Areas <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Reception Area <ul style="list-style-type: none"> There are no tiles on the floor 	Reception Area <ul style="list-style-type: none"> Install new tiles.
	Office Areas <ul style="list-style-type: none"> There are no tiles on the floor 	Office Areas <ul style="list-style-type: none"> Install new tiles
Ceiling and Roof	<ul style="list-style-type: none"> The entire building does not have a ceiling board 	<ul style="list-style-type: none"> Install ceiling board
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
Electrical Installations	<ul style="list-style-type: none"> Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. No septic tank 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Install septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Mud building birds have built nests inside offices. Wasp infestation (wasps have built mud daubers inside and outside the 	<ul style="list-style-type: none"> Remove and replace damaged concrete apron. Remove existing flaked paint. Prepare

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	building). <ul style="list-style-type: none"> Damaged aprons The storage facilities and tractor sheds have been damaged 	columns for repainting. Repaint columns of the veranda. <ul style="list-style-type: none"> The damaged storage facilities and tractor sheds to be demolished and new ones constructed.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. There is no tank to meet the water demands. 	<ul style="list-style-type: none"> Install purification system for drinking water. Install tank stand and tank to meet water demands at the farm

4.3 Figtree C & Figtree D

The supporting farm structures at Figtree C and D Farm consist of 3 offices, a boardroom, female and male ablution areas, a tractor shed, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracked Walls Exterior walls have backwashing or rough textured cement wall. 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Seal cracks and repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices <ul style="list-style-type: none"> Existing plastic tiles are torn and worn out. Existing plastic tiles are stained. 	Offices <ul style="list-style-type: none"> Remove existing plastic tiles, cart away debris and dispose of site. Install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> Stained ceiling. Damaged ceiling due to rain. Rust on corrugated iron roof. Damaged insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Repaint stained ceiling. Remove and replace damaged ceiling. Remove and replace rusted/corrugated iron roof. Remove and replace insulation material. Remove and replace roof trusses.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: SAFDA-MP-0001 (2022/2023)
Part C3: Scope of Work
Section C3.1 Description of Works

Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> • Curtains are worn out. • Broken glass windows. • Rusted window frames. • Broken window latches. • Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> • Remove curtains and install blinds. • Replace broken glass windows. • Remove rust from window frames. • Repaint window frames. • Replace broken window latches. • Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> • Flaked off paint on window frames. • Flaked off paint on burglar guard door and windows. • Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> • Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. • Remove rust from burglar guards. Repaint existing burglar guards.
	Storage Shed <ul style="list-style-type: none"> • Ventilation system is worn out. • None functioning double doors. 	Storage Shed <ul style="list-style-type: none"> • Remove existing ventilation system. • Seal areas where the vents are located. • Install roof ventilation system. • Remove double doors with roll-up doors.
Electrical Installations	<ul style="list-style-type: none"> • Non-existent air-conditioning system. • Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> • Install air-conditioning system. • Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. • Fix electrical wiring. • Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> • Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. • Damaged septic tank. 	<ul style="list-style-type: none"> • Remove and replace kitchen sink with cupboard • Remove and replace existing toilets, urinals, and basins. • Remove and replace existing pipes, fittings, and accessories. • Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> • Corroded poles and fencing wire • Sagging fencing wire • Tilted posts 	<ul style="list-style-type: none"> • Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> • Rat infestation • Mud building birds have built nests inside offices and storage sheds. • Wasp infestation (wasps have built mud daubers inside and outside the building). • Damaged aprons and ramps. • Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> • Pest control services. • Remove existing roof and insulation system. • Replace roof and insulation system. • Remove and replace damaged concrete ramps and apron. • Remove existing flaked paint. Prepare columns for repainting. Repaint columns.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.
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4.4 Lugedlane

The supporting farm structures at Lugedlane Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
	Ablution Facilities <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Ablution Facilities <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
Floors	Offices and Boardroom <ul style="list-style-type: none"> No tiles on floor 	Offices and Boardroom <ul style="list-style-type: none"> Prepare wall and install new tiles.
	Ablution Facilities <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Ablution Facilities <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> The ceiling is stained 	<ul style="list-style-type: none"> Repaint Ceiling
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> No curtains or blinds Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> install blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

		handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system nonexistent Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> install new systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting, and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Termite infestation (termites have built mud daubers inside and outside the building). Damaged veranda floor slab 	<ul style="list-style-type: none"> Pest control services. Replace roof and insulation system. Remove and replace damaged veranda concrete floor slab.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.5 Shinyokane

The supporting farm structures at Shinyokane Farm consist of an office, a boardroom, female and male ablution areas, and a tractor shed. The structural integrity of the building is still intact; however, the whole building needs to be repainted.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
	Tractor Shed <ul style="list-style-type: none"> Concrete walls not plastered IBR sheets are rusted 	Tractor Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint. Remove rusted IBR sheets and install new sheets
Floors	Offices and Boardroom <ul style="list-style-type: none"> Plastic tiles are worn-out 	Offices and Boardroom <ul style="list-style-type: none"> Remove worn-out plastic tiles, prepare wall, and install new tiles.
	Storage Shed <ul style="list-style-type: none"> Storage shed does not have a concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for installation of concrete floor slab. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> Ceiling is damaged. Rust on corrugated iron roof. No insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Remove damaged ceiling, and install new ceiling Remove and replace rusted/corrugated iron roof. Install insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> No curtains or blinds. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Install blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	Tractor Shed <ul style="list-style-type: none"> Ventilation system nonexistent. None functioning double doors. 	Tractor Shed <ul style="list-style-type: none"> Install roof ventilation system. Remove and replace double doors.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system nonexistent Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Install air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting, and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

4.6 Madadeni

The supporting farm structures at Madadeni Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Contract: SAFDA-MP-0001 (2022/2023)
Part C3: Scope of Work
Section C3.1 Description of Works

Floors	Offices and Boardroom	Offices and Boardroom
	<ul style="list-style-type: none"> No tiles on floor 	<ul style="list-style-type: none"> Prepare wall and install new tiles.
Ceiling and Roof	Storage Shed	Storage Shed
	<ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	<ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Windows/Ventilation and Doors	Offices	Offices
	<ul style="list-style-type: none"> Curtains are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	<ul style="list-style-type: none"> Remove worn out curtains and install blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	Storage Shed	Storage Shed
	<ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	<ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system damaged Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove damaged air-conditioning system and install new systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

4.7 Sikwahlane

The supporting farm structures at Sikwahlane Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> No tiles on floor 	Offices and Boardroom <ul style="list-style-type: none"> Prepare wall and install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Ceiling and Roof	<ul style="list-style-type: none"> No ceiling Rust on corrugated iron roof. Damaged insulation material. 	<ul style="list-style-type: none"> Install ceiling Remove and replace rusted/corrugated iron roof. Remove damaged insulation material and install new insulation material.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Curtains are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove worn out curtains and install blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	Storage Shed <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	Storage Shed <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system damaged Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove damaged air-conditioning system and install new systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Other	<ul style="list-style-type: none"> • Rat infestation • Mud building birds have built nests inside offices and storage sheds. • Termite infestation (termites have built mud daubers inside and outside the building). • Damaged aprons and ramps. • Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> • Pest control services. • Remove existing roof and insulation system. • Replace roof and insulation system. • Remove and replace damaged concrete ramps and apron. • Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> • Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. • Tank size is 2000 liters therefore doesn't meet water demand. • Tank stand is damaged. 	<ul style="list-style-type: none"> • Install purification system for drinking water. • Remove and replace storage tank and stand.

4.8 Mbunu B

The supporting farm structures at Mbhunu B Farm consist of 3 offices, a boardroom, female and male ablution areas, a tractor shed, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> • Stained walls. • Flaked off wall paint. • Exterior walls have backwashing or rough textured cement wall. 	Offices and Boardroom <ul style="list-style-type: none"> • Scrape all flaked off paint and prepare surface to receive new paint. • Repaint walls. • Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed <ul style="list-style-type: none"> • Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> • Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> • Existing plastic tiles are torn and worn out. • Existing plastic tiles are stained. 	Offices and Boardroom <ul style="list-style-type: none"> • Remove existing plastic tiles, cart away debris and dispose of site. • Install new tiles.
	Storage Shed <ul style="list-style-type: none"> • Cracks on concrete floor slab. • Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> • Prepare floor for repairing of concrete floor slab. • Repair cracks. • Skim coat concrete floor.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Ceiling and Roof	<ul style="list-style-type: none"> Damaged ceiling due to rain. Rust on corrugated iron roof. Damaged insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Remove and replace damaged ceiling. Remove and replace rusted/corrugated iron roof. Remove and replace insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Curtains have no blinds Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Install blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	Storage Shed <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	Storage Shed <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system nonexistent Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove and replace all air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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Part C3: Scope of Work
Section C3.1 Description of Works

	building). • Damaged aprons and ramps. • Flaked paint from columns in storage facility.	• Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	• Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. • Tank size is 2000 liters therefore doesn't meet water demand. • Tank stand is damaged.	• Install purification system for drinking water. • Remove and replace storage tank and stand.

4.9 Mfunfane, Mbunu C, Mangane

The supporting farm structures at Mfunfane, Mbunu C and Mangane Farm consist of 3 offices, a boardroom, female and male ablution areas, a tractor shed, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom • Stained walls. • Flaked off wall paint. • Exterior walls have backwashing or rough textured cement wall.	Offices and Boardroom • Scrape all flaked off paint and prepare surface to receive new paint. • Repaint walls. • Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed • Storage shed has backwashing or rough textured cement wall.	Storage Shed • Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices • Existing plastic tiles are torn and worn out. • Existing plastic tiles are stained.	Offices • Remove existing plastic tiles, cart away debris and dispose of site. • Install new tiles.
	Storage Shed • Cracks on concrete floor slab. • Damaged concrete floor slab	Storage Shed • Prepare floor for repairing of concrete floor slab. • Repair cracks. • Skim coat concrete floor.
Ceiling and Roof	• Stained ceiling. • Damaged ceiling due to rain. • Rust on corrugated iron roof. • Damaged insulation material. • Damaged wood trusses due to termites.	• Repaint stained ceiling. • Remove and replace damaged ceiling. • Remove and replace rusted/corrugated iron roof. • Remove and replace insulation material. • Remove and replace roof trusses.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Blinds are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove and replace existing blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
Windows/Ventilation and Doors	Storage Shed <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	Storage Shed <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
	<ul style="list-style-type: none"> Air-conditioning system not functioning. Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove and replace all air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Electrical Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Plumbing Installations	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Fencing	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system.
Other		

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<ul style="list-style-type: none"> Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

4.10 Sibange

The supporting farm structures at Sibange Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> No tiles on floor 	Offices and Boardroom <ul style="list-style-type: none"> Prepare wall and install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> No ceiling Rust on corrugated iron roof. No insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Install ceiling Remove and replace rusted/corrugated iron roof. Install insulation material. Remove and replace roof trusses.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> • Curtains are worn out. • Broken glass windows. • Rusted window frames. • Broken window latches. • Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> • Remove worn out curtains and install blinds. • Replace broken glass windows. • Remove rust from window frames. • Repaint window frames. • Replace broken window latches. • Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> • Flaked off paint on window frames. • Flaked off paint on burglar guard door and windows. • Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> • Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. • Remove rust from burglar guards. Repaint existing burglar guards.
Windows/Ventilation and Doors	Storage Shed <ul style="list-style-type: none"> • Ventilation system is worn out. • None functioning roll up doors. 	Storage Shed <ul style="list-style-type: none"> • Remove existing ventilation system. • Seal areas where the vents are located. • Install roof ventilation system. • Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> • Air-conditioning system none existent • Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> • Install all air-conditioning systems. • Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. • Fix electrical wiring. • Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> • Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. • Damaged septic tank. 	<ul style="list-style-type: none"> • Remove and replace kitchen sink with cupboard • Remove and replace existing toilets, urinals, and basins. • Remove and replace existing pipes, fittings, and accessories. • Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> • Corroded poles and fencing wire • Sagging fencing wire and gates • Tilted posts 	<ul style="list-style-type: none"> • Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> • Rat infestation • Mud building birds have built nests inside offices and storage sheds. • Wasp infestation (wasps have built mud daubers inside and outside the building). • Damaged aprons and ramps. • Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> • Pest control services. • Remove existing roof and insulation system. • Replace roof and insulation system. • Remove and replace damaged concrete ramps and apron. • Remove existing flaked paint. Prepare columns for repainting. Repaint columns.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.
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4.11 Spoons 7, Spoons 7B

The supporting farm structures at Spoon 7 and Spoons 7B Farm consist of 3 offices, a boardroom, female and male ablution areas, a tractor shed, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall. 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> Existing plastic tiles are torn and worn out. Existing plastic tiles are stained. 	Offices and Boardroom <ul style="list-style-type: none"> Remove existing plastic tiles, cart away debris and dispose of site. Install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> Damaged ceiling due to rain. Rust on corrugated iron roof. Damaged insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Remove and replace damaged ceiling. Remove and replace rusted/corrugated iron roof. Remove and replace insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Blinds are worn out. Broken glass windows. Rusted window frames. 	Offices <ul style="list-style-type: none"> Remove and replace existing blinds. Replace broken glass windows. Remove rust from window frames.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<ul style="list-style-type: none"> Broken window latches. Damaged doors and door handles. 	<ul style="list-style-type: none"> Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	<p style="text-align: center;">Storage Shed</p> <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	<p style="text-align: center;">Storage Shed</p> <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system none existent Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove and replace all air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.
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4.12 Spoons 8

The supporting farm structures at Spoon 8 Farm consist of 3 offices, a boardroom, female and male ablution areas, a tractor shed, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall. 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> Existing plastic tiles are torn and worn out. Existing plastic tiles are stained. 	Offices and Boardroom <ul style="list-style-type: none"> Remove existing plastic tiles, cart away debris and dispose of site. Install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> Damaged ceiling due to rain. Rust on corrugated iron roof. Damaged insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Remove and replace damaged ceiling. Remove and replace rusted/corrugated iron roof. Remove and replace insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Blinds are worn out. Broken glass windows. Rusted window frames. 	Offices <ul style="list-style-type: none"> Remove and replace existing blinds. Replace broken glass windows. Remove rust from window frames.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<ul style="list-style-type: none"> Broken window latches. Damaged doors and door handles. 	<ul style="list-style-type: none"> Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	<p style="text-align: center;">Storage Shed</p> <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	<p style="text-align: center;">Storage Shed</p> <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system none existent Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Install all air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.13 Walda

The supporting farm structures at Walda Farm consist of an office, 2 boardrooms, female and male ablution areas, a tractor shed, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Exterior walls have backwashing or rough textured cement wall. 	Offices <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices <ul style="list-style-type: none"> Existing plastic tiles are torn and worn out. Existing plastic tiles are stained. 	Offices <ul style="list-style-type: none"> Remove existing plastic tiles, cart away debris and dispose of site. Install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> Stained ceiling. Damaged ceiling due to rain. Rust on corrugated iron roof. Damaged insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Repaint stained ceiling. Remove and replace damaged ceiling. Remove and replace rusted/corrugated iron roof. Remove and replace insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Blinds are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove and replace existing blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	<p>Storage Shed</p> <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	<p>Storage Shed</p> <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system not functioning. Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove and replace all air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

4.14 Magudu

The supporting farm structures at Magudu Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Table below shows the problem description and solutions that were found during the assessment of the building interior

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> Stained walls. Flaked off wall paint. Cracks on walls 	Offices and Boardroom <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Seal cracks
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> No tiles on floor 	Offices and Boardroom <ul style="list-style-type: none"> Prepare wall and install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> No ceiling Rust on corrugated iron roof. No insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Install ceiling Remove and replace rusted/corrugated iron roof. Install insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Curtains are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove worn out curtains and install blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
	PROBLEM DESCRIPTION	SOLUTION
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	Storage Shed <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	Storage Shed <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the vents are located. Install roof ventilation system.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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		<ul style="list-style-type: none"> Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system none existent Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Install all air-conditioning systems. Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> Kitchen sink, basins, toilets, urinals, pipes, fittings, fixtures, and accessories are either broken, leaking, or are not working. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Nkomazi River is currently being used for consumption, flushing, etc. Tank size is 2000 liters therefore doesn't meet water demand. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

4.15 Phiva**

No Contact details

4.16 Mangweni

No Infrastructure

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

4.17 Mzinti**

No Contact details

4.18 Ntunda**

No Contact details

4.19 Ntunda B**

No Contact details

4.20 Boschfontein 1 & Boschfontein 2

No Infrastructure

4.21 Buffelspruit

No Infrastructure

4.22 Langeloo I

The supporting farm structures at Langeloo 1 Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table below shows the problem description and solutions that were found during the assessment of the building interior

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> There are cracks on the walls. The paint is flaking off in some areas The walls are stained 	Offices and Boardroom <ul style="list-style-type: none"> Seal all the cracks. Scrape all flaked off paint and prepare surface to receive new paint and then repaint the walls.
	Storage Shed <ul style="list-style-type: none"> The cement wall of the storage shed is rough-textured or backwashed.. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> No tiles on floor There are cracks on the floor. 	Offices and Boardroom <ul style="list-style-type: none"> Prepare wall and install new tiles. Seal all the cracks.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> The office area does not have a ceiling The insulation material is damaged 	<ul style="list-style-type: none"> Install ceiling Remove damaged insulation material and install new insulation material.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> All the blinds have been damaged There is broken glass in some of the windows. The window frames are rusted. Some windows are missing window latches Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove worn out blinds and install blinds. Replace broken glass windows. Remove rust from window frames and repaint them. Replace broken window latches. Remove and replace damaged doors and door handles
	PROBLEM DESCRIPTION	SOLUTION
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	Storage Shed <ul style="list-style-type: none"> Ventilation system is worn out. None functioning double doors. 	Storage Shed <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the ventilation system is located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system damaged Faulty electrical wiring, no electrical plugs, no lights/lights are not working. 	<ul style="list-style-type: none"> Remove damaged air-conditioning system and install new systems. Disconnect any electrical fixtures, equipment, and panels, and place them aside as instructed by the engineer. Remove all of the current electrical wiring, including distribution boxes, light fixtures, bulbs, and switch sockets and then fix the electrical wiring. Reconnect the lights, power, and electrical panels before testing the complete system.
Plumbing Installations	<ul style="list-style-type: none"> The pipes, fittings, fixtures, kitchen sinks, basins, toilets, urinals, and other accessories are either faulty, leaky, or damaged. There is no septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard, existing toilets, urinals, and basins, pipes, fittings, and accessories. Install a new septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). The aprons and ramps have cracks 	<ul style="list-style-type: none"> Pest control services. Seal all the cracks seen on the aprons and ramps. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Mlumat River is currently being used for consumption, flushing, etc. There is no tank to store the water from the river. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Install a new tank. Remove and replace tank stand.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

4.23 Langeloop II

The supporting farm structures at Langeloop 2 Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table below shows the problem description and solutions that were found during the assessment of the building interior

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices and Boardroom <ul style="list-style-type: none"> There are cracks and termite tubes on the walls The paint is flaking off on some portions The walls are stained 	Offices and Boardroom <ul style="list-style-type: none"> Scrape off all termite tubes and seal all the visible cracks Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls.
	Storage Shed <ul style="list-style-type: none"> Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> Prepare wall for plaster, plaster wall, add wall primer and paint.
Floors	Offices and Boardroom <ul style="list-style-type: none"> There are cracks on the floors There are no tiles 	Offices and Boardroom <ul style="list-style-type: none"> Seal all visible cracks and prepare for the installation of tiles Prepare floor and install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks on concrete floor slab. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> No ceiling No insulation material. Damaged wood trusses due to termites. 	<ul style="list-style-type: none"> Install ceiling Install insulation material. Remove and replace roof trusses.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> Curtains and/or blinds are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	Offices <ul style="list-style-type: none"> Remove worn out curtains and/or blinds and install new blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
	PROBLEM DESCRIPTION	SOLUTION
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	Storage Shed <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	Storage Shed <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the ventilation system was located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system does not function 	<ul style="list-style-type: none"> Install new air-conditioning systems.
Plumbing Installations	<ul style="list-style-type: none"> The pipes, fittings, fixtures, kitchen sinks, basins, toilets, urinals, and other accessories are either faulty, leaking, or damaged. There is no septic tank 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> Rat infestation Mud building birds have built nests inside offices and storage sheds. Wasp infestation (wasps have built mud daubers inside and outside the building). Damaged aprons and ramps. Flaked paint from columns in storage facility. 	<ul style="list-style-type: none"> Pest control services. Remove existing roof and insulation system. Replace roof and insulation system. Remove and replace damaged concrete ramps and apron. Remove existing flaked paint. Prepare columns for repainting. Repaint columns.
Availability of Clean Water	<ul style="list-style-type: none"> Currently, unpurified water from the Mlumati River is utilized for flushing, drinking, and other purposes. The 2000 liter tank is too little to hold the required amount of water. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Remove and replace storage tank and stand.

4.24 Middelplaas

The supporting farm structures at Middelplaas Farm consist of the following:

- Two offices,
- A boardroom,
- Female and male ablution areas,
- A tractor shed,
- and storage facilities.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table below shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices <ul style="list-style-type: none"> The walls in the offices have spider webs and are stained. The paint on the walls is flaking off. Exterior walls of the offices have backwashing or rough textured cement wall. 	Offices <ul style="list-style-type: none"> Remove all the spider webs on the walls of the offices. Scrape off all flaking paint and prepare the surface for fresh coat and then repaint the walls. Plaster the exterior wall and then paint it..
	Boardroom <ul style="list-style-type: none"> The walls of the boardroom has back washing. 	Boardroom <ul style="list-style-type: none"> Plaster the walls of the boardroom. After plastering the wall, paint it with at least two coats of paint.
	Storage Facilities <ul style="list-style-type: none"> The wall of the storage facilities is made of cement with a rough texture. 	Storage Facilities <ul style="list-style-type: none"> Plaster the wall, prime it, and then paint it.
	Ablution Facilities and Kitchen <ul style="list-style-type: none"> The walls has spider webs, stained, and the paint is chipping off. 	Ablution Facilities and Kitchen <ul style="list-style-type: none"> Remove all the spider web and then prepare the wall for repainting. Repaint the walls.
Floors	Office Area <ul style="list-style-type: none"> The floor of the office space is not tiled. 	Office Area <ul style="list-style-type: none"> Install new tiles.
	Storage Shed <ul style="list-style-type: none"> Cracks in the floor slab's concrete. Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> Prepare floor for repairing and sealing of cracks on the concrete floor slab. Repair cracks. Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> The office area's ceiling is damaged. 	<ul style="list-style-type: none"> Remove and replace damaged ceiling.
	PROBLEM DESCRIPTION	SOLUTION
Windows/V entilation and Doors	Offices <ul style="list-style-type: none"> None of the windows have shades or curtains.. The windows have shattered glass and all the window frames with rust. 	Offices <ul style="list-style-type: none"> Replace all of the windows' blinds. Replace broken glass windows. Remove rust from window frames. Repaint window frames.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<ul style="list-style-type: none"> A few window locks are damaged. The are damaged doors and door handles Paint that flaked off of window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Replace all the broken window latches. Remove and replace damaged doors and door handles Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	<p style="text-align: center;">Storage Shed</p> <ul style="list-style-type: none"> Ventilation system is worn out. None functioning double doors. 	<p style="text-align: center;">Storage Shed</p> <ul style="list-style-type: none"> Remove existing ventilation system and seal off all the area where the ventilators were located. Install roof ventilation system. Remove and replace double doors.
Plumbing Installations	<ul style="list-style-type: none"> The kitchen sink, toilets, pipes, fittings, fixtures, and accessories have been damaged or are non-existent. The septic tank is damaged. 	<ul style="list-style-type: none"> Install new cabinets, sinks, pipes, fixtures, and other appliances in the kitchen. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded fence posts and wire, sagging fence gates, and tilted fence posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> There are spider webs in the entire building, which means that there is an infestation of spiders 	<ul style="list-style-type: none"> Pest control services to remove termites.
Availability of Clean Water	<ul style="list-style-type: none"> Currently, unpurified water from the Mlumati River is utilized for flushing, drinking, and other purposes. There is no water storage tank. The tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Install new tank stand and storage tank Remove and replace storage tank and stand.

4.25 Ngogolo

The supporting farm structures at Ngogolo Farm consist of the following support structures:

- A guard house,
- Three exterior storage sheds,
- Outside male and female ablution facilities,
- Offices,
- Interior Gender-neutral Facilities,
- Kitchen, and a
- Tractor Shed

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table below shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Guardhouse <ul style="list-style-type: none"> The outside walls are stained due to rain The inside walls are stained as well. 	Guardhouse <ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint walls. Add an apron around the guardhouse to prevent staining of the outside walls
	First Storage Shed <ul style="list-style-type: none"> The walls of the storage shed are rough-textured or backwashed with cement. Both the outside and the inside walls are stained 	First Storage Shed <ul style="list-style-type: none"> Plaster the wall, prepare the wall for plaster, apply wall primer, and paint.
	Second and Third Storage Sheds <ul style="list-style-type: none"> Storage shed walls have a rough texture or have been backwashed with cement. The inside and exterior walls are stained. 	First Storage Shed <ul style="list-style-type: none"> Prime the wall before plastering, paint, and plaster the wall.
	Outside Ablution Facilities <ul style="list-style-type: none"> The exterior walls of the ablution facilities have a rough texture or have been backwashed with cement. Walls on the inside and outside are discoloured. 	Outside Ablution Facilities <ul style="list-style-type: none"> The exterior wall needs to be plastered. A primer and paint need to be applied on both the interior and exterior walls
Floors	Office Area <ul style="list-style-type: none"> Existing ceramic tiles are worn out. 	Office Area <ul style="list-style-type: none"> Remove existing ceramic tiles, cart away debris and dispose of site. Install new tiles.
	Storage Sheds <ul style="list-style-type: none"> Concrete floor slab has cracks or is damaged. 	Storage Sheds <ul style="list-style-type: none"> Skim coat the concrete floor and fix any fractures before replacing the concrete floor slab.
	PROBLEM DESCRIPTION	SOLUTION
Ceiling and Roof	<ul style="list-style-type: none"> The ceiling in the office area is stained The tractor shed does not have a ventilation system 	<ul style="list-style-type: none"> Repaint stained ceiling. Install a ventilation system in the tractor shed
Windows/Ventilation and Doors	<ul style="list-style-type: none"> There are no blinds nor curtains in the office area. The first storage shed has broken windows. The window painted on the window frames is chipping off Broken window latches. Damaged doors and door handles. 	<ul style="list-style-type: none"> Install blinds in all the windows of the office area. Replace all broken windows in the storage shed Scrape off the existing paint on the window frames and apply new paint Replace broken window latches. Remove and replace damaged doors and door

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

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		handles
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system not functioning. There are exposed wires in the guardhouse and the tractor shed. 	<ul style="list-style-type: none"> Remove and replace all air-conditioning systems. Disconnect any electrical fixtures, equipment, and panels, and place them aside as instructed by the engineer. Remove all the exposed electrical wiring, including any light fixtures, bulbs, switch sockets, and distribution boxes. Fix electrical wiring. Reconnect the power, lights, and electrical panels, then test the complete system.
Plumbing Installations	<ul style="list-style-type: none"> Basins, toilets, pipes, fittings, fixtures, and accessories are not working in the exterior ablution facility. Damaged septic tank. 	<ul style="list-style-type: none"> Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> The apron surrounding the office area is damaged. The ramps are cracked 	<ul style="list-style-type: none"> Remove and replace damaged concrete ramps and apron.

4.26 Nhlangu East & Mbongozi

The supporting farm structures at Mbongozi and Nhlangu East Farm consist of two offices, a boardroom, female and male ablution areas, and storage facilities. The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	<p align="center">Offices and Boardroom</p> <ul style="list-style-type: none"> The walls have stains The paint on some portions of the walls are flaking off. There are cracks. 	<p align="center">Offices and Boardroom</p> <ul style="list-style-type: none"> Scrape off all flaking paint and prepare the surface for fresh coats and then repaint the walls Seal any visible cracks
	<p align="center">Storage Shed</p> <ul style="list-style-type: none"> The wall of the storage shed is made of cement with a rough texture. 	<p align="center">Storage Shed</p> <ul style="list-style-type: none"> Plaster the wall, prepare the wall for plaster, apply wall primer, and paint.
Floors	<p align="center">Offices and Boardroom</p> <ul style="list-style-type: none"> No tiles on the floor 	<p align="center">Offices and Boardroom</p> <ul style="list-style-type: none"> Wall preparation and new tile installation.
	<p align="center">Storage Shed</p> <ul style="list-style-type: none"> Cracks in the floor slab's concrete. Damaged concrete floor slab 	<p align="center">Storage Shed</p> <ul style="list-style-type: none"> Prepare floor for repairing of concrete floor slab. Repair all the cracks. Skim coat the concrete floor.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Ceiling and Roof	<ul style="list-style-type: none"> No ceiling Rust on corrugated iron roof. Damaged insulation material. 	<ul style="list-style-type: none"> Install ceiling Remove and replace rusted/corrugated iron roof. Remove damaged insulation material and install new insulation material.
Windows/Ventilation and Doors	<p>Offices</p> <ul style="list-style-type: none"> Curtains are worn out. Broken glass windows. Rusted window frames. Broken window latches. Damaged doors and door handles. 	<p>Offices</p> <ul style="list-style-type: none"> Remove worn out curtains and install new blinds. Replace broken glass windows. Remove rust from window frames and repaint window frames. Replace broken window latches. Remove and replace damaged doors and door handles
	PROBLEM DESCRIPTION	SOLUTION
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Paint that has peeled off window frames. There is paint that flaked off the windows and door of the burglar guard. Window and door burglar bars that are rusted. 	<ul style="list-style-type: none"> Scrape off all flaking paint and prepare the surface for fresh coats. Refinish the door frames. Clean up the rust on the burglar bars. Refinish the current burglar bars.
	<p>Storage Shed</p> <ul style="list-style-type: none"> Ventilation system is worn out. None functioning roll up doors. 	<p>Storage Shed</p> <ul style="list-style-type: none"> Remove existing ventilation system. Seal areas where the ventilators are located. Install roof ventilation system. Remove and replace roll up doors.
Electrical Installations	<ul style="list-style-type: none"> Air-conditioning system damaged Defective electrical wiring, no electrical connectors, and no/broken lights. 	<ul style="list-style-type: none"> Replace any damaged air-conditioning systems with new ones. Rewire the electrical system. Test the whole installation after fixing the electrical panels, lighting, and power.
Plumbing Installations	<ul style="list-style-type: none"> There are broken, leaking, or malfunctioning kitchen sinks, basins, toilets, urinals, pipes, fittings, fixtures, and accessories. There is no septic tank. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, urinals, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded fence posts and wire, sagging fence gates, and tilted fence posts 	<ul style="list-style-type: none"> Replace any worn-out posts, stays, wire fence, and gates.
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> Termite tubes due to termite infestation Office buildings and storage sheds have been home to nesting mud building birds.. A wasp infestation (inside and outside the building, wasps have constructed mud daubers). 	<ul style="list-style-type: none"> Pest control services.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Availability of Clean Water	<ul style="list-style-type: none"> • Currently, unpurified water from the Mlumati River is utilized for drinking, flushing, etc. • There is no tank for storing water. • Tank stand is damaged. 	<ul style="list-style-type: none"> • Install purification system for drinking water. • Remove and replace storage tank and stand.
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4.27 Nhlangu West

The supporting farm structures at Nhlangu West Farm consist of the following:

- Three offices,
- A boardroom, and
- Female and male ablution areas.

The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table shows the problem description and solutions that were found during the assessment of the building interior.

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices <ul style="list-style-type: none"> • The walls of the offices are stained. • Flaked off wall paint. 	Offices <ul style="list-style-type: none"> • Scrape off all flaking paint and prepare the surface for fresh coats and repaint all the walls.
	Boardroom <ul style="list-style-type: none"> • The walls of the boardroom are stained. 	Boardroom <ul style="list-style-type: none"> • Repaint all the walls by scraping off any flaking paint and preparing the surface for new coats.
	Ablution Facilities and Kitchen <ul style="list-style-type: none"> • The boardroom's walls have stains. 	Ablution Facilities and Kitchen <ul style="list-style-type: none"> • Paint all the walls again, removing any flaking paint and priming the surface.
Floors	Offices <ul style="list-style-type: none"> • Existing ceramic tiles are torn and worn out. • Existing ceramic tiles are stained. 	Offices <ul style="list-style-type: none"> • Remove existing ceramic tiles, cart away debris and dispose of site. • Install new tiles.
	Boardroom <ul style="list-style-type: none"> • There are no tiles on the floor of the boardroom 	Boardroom <ul style="list-style-type: none"> • Prepare the floor for installation of new tiles and install new tiles.
	Ablution Facilities and Kitchen <ul style="list-style-type: none"> • Ceramic tiles currently in use are ripped and worn out. • Stained ceramic tiles currently in use 	Ablution Facilities and Kitchen <ul style="list-style-type: none"> • Dispose of the site's waste and existing ceramic tiles after they are removed. • Install new tiles
Ceiling and Roof	<ul style="list-style-type: none"> • Stained ceiling. • Damaged ceiling due to rain. • Rust on corrugated iron roof. • Damaged insulation material. 	<ul style="list-style-type: none"> • Remove and replace damaged ceiling. • Remove and replace rusted/corrugated iron roof. • Remove and replace insulation material. • Remove and replace roof trusses.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

Windows/Ventilation And Doors	<ul style="list-style-type: none"> There are no curtains nor blinds in all the windows Rusted window frames. Damaged doors and door handles. 	<ul style="list-style-type: none"> Install blinds in all the windows Remove rust from window frames. Repaint window frames. Remove and replace damaged doors and door handles
	PROBLEM DESCRIPTION	SOLUTION
Windows/Ventilation and Doors	<ul style="list-style-type: none"> Flaked off paint on window frames. Flaked off paint on burglar guard door and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> Scrape all flaked off paint and prepare surface to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
Electrical Installations	<ul style="list-style-type: none"> Defective electrical wiring, no electrical connectors, and no/broken lights. 	<ul style="list-style-type: none"> Turn off any electrical fixtures, equipment, and panels, and place them aside as instructed by the engineer. Remove all the current electrical wiring, including any light fixtures, bulbs, switch sockets, and distribution boxes and then fix electrical wiring. Test the whole installation after reconnecting the electrical panels, lighting, and power.
Plumbing Installations	<ul style="list-style-type: none"> There are broken, leaking, or malfunctioning kitchen sinks, basins, toilets, pipes, fittings, fixtures, and accessories. The septic is damaged and/or not functioning. 	<ul style="list-style-type: none"> Remove and replace kitchen sink with cupboard Remove and replace existing toilets, and basins. Remove and replace existing pipes, fittings, and accessories. Remove and replace damaged septic tank
Fencing and Gate	<ul style="list-style-type: none"> The fence wire is drooping, the poles are slanted, and both the poles and the fencing are corroded. The gate wire is cut and are closed off with foreign objects 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate. Remove old gate and install new gate
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> There are termite tubes on the walls of the building 	<ul style="list-style-type: none"> Pest control services for the termites.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Mlumati River is currently being used for consumption, flushing, etc. There is no tank nor tank stand to store water. 	<ul style="list-style-type: none"> Install purification system for drinking water. Install tank stand and tank.

4.28 Schoemansdal

The supporting farm structures at Schoemansdal Farm consist of the following:

- Two offices,
- A boardroom,
- Female and male ablution areas,

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

- A tractor shed,
- and storage facilities.

The structural integrity of the building is still intact; however, the whole building needs to be repainted. Table below shows the problem description and solutions that were found during the assessment of the building interior

	PROBLEM DESCRIPTION	SOLUTION
Walls	Offices <ul style="list-style-type: none"> • The walls of the offices are stained and have termite tubes. • Flaked off wall paint. • Exterior walls have backwashing or rough textured cement wall. 	Offices <ul style="list-style-type: none"> • Scrape off the termite tubes • Scrape all flaked off paint and prepare surface to receive new paint. • Repaint walls. • Prepare wall for plaster, plaster wall, add wall primer and paint.
	Storage Shed <ul style="list-style-type: none"> • Storage shed has backwashing or rough textured cement wall. 	Storage Shed <ul style="list-style-type: none"> • Prepare wall for plaster, plaster wall, add wall primer and paint.
	Ablution Facilities and Kitchen <ul style="list-style-type: none"> • The walls have termite tubes, stained, and the paint is chipping off. 	Ablution Facilities and Kitchen <ul style="list-style-type: none"> • Scrape off all the termite tubes and flaked off paint. • Repaint the walls.
Floors	Office Area <ul style="list-style-type: none"> • There are no tiles on the floor of the office area. • There are cracks on the floor of the office area 	Office Area <ul style="list-style-type: none"> • Install new tiles. • Repair the cracks and skim coat the concrete floor
	Storage Shed <ul style="list-style-type: none"> • Cracks on concrete floor slab. • Damaged concrete floor slab 	Storage Shed <ul style="list-style-type: none"> • Prepare floor for repairing of concrete floor slab. • Repair cracks. • Skim coat concrete floor.
Ceiling and Roof	<ul style="list-style-type: none"> • The ceiling in the office area is damaged 	<ul style="list-style-type: none"> • Remove and replace damaged ceiling.
Windows/Ventilation and Doors	Offices <ul style="list-style-type: none"> • There are no blinds no curtains in all the windows. • There are broken glass windows. • Rusted window frames. 	Offices <ul style="list-style-type: none"> • Install new blinds in all the windows. • Replace broken glass windows. • Remove rust from window frames. • Repaint window frames.
	PROBLEM DESCRIPTION	SOLUTION
Windows/Ventilation and Doors	<ul style="list-style-type: none"> • Some of the window latches are broken • Damaged doors and door handles. • Flaked off paint on window frames. • Flaked off paint on burglar guard door 	<ul style="list-style-type: none"> • Replace all the broken window latches. • Remove and replace damaged doors and door handles • Scrape all flaked off paint and prepare surface

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

	<ul style="list-style-type: none"> and windows. Rusted burglar guards on doors and windows. 	<ul style="list-style-type: none"> to receive new paint. Repaint door frames. Remove rust from burglar guards. Repaint existing burglar guards.
	<p>Storage Shed</p> <ul style="list-style-type: none"> Ventilation system is worn out. None functioning double doors. 	<p>Storage Shed</p> <ul style="list-style-type: none"> Remove existing ventilation system and seal off all the area where the ventilators were located. Install roof ventilation system. Remove and replace double doors.
Electrical Installations	<ul style="list-style-type: none"> There is faulty wiring in the whole building, there is exposed wires, the wall sockets and plugs are not functioning. 	<ul style="list-style-type: none"> Disconnect all electrical panels, fixtures, and equipment, set aside as directed by engineer. Take out existing concealed/surface electrical wiring complete with light fittings, bulbs, switch sockets and distribution boxes. Fix electrical wiring. Reconnect the electrical panels, lighting, and power, and test the entire installation.
Plumbing Installations	<ul style="list-style-type: none"> The kitchen sink, toilets, pipes, fittings, fixtures, and accessories have been damaged or are non-existent. Damaged septic tank. 	<ul style="list-style-type: none"> Install new kitchen sink with cupboards, toilets, sinks, pipes, fixtures, and accessories. Remove and replace damaged septic tank
Fencing	<ul style="list-style-type: none"> Corroded poles and fencing wire Sagging fencing wire and gates Tilted posts 	<ul style="list-style-type: none"> Remove and replace existing posts, stays, fencing wire, and gate.
	PROBLEM DESCRIPTION	SOLUTION
Other	<ul style="list-style-type: none"> There are termite tubes in the entire building, which means that there is an infestation of termites 	<ul style="list-style-type: none"> Pest control services to remove termites.
Availability of Clean Water	<ul style="list-style-type: none"> Unpurified water from the Mlumati River is currently being used for consumption, flushing, etc. There is no tank for storing water. Tank stand is damaged. 	<ul style="list-style-type: none"> Install purification system for drinking water. Install new tank stand and storage tank Remove and replace storage tank and stand.

4.29 Tikhontele

No Contact details

4.30 Vlakbult

No Contact details

4.31 Zelpy

No Infrastructure

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SOUTH AFRICAN DEVELOPMENT ASSOCIATION (SAFDA)

CONTRACT NO.: SAFDA-MP-0001 (2022/2023)

**APPOINTMENT OF A CONTRACTOR FOR THE
REHABILITATION OF MALELANE/NKOMATI SUGARCANE
FARMS OFFICE BUILDINGS AND STORAGE FACILITIES
INFRASTRUCTURE TO SUPPORT THE OPTIMUM
OPERATIONALIZATION OF SUGARCANE FARMS WITHIN
NKOMAZI MUNICIPALITY, EHLANZENI DISTRICT**

C3.2 ENGINEERING

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.2 ENGINEERING

C3.2.1 LIST OF DRAWINGS

Drawings Prepared by Contractor

To be issued by the contractor: NONE

Drawings Prepared by the Employer

To be issued to the preferred contractor : NONE

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SOUTH AFRICAN DEVELOPMENT ASSOCIATION (SAFDA)

CONTRACT NO.: SAFDA-MP-0001 (2022/2023)

**APPOINTMENT OF A CONTRACTOR FOR THE
REHABILITATION OF MALELANE/NKOMATI SUGARCANE
FARMS OFFICE BUILDINGS AND STORAGE FACILITIES
INFRASTRUCTURE TO SUPPORT THE OPTIMUM
OPERATIONALIZATION OF SUGARCANE FARMS WITHIN
NKOMAZI MUNICIPALITY, EHLANZENI DISTRICT PROVINCE**

C3.3 PROCUREMENT

<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Contractor	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 1	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 2	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Employer	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 1	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 2
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C3.3 PROCUREMENT

C3.3.1 PREFERENTIAL PROCUREMENT PROCEDURES

The Preference Points Scoring system will be applied as indicated in Part T.2.2.8

C3.3.2 COMMUNITY LIAISON OFFICER

It is the requirement of the Contract that a Community Liaison Officer (CLO) be appointed by the Contractor. The primary functions of the CLO shall be to assist the Contractor with the selection and recruitment of targeted labour, to represent the community in matters concerning the use of targeted labour (and/or enterprises) on the works, and to assist with the communication between the Contractor, the Client and the local community.

The Contractor shall appoint the CLO as per the recruitment method approved by the Employer. The candidates must have a minimum of Grade 12 qualification with the ability to read and write. The candidates should reside in the community of Tonga Village, Nkomazi Local Municipality.

<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Contractor	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 1	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 2	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Employer	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 1	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 2
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SOUTH AFRICAN DEVELOPMENT ASSOCIATION (SAFDA)

CONTRACT NO.: SAFDA-MP-0001 (2022/2023)

**APPOINTMENT OF A CONTRACTOR FOR THE
REHABILITATION OF MALELANE/NKOMATI SUGARCANE
FARMS OFFICE BUILDINGS AND STORAGE FACILITIES
INFRASTRUCTURE TO SUPPORT THE OPTIMUM
OPERATIONALIZATION OF SUGARCANE FARMS WITHIN
NKOMAZI MUNICIPALITY, EHLANZENI DISTRICT PROVINCE**

C3.4 CONSTRUCTION

<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Contractor	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 1	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 2	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Employer	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 1	<div style="border: 1px solid black; width: 100px; height: 20px; margin-bottom: 5px;"></div> Witness 2
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C 3.4.1 CONSTRUCTION STANDARDS

The standard specifications on which this contract is based are the **SANS 1200 Standardised Specification for Civil Engineering Construction (Edition 3)**.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

SOUTH AFRICAN DEVELOPMENT ASSOCIATION (SAFDA)

CONTRACT NO.: SAFDA-MP-0001 (2022/2023)

**APPOINTMENT OF A CONTRACTOR FOR THE
REHABILITATION OF MALELANE/NKOMATI SUGARCANE
FARMS OFFICE BUILDINGS AND STORAGE FACILITIES
INFRASTRUCTURE TO SUPPORT THE OPTIMUM
OPERATIONALIZATION OF SUGARCANE FARMS WITHIN
NKOMAZI MUNICIPALITY, EHLANZENI DISTRIROVINCE**

C3.5 MANAGEMENT

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

C3.5.1 PLANNING AND PROGRAMMING

1. Planning and Programming

The Contractor is required to commence with execution of the Works within 14 days from the date of handover.

The programme shall include details of anticipated monthly expenditures based on the programme and shall be in the form of a bar chart with a calendar week as the time scale. The programme shall itemise key construction activities and indicate their duration, weekly production rates and their relation to other activities thereby defining a critical path to the Due Completion Date. The monthly expenditures shall be the net value of construction and shall not include contingencies and VAT.

The programme shall make allowance for all gazetted holidays, builder's break and rain. The Contractor shall table an updated copy of the approved programme at each site meeting clearly indicating the actual progress versus the scheduled progress.

2. Payment Certificates

Measurements will be done continuously between the Client's Representatives and the Contractor on dates and time agreed on. These parties must arrange dates.

The progress of the following items will be recorded hereunder:

The contractor will provide a concept with quantities to the Client. If any material on site is claimed, proof of ownership must be provided either by means of the necessary receipts or a letter from the supplier stating that ownership has been transferred to the contractor upon delivery.

After the payment certificate has been approved by the Client, the contractor must issue a VAT invoice. The certificate will then be ready for handing in.

Payment certificates must be completed monthly and submitted before each site meeting, to ensure that percentage progress can be ready for the site meeting each month.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

C.3.5.2 HEALTH AND SAFETY

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Contractor

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Employer

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Witness 2

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ANNEXURES

Annexure 1 Appointment letters

- 1.1 Appointment of Assistant Construction Supervisor
- 1.2 Appointment of Construction Site Health and Safety Officer
- 1.3 Appointment of Construction Vehicle and Mobile Plant Inspector
- 1.4 Appointment of Subcontractor
- 1.5 Appointment of Construction Supervisor
- 1.6 Appointment of Excavation Work Supervisor
- 1.7 Appointment of Formwork and Support Work Supervisor
- 1.8 Appointment of Ladder Inspector
- 1.9 Appointment of Risk Assessor
- 1.10 Appointment of Scaffolding Supervisor
- 1.11 Appointment of Stacking Supervisor

Annexure 2 Notification Templates

- 2.1 Notification for Construction Work

Annexure 3 Identified Health and Safety Hazards

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

REFERENCES TO THE SCOPE OF WORKS IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS: HEALTH AND SAFETY SPECIFICATION

1. SCOPE

1.1 Scope of Specification

This specification covers the principles, duties, responsibilities, liabilities, and requirements applicable in respect of health and safety in the work place on construction work.

This document constitutes the Employers' Health and Safety Specification as defined in the Construction Regulations, 2003 of the Occupational Health and Safety Act (Act 85 of 1993).

This specification applies to tunnelling although the minimum requirements for tunnelling are contained in the Mines Health and Safety Act. This specification however does not apply to underground construction at this point in time as covered by the Mines Health and Safety Act, 1996 (Act 29 of 1996) as amended.

1.2 Philosophy

Some of the terms and requirements of the Occupational Health and Safety Act and its Regulations may be novel to Contractors. This specification has therefore been prepared as an instructive guideline without being prescriptive, constraining the competitive advantage or interfering with the legal obligations of the responding parties.

The Health and Safety Plan required in terms of this specification may also be novel to Contractors. This specification has therefore been prepared in such a way to allow Contractors to employ the services of specialist consultants for the preparation and implementation of the same during the construction of the Works.

Health and safety can only be assured on construction works if all stakeholders buy into the Health and Safety plan and when the health and safety of all is an integrated line accountability of all management staff and workers on site. The management systems that are provided for in this specification is to enable the performance statistics of health and safety to be regularly captured, the intention of these systems is not to achieve health and safety by policing the conduct of the Contractor's employees.

In addition to ensuring health and safety, the intention of the management system is rather to commercially exploit the benefit of doing things right the first time that goes hand in hand with top health and safety performance. Accidents and injuries never pay. The loss of production and the cost of injuries, however, relatively infrequent they may be, far outweigh the effort required to maintain top health and safety on construction.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The specification accordingly provides for:

- a) Independent periodic audits to ensure an unbiased pursuit of health and safety,
- b) Follow-up audits to ensure the implementation of prescribed remedial actions,
- c) The review of the efficiency and effectiveness of the Contractor's Health and Safety Plan,
- d) The preparation of regular reports of inspections and accidents to enable the tracking of changes in health and safety performance,
- e) The monitoring of conditions on a continuously pro-active basis to ensure that hazards are without delay identified, assessed and remedied should it threaten the health and safety of persons and property,
- f) Ad hoc inspections to ensure that health and safety is pursued with dedication and not out of intimidation or coercion, and
- g) Development of all aspects of the Contractor's Health and Safety Plan.

The fundamental intention of this specification is that the preservation of health and safety will become a core value of all involved during the construction of the Works.

This Specification does not require the preparation of an unduly extensive or complex risk assessment. The Contractor should rather prepare a risk assessment which takes the size of the project, the size of the Contractor's organization, the conditions of the workplace and the nature, complexity and significance of the hazards likely to be encountered during the execution of the Works into account.

2. INTERPRETATIONS

2.1 Supporting specifications

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

- a) Occupational Health and Safety Act, 1993, and its regulations which shall include, but shall not be limited to the following:

Construction Regulations, 2003,
General Safety Regulations,
General Administrative Regulations, 1996,
Driven Machinery Regulations, 1988,
Electrical Installation Regulations, 1992,
Electrical Machinery Regulations, 1988,
Environmental Regulations for Workplaces, 1987, and
Facilities Regulations, 1990.

- b) Clauses 4.5.2, 4.6, 4.7 and 4.8 of the Contract Data.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

2.2 Application

This specification contains clauses that are applicable to the occupational health and safety requirements of the Occupational Health and Safety Act, 1993 and its Regulations, in particular the Construction Regulations, 2003 promulgated on 18 July 2003 in terms of Section 43 of the Act.

2.3 Definitions

In the Contract (as defined in clause 1.(1)(e) of the Conditions of Contract) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise requires:

- (a) "Assistant Construction Supervisor" means a competent person appointed in accordance with regulation 6.(2) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
- (b) "Batch Plant Supervisor" means a competent person appointed in accordance with regulation 18.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
- (c) "Construction Health and Safety Officer" means a competent person appointed in accordance with regulation 6.(6) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
- (d) "Construction Supervisor" means a competent person appointed on a full-time basis in accordance with regulation 6.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
- (e) "Construction Vehicles & Mobile Plant Inspector" means a competent person appointed in accordance with regulation 21.(1)(j) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
- (f) "Contractor" means the natural or juristic person or partnership whose tender has been accepted by or on behalf of the Employer and, who is defined as the Principal Contractor in the Construction Regulations, 2003.
- (g) "Demolition Work Supervisor" means a competent person appointed in accordance with regulation 12.(1) of the Construction Regulations, 2003, in writing by the Contractor with written notification to the Engineer.
- (h) "Employer's Designer" means the natural or juristic person or partnership named in the Appendix to Tender or any other natural or juristic person or partnership appointed from time to time by the Employer for the design of the portion of the Permanent Works which the Employer is responsible to design in terms of this Contract.
- (i) "Contractor's Designer" means the natural or juristic person or partnership appointed from time to time by the Contractor and notified in writing to the Engineer and Employer for the design of the portion of the Permanent Works which the Contractor is responsible to design in terms of this Contract, and for the design of the Temporary Works.
- (j) "Electrical Temporary Installation Inspector" means a competent person appointed in accordance with regulation 22.(d) of the Construction Regulations, 2003, in writing by

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- the Contractor, with written notification to the Engineer.
- (k) “Employer” means the natural or juristic person or partnership for whom the Works are to be executed, who is named as the Employer in the Conditions of Contract and who is known as the “Client”, in the Occupational Health and Safety Act, 1993 and its regulations.
 - (l) “Engineer” means the natural or juristic person or partnership named as the Engineer in the Conditions of Contract and appointed by the Employer to act as the Engineer in terms of this Contract.
 - (m) “Engineer’s Representative” means the person appointed by the Engineer in terms of Clause 2 of the Conditions of Contract.
 - (n) “Excavation Work Supervisor” means a competent person appointed in accordance with regulation 11.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (o) “Explosive Powered Tools Issuer” means a competent person appointed in accordance with regulation 19.(2)(g)(i) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (p) “Fall Protection Developer” means a competent person appointed in accordance with regulation 8.(1)(a) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (q) “Fire Extinguisher Inspector” means a competent person appointed in accordance with regulation 27.(h) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (r) “Formwork and Support Work Supervisor” means a competent person appointed in accordance with regulation 15.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (s) “Hazard” means any object, action or condition that can potentially harm the health and safety of persons or property.
 - (t) “Hazard Identification” means the identification and documenting of existing or expected hazards.
 - (u) “Health and Safety Consultant” means the natural or juristic person or partnership appointed by the Contractor to assist in any matters related to health and safety on the construction site.
 - (v) “Health and Safety Plan” means a documented plan, prepared by the Contractor, of work procedures to mitigate, reduce or control hazards identified.
 - (w) “Health and Safety Specification” means a documented specification of all health and safety requirements and criteria to mitigate, reduce or control hazards identified.
 - (x) “Health and Safety Representative” means the person/s designated in accordance with section 17 of the Occupational Health and Safety Act.
 - (y) “Ladder Inspector” means a competent person appointed in accordance with regulation 13 of the General Safety Regulations, in writing by the Contractor, with written notification to the Engineer.
 - (z) “Material Hoist Inspector” means a competent person appointed in accordance with regulation 17.(8)(a) of the Construction Regulations, 2003 in writing by the Contractor, with written notification to the Engineer.
 - (aa) “Method Statement” means a document detailing the key activities to mitigate, reduce or

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- control hazards identified.
- (bb) “Professional Engineer” means any person employed from time to time by either the Employer or Contractor who holds registration as either a Professional Engineer or Professional Certificated Engineer under the Engineering Profession Act, 2000 (Act No. 46 of 2000).
 - (cc) “Professional Technologist” means any person employed from time to time by either the Employer or Contractor who holds registration as a Professional Technologist under the Engineering Profession Act, 2000 (Act No. 46 of 2000).
 - (dd) “Risk” means the likely occurrence and impact of a hazard.
 - (ee) “Risk Assessment” means a programme carried out to identify and evaluate the likely occurrence and impact of all hazards.
 - (ff) “Risk Assessor” means a competent person appointed in accordance with regulation 7.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (gg) “Safety Agent” means a competent natural or juristic person or partnership named in the Appendix to Tender or any other person appointed from time to time by the Employer and notified in writing to the Contractor to act on behalf of the Employer for the purposes of this specification.
 - (hh) “Scaffolding Supervisor” means a competent person appointed in accordance with regulation 14.(2) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (ii) “Stacking Supervisor” means a competent person appointed in accordance with regulation 26.(a) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.
 - (jj) “Subcontractor” means the natural or juristic person or partnership who is appointed by the Contractor with prior consent of the Engineer to execute certain tasks associated with the Works and who is also an employer as defined in section 1 of the Occupational Health and Safety Act.
 - (kk) “Suspended Platforms Supervisor” means a competent person appointed in accordance with regulation 15.(1) of the Construction Regulations, 2003, in writing by the Contractor, with written notification to the Engineer.

2.4 Duties, responsibilities and liabilities

2.4.1 Principal Parties

This section covers the duties, responsibilities and liabilities of the following principal parties:

Employer
Employer’s Safety Agent
Contractor
Subcontractor
Employer’s Designer
Contractor’s Designer

The duties and responsibilities of the various principal parties are briefly summarized below (the numbers indicated correspond to the applicable regulation number in the Construction

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Regulations, 2003). The intention of the summary is not to replace the Regulations, but is included for indicative purposes. The liabilities of each party are also shown.

a) Employer

In addition to the duties, responsibilities and liabilities specified in the Conditions of Contract, the Employer shall have the following duties and responsibilities to ensure compliance with the Construction Regulations, 2003:

- 4.(1)(a) Prepare health and safety specifications for the Works.
- 4.(1)(a) Provide copies of the specifications to Tenderers or to the appointed Contractor.
- 4.(1)(b) Provide any information to the Contractor that may affect the health and safety of his employees.
- 4.(1)(c) Appoint the Contractor in writing for the Works.
- 4.(1)(d) Take reasonable steps to ensure that the Contractor's Health and Safety Plan is implemented and maintained on the Works (which shall include monthly audits).
- 4.(1)(e) Stop the Contractor from executing work, not in accordance with, his Health and Safety Plan or which poses a threat to the health and safety of persons.
- 4.(1)(f) Ensure that sufficient health and safety information and appropriate resources are made available to the Contractor when changes are brought about to the design.
- 4.(1)(g) Ensure that the Contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works.
- 4.(1)(h) Ensure that Tenderers have made provision in their tenders for the cost of health and safety measures during the construction of the Works.
- 4.(2) Discuss and negotiate the contents of the Contractor's Health and Safety Plan.
- 4.(2) Approve the Contractor's Health and Safety Plan for implementation.
- 4.(3) On request, make available copies of the Contractor's Health and Safety Plan to his employees, his Subcontractors and inspectors.
- 4.(4) Satisfy himself on the competencies and resources of the Contractor he intends appointing.
- 4.(6) Satisfy himself on the competencies and resources of his Safety Agent should he decide to appoint one.

In terms of Clause 4.6 of the Contract Data, the Contractor accepts sole liability as mandatory for due compliance with the Occupational Health and Safety Act, 1993 and all its regulations including the Construction Regulations, 2003. The Employer will only be responsible for the duties imposed on the Employer in terms of the Construction Regulations, 2003 as listed above.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

b) Employer's Safety Agent

Where the Employer decides to appoint an agent in accordance with regulation 4.(5) of the Construction Regulations, 2003, the duties and responsibilities as imposed by these regulations upon the Employer shall as far as reasonably practicable apply to his Safety Agent.

c) Contractor

In addition to the duties, responsibilities and liabilities specified in the Conditions of Contract, the Contractor shall have the following duties and responsibilities to ensure compliance with the Construction Regulations, 2003:

- 3.(1)(a) Notify the provincial director in writing of the commencement of the construction works.
- 3.(3) Ensure that a copy of the notification letter is kept on site for inspection on request as well as proof of its receipt by the Department of Labour.
- 5.(1) Demonstrate a Health and Safety Plan, based on the Employer's health and safety specifications.
- 5.(1) Apply the Health and Safety Plan from the Commencement Date until completion of the Works.
- 5.(2) Ensure co-operation between all contractors to enable each to comply with the provisions of Construction Regulations.
- 5.(3)(a) Provide any Tenderer or Subcontractor with copies of the Employer's health and safety specifications.
- 5.(3)(b) Appoint Subcontractors in writing.
- 5.(3)(c) Ensure that each Subcontractor's Health and Safety Management Plan is implemented and maintained on their portion of the Works.
- 5.(3)(d) Stop any Subcontractor from executing Works, not in accordance with, the Contractor's Health and Safety Plan or which poses a threat to the health and safety of persons.
- 5.(3)(e) Ensure that sufficient health and safety information and appropriate resources are made available where applicable, to the Subcontractor when changes are brought about to the design of the Works.
- 5.(3)(f) Ensure that his Subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works.
- 5.(3)(g) Ensure that his Tenderers have made provision in their tenders for the cost of health and safety measures during the construction of the Works in line with the requirements of the Employers Health and Safety Specification and his Health and Safety Management Plan.
- 5.(5) Discuss and negotiate the contents of his Subcontractor's Health and Safety Plan, to ensure compliance with the Employer's Health and Safety Specification and consistent with the Contractors Health and Safety Management Plan.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- 5.(5) Approve his Subcontractor's Health and Safety Plan for implementation and to keep records of all such approvals on site for auditing purposes.
- 5.(6) On request, make available a copy of his and his Subcontractor's Health and Safety Plan to an employee, inspector, contractor, the Employer or the Employer's Safety Agent.
- 5.(7) Open and maintain a record management system regarding health and safety for the Contractors own and Subcontractors' Health and Safety Documentation on the construction site.
- 5.(7) Upon request, make available his health and safety record management system to an inspector, Employer, the Employer's Safety Agent or the Contractor.
- 5.(8) Deliver the health and safety record management system to the Employer upon completion of the Works.
- 5.(9) Ensure that a comprehensive and updated list of all his Subcontractors (including their respective subcontracting agreements) are included in the health and safety record management system.
5. (10) Satisfy himself on the competencies and resources of the Subcontractor he intends appointing.
6. (1) Appoint a construction supervisor.
6. (3) Appoint assistant construction supervisors if required by an inspector.
6. (5) Appoint individual construction supervisors for individual construction sites.
- 6.(6) The Contractor shall after due consideration of the complexity, size and potential hazards and associated risks as well as controls towards the mitigation of risks, appoint a safety officer in writing. The contractor shall submit a detailed CV of the envisaged Safety Officer appointment for final acceptance thereof by the Employer or his Safety Agent.
- 6.(7) Provide opportunities to the construction safety officer to provide inputs into the Health and Safety Plan.
- 6.(8) Satisfy himself with the competencies and resources of the construction safety officer he intends appointing.
7. (1) Perform a risk assessment prior to the commencement of any construction work.
7. (2) On request, make available copies of the his/her risk assessment.
7. (3) Consult with the health and safety committee on the development, monitoring and review of the risk assessment.
7. (4) Ensure that all employees are informed, instructed and trained regarding any hazard and the related work procedures before any work commences. The contractor shall ensure that proof of such is available on site for auditing purposes.
7. (5) Ensure that all Subcontractors are informed regarding any hazard as stipulated in the risk assessment. Further that Subcontractors conduct their own risk assessments as and when required
7. (6) Analyse ergonomic related hazards and address the same in the risk assessment.
7. (7) Ensure that all employees undergo health and safety induction prior to

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

permitting each employee access to the Works. The Contractor shall ensure that proof of such is available on site for auditing purposes.

- 7. (8) Ensure that all visitors undergo health and safety induction and are provided with the necessary personal protective equipment. The Contractor shall ensure that proof of such is available on site for auditing purposes.
- 7. (9) Ensure that every employee is in possession and carries at all times his proof of health and safety induction training.
- 9. (1) (a) Prevent the uncontrolled collapse of any structure which may become unstable due to the carrying out of construction work.
- 9. (1) (b) Ensure that no structure is loaded in an unsafe manner.
- 9. (3) Ensure that all construction drawings are on site and available on request by an inspector, contractors, Employer, the Employer's Safety Agent or employee.

In terms of Clause 4.6 of the Contract Data, it shall be deemed that the parties to this Contract have agreed in writing in terms of Section 37(2) of the Occupational Health and Safety Act, 1993 that the Contractor accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 and all its regulations, including the Constructions Regulations, 2003, for which he is liable as mandatory.

d) Subcontractor

To ensure compliance with the Construction Regulations, the Subcontractor shall:

- 5.(4) Demonstrate a Health and Safety Plan, based on the Employer's health and safety specification.
- 5.(4) Apply his Health and Safety Plan from the Commencement Date and until completion of the Works.
- 5.(12) Satisfy himself on the competencies and resources of any Subcontractor he intends appointing.
- 5.(14) Provide the Contractor with any information which might affect the health and safety of any person or which might justify a review of the Health and Safety Plan.

In addition to the above items, the Subcontractor shall, to ensure compliance with the Construction Regulations, comply with regulations 5.7, 6.(1), 6.(3), 6.(5), 6.(6), 6.(7), 6.(8), 7.(1), 7.(2), 7.(3), 7.(4), 7.(6), 7.(7), 7.(8), 7.(9), 9.(1)(a), 9.(1)(b) and 9.(3), summarized in Section 2.4.1(c) above.

e) Designer (Employer's Designer or Contractor's Designer)

To ensure compliance with the Construction Regulations, 2003, the Designer (as defined in the Construction Regulations, 2003) shall:

- 9.(2) Make available to the Employer all relevant information affecting the pricing of the Works.

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- 9.(b) Inform the Contractor of any hazards relating to the Works.
- 9.2(b) Make available all information required for the safe execution of the Works.
- 9.2(c) Ensure that information relating to geo-sciences, designs loads, and the methods and sequencing of construction processes are made available to the Contractor in a report.
- 9.2(d) Not include dangerous procedures or hazardous materials in the structure's design which could be avoided.
- 9.2(e) Make provision in the design of the Works for hazards likely to be encountered during its subsequent maintenance.
- 9.(2)(f) Carry out inspections of the construction work during the construction period to ensure compliance with the designs.
- 9.2(f) Keep records of the inspections carried out on the construction site.
- 9.2(g) Stop any contractor from executing works not in accordance with the designs.
- 9.2(h) Conduct a final inspection of the completed Works prior to its commissioning.
- 9.2(h) Issue a completion certificate to the Contractor subsequent to a successful final inspection.
- 9.(2)(i) Ensure that cognizance is taken of ergonomic design principles in order to minimize related hazards.

The Employer's Designer shall only accept responsibility to comply with the Construction Regulations, 2003 for that portion of the Permanent Works which the Employer is responsible to design in terms of the Contract.

The Contractor's Designer shall accept sole responsibility and liability to comply with the Construction Regulations, 2003 for that portion of the Permanent Works for which the Contractor is responsible to design in terms of the Contract as well as the design of the Temporary Works.

2.4.2 Secondary Parties

This section covers the duties, responsibilities and liabilities of the following secondary parties:

Construction Health and Safety Officer
Contractor's Employees Fall Protection Developer
Health and Safety Consultant
Health and Safety Representative
Risk Assessor

a) Construction Health and Safety Officer

The Construction Health and Safety Officer will act as Health and Safety advisor to the site management staff, ensuring the integrity of the Safety management System and Plan and its implementation. The Construction Health and Safety Officer can therefore never take over the line management responsibilities for safe work practices.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Contractor is responsible for the development of the position outcomes descriptors for the Construction Health and Safety Officer. This documentation shall be available on site for auditing purposes.

The Construction Health and Safety Officer shall if given an opportunity, provide an input into the Contractor's Health and Safety Plan.

b) Contractor's Employees

All employees will be responsible for safety on the construction site and the work place as prescribed in section 14 of the Occupational Health and Safety Act, 1993 and briefly summarized as follows:

Take reasonable care for the health and safety of himself and of other persons who may be affected by his acts,
Co-operate with his employer with regards to health and safety to ensure that his employer complies with requirements imposed on him,
Obey the health and safety rules and procedures laid down by his employer,
Report any unsafe or unhealthy situation to his employer or to the health and safety representative for his workplace,
Immediately report any incident in which he was involved which has caused an injury to himself or others, and
Assist in inquiries and incident investigations.

No employee shall intentionally or recklessly interfere with, damage or misuse anything which is in the interest of health and safety

c) Fall Protection Developer

The Fall Protection Developer will be responsible for the preparation and maintenance of a fall protection plan to be implemented by the Contractor, in such a manner to ensure compliance with regulation 8 of the Construction Regulations, 2003.

d) Health and Safety Consultant

The Health and Safety Consultant shall assist the Contractor in any health and safety matters on the Works for which he is appointed.

e) Health and Safety Representative

The Health and Safety Representative shall fulfil the duties as set out in section 18 of the Occupational Health and Safety Act, (Act 85 of 1993). A health and safety representative shall not incur any civil liability by reason of the fact only that he failed to do anything which he may do or is required to do in terms of the Act.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

f) Risk Assessor

The Risk Assessor shall facilitate the risk assessment process of the Contractor or Subcontractor. The Risk Assessor shall be responsible for the compilation and implementation of a management plan towards the continuous mitigation of identified risks to as low as is reasonable practicable.

2.4.3 Supervisors, Inspectors and Issuers

This section covers the duties, responsibilities and liabilities of the following Supervisors, Inspectors and Issuers likely to be found on the Works:

a) Batch Plant Supervisor

The Batch Plant Supervisor shall be required to ensure compliance with regulation 18 of the Construction Regulations, 2003. In addition, he shall fulfil the following duties and responsibilities:

Manage the day to day operation of a batch plant,
Be responsible for the maintenance of the batch plant,
Be able to identify developing defects and hazardous situations,
Act as the Occupational Health and Safety Representative at the batch plant, and
Take responsibility for the safety of the personnel at the batch Plant.

The Batch Plant Supervisor will have the authority to stop operation of the plant should any hazardous situation require it.

b) Construction Supervisor

The Construction Supervisor shall be responsible for supervising the construction work inclusive of the implementation and maintenance of safe work practices.

c) Construction Vehicle & Mobile Plant Inspector

The Construction Vehicle and Mobile Plant Inspector will ensure the safety of all construction vehicles and plant in such a manner to ensure compliance with regulation 21 of the Construction Regulations, 2003. The inspector will also be responsible for the regular inspection of all vehicles and plant and the recording of his findings. The Contractor shall ensure that proof of such is available on site for auditing purposes.

d) Demolition Work Supervisor

The Demolition Work Supervisor will supervise and control all demolition work on the

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Works in such a matter to ensure compliance with regulation 12 of the Construction Regulations, 2003. The supervisor will be responsible for all administration related to the demolition works. The Contractor shall ensure that proof of such is available on site for auditing purposes.

e) Electrical Temporary Installation Inspector

The Electrical Temporary Installation Inspector will control all temporary electrical installations on the Works to ensure compliance with regulation 22 of the Construction Regulations, 2003, the Electrical Installations Regulations, 1992 and SANS 0142. The Contractor shall ensure that proof of such is available on site for auditing purposes.

f) Excavation Work Supervisor

The Excavation Work Supervisor will supervise all excavation work on the Works in such a matter to ensure compliance with regulation 11 of the Construction Regulations, 2003 and shall in particular ensure that every excavation is inspected:

On a daily basis before each shift,
After every blasting operation,
After an unexpected fall of ground,
After substantial damage to supports, and
After rains.

The Contractor shall ensure that proof of such is available on site for auditing purposes.

g) Explosive Power Tools Issuer

The Explosives Power Tools issuer will control the issuing and collection of explosive tools, cartridges and nails or studs to ensure compliance with regulation 19 of the Construction Regulations, 2003. The Contractor shall ensure that proof of such is available on site for auditing purposes.

h) Fire Extinguisher Inspector

The Fire Extinguisher Inspector will be responsible for the operation and inspection of all firefighting equipment on the Works to ensure compliance with regulation 27 of the Construction Regulations, 2003. The Contractor shall ensure that proof of such is available on site for auditing purposes.

i) Formwork and Support Work Supervisor

The Formwork and Support Work Supervisor will supervise all formwork and support work operations and will see to it that formwork and support work erectors, operators and inspectors are competent to carry out their work Works to ensure compliance with

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

regulation 10 of the Construction Regulations, 2003. The Contractor shall ensure that proof of such is available on site for auditing purposes.

j) Ladder Inspector

The Ladder Inspector will be responsible for the regular inspection and recording of his/her findings of all ladders on the Works and to ensure compliance with regulation 13 of the General Safety Regulations. The Contractor shall ensure that proof of such is available on site for auditing purposes.

k) Material Hoist Inspector

The Material Hoist Inspector will be responsible for the daily inspection of material hoists or similar machinery and to ensure Works to ensure compliance with regulation 17 of the Construction Regulations, 2003. The inspector must have experience pertaining to the erection and maintenance of all hoists on the Works. The inspector must be able to determine the serviceability of the entire material hoist including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices. The Contractor shall ensure that proof of such is available on site for auditing purposes.

l) Scaffolding Supervisor

The Scaffold Supervisor will be required to supervise all scaffolding work operations carried out on the Works and to ensure compliance with regulation 14 of the Construction Regulations, 2003 as well as ensure compliance with applicable SABS 085 specifications. The Contractor shall ensure that proof of such is available on site for auditing purposes.

m) Stacking Supervisor

The Stacking Supervisor shall supervise the stacking and storage of all articles on site and shall be responsible to ensure compliance with regulation 26 of the Construction Regulations, 2003.

n) Suspended Platform Supervisor

The Suspended Platform Supervisor will supervise all suspended platform work operations carried out on the Works and to ensure compliance with regulation 15 of the Construction Regulations, 2003. The supervisor will also see to it that all suspended platform erectors, operators and inspectors are competent to carry out their work. The Contractor shall ensure that proof of such is available on site for auditing purposes.

3. GENERAL REQUIREMENTS OF HEALTH AND SAFETY PLAN

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

3.1 General

It will be expected from the Contractor to include in his safety plan method statements on how to accomplish the requirements relating to the Construction Regulations, 2003 and related incorporated standards and regulations.

Contractors should describe how their safety management systems will work and what control procedures they plan on using to ensure safety on the construction site

The following generic aspects should be covered in their safety plan

- What administrative procedures the Contractor envisages to use in the implementation and maintenance of the safety plan with reference to the construction site
- How continuous assessment of the safety plan will be assessed and implemented with respect to construction site
- What control systems the Contractor envisages to implement on site to support his safety program
- How the Contractor will ensure that he adheres to the construction regulations in respect of competent persons for appointments
- What external resources the Contractor envisages on using to ensure successful implementation and sustainability of the safety plan
- What training to employees the Contractor envisages and how he would go about to execute it
- The Contractor should indicate which competent persons he plans on employing

During the tendering phase it will be expected from the tenderer to briefly explain how the abovementioned will be accomplished.

Once a successful tenderer has been appointed, the Contractor shall supply a detailed Health and Safety Plan for review by the Employer, prior to site mobilization, to ensure compliance with the Construction Regulations, 2003. Mobilization shall be dependent upon the acceptance of the Contractor's Health and Safety Management Plan by the Employer. The Contractor's Health and Safety Plan should include, but not be limited to, those sections indicated in Section 3.2 of this specification.

3.2 Outline of Health and Safety Plan

The Contractor's Health and Safety Plan prepared in accordance with this specification shall consist of at least the following sections and sub-sections:

1. Aim and Scope of Plan,
2. Risk Assessment,
 - a. Alternative Forms of Risk Assessment,
 - b. Methodology of Risk Assessment,
 - c. Elements of Risk Assessment,

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- i. Scope of assessment,
 - ii. Risks Identified,
 - iii. Risk Analysis,
 - iv. Risk Evaluation,
 - v. Risk Treatment,
 - vi. Monitoring and reviewing,
3. Resources,
 - a. Health and Safety Staffing Organogram,
 - b. Supervisors, Inspectors and Issuers,
 - c. Employees,
 - d. Subcontractors inclusive of their scope of work and their core resources,
 - e. Training,
 - f. Plant,
 - g. Vehicles,
 - h. Equipment
4. Materials,
 - a. Temporary Materials
 - b. Permanent Materials
5. Categories of Work
6. Implementation of Health and Safety Plan,
 - a. Administrative systems,
 - b. Training,
 - c. Reporting,
 - d. Monitoring,
 - e. Inspections,
7. Auditing,
 - a. Internal audits,
 - b. Follow-up audits,
8. Financial Aspects,
9. Emergency procedures and response

4. RISK ASSESSMENT

4.1 General

This section of the specification provides guidelines for the Contractor in preparation of risk assessments in order to ensure compliance with Regulation 7 of the Construction Regulations, 2003. This section highlights the principles related to the preparation of suitable and sufficient risk assessments. Contractor Staff intending to prepare risk assessments should be trained and suitably experienced in the application envisaged.

A suitable and sufficient risk assessment is an assessment which:

Accounts for risks that are likely to arise during the construction of the Works,
Enables the development and implementation of systems to manage the risks,

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Remains valid for a reasonable period of time,
Provides a basis for training of employees, and
Improves working procedures and introduce long term controls.

The requirements of the Construction Regulations will not be satisfied by a single risk assessment exercise that holds good for all time. The risk assessment process on the Works is an ongoing process.

The objectives of risk assessments are to:

Identify the risks that are mostly in need of reduction,
Identify the various options for achieving such reduction,
Identify the risks that require careful ongoing management, and
Identify the nature of the required ongoing attention.

4.2 Forms of Risk Assessment

In order to ensure compliance with the Construction Regulations, the Contractor will be required to carry out the following three forms of risk assessment:

4.2.1 *Baseline or datum risk assessments*

The Contractor will be required carry out a risk assessment before the commencement of construction activities on the Works. This “baseline” or “datum” risk assessment will form part of the Contractor’s Health and Safety Plan. The risks and hazards to which persons, plant, vehicles and facilities may be exposed during the construction of the Works should be identified and evaluated. Measures to reduce or control these risks or hazards should be defined during this assessment. The effectiveness of the measures defined and the baseline risk assessment prepared shall be monitored and reviewed from time to time to ensure that it remains relevant and accurate.

4.2.2 *Issue based risk assessments*

The Contractor will be required to carry out separate risk assessments during construction of the Works when methods and procedures are varied, for example when:

Designs are amended,
New machines are introduced,
Plant is periodically cleaned and maintained,
Plant is started-up or shut-down,
Systems of work change or operations alter,
Incidents or near-misses occur, or
Technological developments invalidate prior risk assessments.

4.2.3 *Continuous risk assessments*

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Occupational Health and Safety Act specifically requires that employers shall provide and maintain working environments that are safe and without risk to health. The general awareness of hazards needs to be raised as work ethic to maintain a safe and risk free environment on an ongoing basis. This is achieved by continuous risk assessments, the most important form of risk assessment that takes place as an integral part of day-to-day management. Examples of continuous risk assessments include:

Regular audits,
Maintaining general hazard awareness,
Pre-work risk assessment

4.3 Methodology for the Preparation of Risk Assessments

The Contractor shall in the preparation of his risk assessments, follow the following general principles:

Employ a team of suitably qualified individuals with appropriately varied and relevant experience in risk assessment,
The appointed risk assessor shall lead the risk assessment,
Provide the team with background data, scope of work, potential hazards and underlying causes, and
Where necessary employ experts for complex risk assessments and aspects of risk assessments that require experiential judgment,
Institute an ongoing system of identifying aspects of the work that require risk assessment, and
Conduct risk assessments in workshops of the team or by individual members of the team under guidance of the leader as appropriate to the situation.

4.4 Elements of a Risk Assessment

4.4.1 General

The process of carrying out a risk assessment consists of a number of well-defined steps. These steps improve decision-making by providing a greater understanding of the risks and their impacts. The main steps or elements of the risk assessment process are as follows:

- 1) Consider scope and nature of risks involved, determine purpose and physical and legal bounds of assessment and define risk evaluating criteria,
- 2) Systematically identify risks,
- 3) Analyze risks with regard to causes, likelihood of occurrence and possible consequences against the background of existing controls and its effectiveness,
- 4) Evaluate risks in terms of pre-established criteria to determine need and priority for attention,
- 5) Treat risks through a process of risk elimination, substitution, controlling risk at source,

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

risk mitigation such as training and as far as risk remains, provide personal protective equipment (PPE),

- 6) Monitor and review progress and performance in terms of management system, and
- 7) Communicate and consult.

The following sections 4.4.2 to 4.4.7 deal with items (2) to (7) above.

These items form the continuing process of the risk assessment as indicated in Figure 1, below.

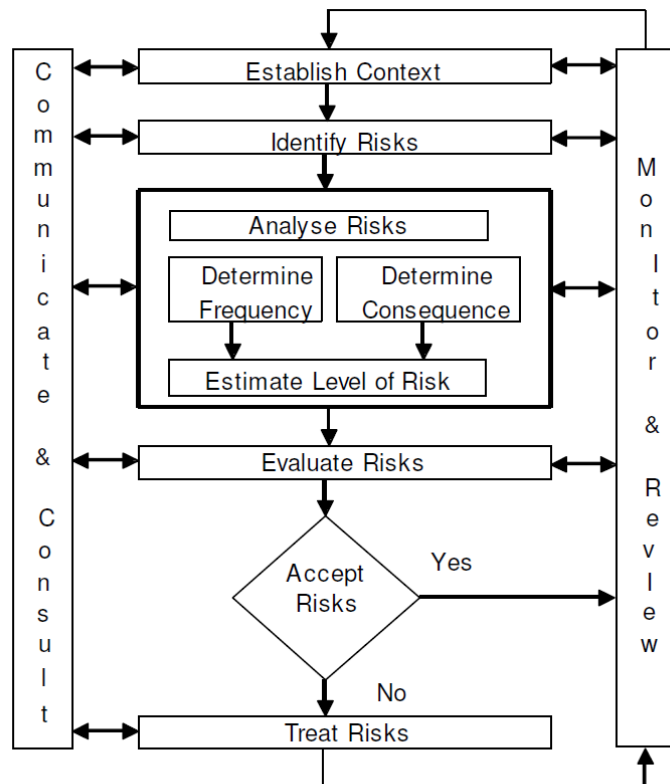


Figure 1: Risk Management Process

The Contractor shall ensure that the risk assessment compiled as part of his Health and Safety Plan contains at least these items.

4.4.2 Risk Identification

The Contractor should regard this step of the risk assessment as the most important. Subsequent analysis and evaluation of risks and the development of risk control measures are wasted if the risks or hazards on the Works are not carefully identified.

The Contractor should bear the following principles in mind when identifying the risks:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

- i) Systematically address all risks or hazards on the Works,
- ii) Review all aspects of the work, but consider only those that have a potential to cause harm,
- iii) Rank the risks identified in order of importance and then use appropriately advanced techniques to deal with major risks,
- iv) Deal mainly with major risks and don't obscure these with unimportant information, especially minor risks,
- v) Address what actually happens in the workplace during the work activity
- vi) Consider all persons that may be affected,
- vii) Highlight those groups and individuals who may particularly be at risk, and
- viii) Review the adequacy and effectiveness of existing safety controls and measures

4.4.3 Risk Analysis

In this step, the Contractor will be required to analyze the risks identified by determining each risks frequency and magnitude or severity of the consequence of the risk or hazard.

The frequency of occurrence of a hazard may be expressed as the number of times that it may occur in a year, decade, lifetime, century, or longer period, according to comparative human experience. The magnitude of the likely consequence of a hazard may be expressed in terms of the degree of incapacitation, number of people or costs involved. The frequency of occurrence of a hazard and the magnitude of its consequence may be compounded as the risk that it poses as shown in the "risk matrix" in Figure 2 below.

Frequency of Occurrence of Hazard	Severity of Consequences of Potential Hazard					
	1 Medically treatable	1 Compensable	10 Com	1 Permanently disabling	1 Fatality	10 Fatalities
Frequent; 1 or more occurrences per year	Medium	High	Very high	Severe	Severe	Severe
Several times during a career; 0.1 occurrences	Medium-low	Medium	High	Very high	Severe	Severe
Unlikely, but possible during a career; 0.01 occurrences per year	Low	Medium-low	Medium	High	Very high	Severe
Very unlikely during a career; 0.001 occurrences per year	Low	Low	Medium-low	Medium	High	Very high
Barely credible; 0.0001 occurrences	Low	Low	Low	Medium-low	Medium	High

Figure 2: Compounded Risk Matrix

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The columns in the table represent the likely consequence of the hazard and the rows, the frequency of occurrence. The scales for both quantities represent consistent progressions, albe they qualitative. The risks evidently range from low to severe. Note that diagonals in the matrix represent the risks of the identified hazards, taking the effectiveness of controls into consideration.

The table represents a typical risk matrix that need not necessarily be adopted by the Contractor. The Contractor may use an alternative risk matrix provided that it is approved as part of his Health and Safety Plan.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

4.4.4 Risk Evaluation

In this step the Contractor will be required to compare the assessed risk with similar risks previously experienced for the purpose of deciding how to treat the risk. A useful systematic approach for this purpose is as follows:

If the assessed risk exceeds similar risks that have occurred in the past and that are considered to be unacceptable, the assessed risk would require treatment depending upon its magnitude as discussed in Section 4.4.5, or

If the assessed risk exceeds similar historical risks that are acceptable, treatment of the assessed risk will depend on the extent by which it exceeds the historical risks, or

If the assessed risk is less than historical risks that are unacceptable, treatment of the assessed risk will depend on the extent by which it is less than the historical risks, or

If the assessed risk is less than historical risks that are acceptable, the assessed risk would also be acceptable and would not require any treatment.

4.4.5 Risk Treatment

In this step, the Contractor will select and implement appropriate measures for dealing with risk. Typically measures comprise the following:

Elimination by changing designs, procedures, management methods, etc, applicable to high frequency–high consequence risks, or

Reduction by changing designs, procedures, management methods, etc, applicable to high frequency–high consequence risks, or

Minimization by changing designs, procedures, management methods, etc, applicable to high frequency–low consequence risks, or

Transfer or share whole or part of the risk to another party by insurance, contractual arrangements or organizational structures, applicable to low frequency–high consequence risks, or

Control to ensure that risks do not increase, applicable to low frequency–high consequence risks, or

Retention together with provision of monitoring and personal protective equipment, applicable to low frequency–low consequence residual risks after reduction, or

Acceptance without particular action other than provision of personal protective equipment, applicable to low frequency–low consequence risks.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The following principles enable the optimum treatment to be determined:

Avoid risks altogether if possible by using different approaches, substances or methods of work,
Combat risks at source rather than by adopting secondary measures,
Adapt work to the individual rather than the individual to the work, that is, in the design consider the people and their attributes that will operate the system
Take advantage of technological and technical progress,
Risk prevention measures must be part of a coherent policy and approach to safety management that involves performance measurement, goal setting, feedback and analysis, Give preference to measures that protect the whole work force,
Ensure that those for whom protection is provided understand what they need to do to make sure that the protection works, and
Ensure that measures to control risks are an accepted part of an active health and safety culture supported by all levels of the organization; single risk reduction initiatives invariably fail.

4.4.6 *Reporting and Recording*

The Contractor shall ensure that the risk assessment process is recorded in the form of a report and included in his Health and Safety Plan. The report should be easily accessible to the Contractor's employees, their representatives, to inspectors, the Employer or his Safety Agent and the Engineer. The essential contents of the report should be as follows:

Objectives and expected outcomes, Description of the Works under assessment, Summary of context of study, Composition of risk assessment team, (including qualifications and relevant experience), Approach used to systematically identify risks, Identified risks (ranked in order of priority), Method adopted for assessing frequencies and consequences of risks, Consequences (ranked in order of magnitude), Identification of individuals and groups who may be affected by major hazards and risk and who may especially be at risk, Basis for defining safety standards to be achieved, Contractor's resources devoted to risk assessment, Actions proposed to reduce unacceptably high risks, Review effectiveness of existing safety measures to control risks, and Implementation programme of selected treatments (including controls to manage unacceptably high risks).

4.4.7 *Monitoring and Review*

It is necessary to monitor risks, the effectiveness of the risk treatment plan and the strategies and management system set up to control implementation. Control of the risk management program entails the setting of standards, monitoring actual performance, comparing the performance with the standards and correcting any

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

deviations from the standard. Risks and the effectiveness of the control measures need to be monitored to ensure changing circumstances do not alter risk priorities. Few risks remain static.

Ongoing review is essential to ensure that the management plan remains relevant. Factors that affect the likelihood and consequences of an outcome may change, as may factors that affect the suitability or cost of the various treatment options. If an accident occurs, or if more is learnt about the hazards in the workplace, the risk assessment may need to be reviewed or modified. Hazards may be observed that have not been anticipated or previously identified and which may require appropriate measures to be taken. After an accident has occurred, it is important to determine whether it was predicted, whether preventive measures were identified, and if so, why they did not work, whether the risk assessment is still suitable and sufficient if it failed to predict the accident, whether to the decision to accept a predicted risk as tolerable is still valid, why the accident occurred and what should be done to prevent similar accidents occurring again. It is therefore necessary to regularly repeat the risk management cycle, the time between reviews being dependent on the nature of the risks and the degree of change likely to take place in the work activity. Review is an integral part of the risk management treatment plan.

4.4.8 Communication and Consultation

The Contractor will be required to communicate and consult with internal and external stakeholders during each step of the risk assessment process. Stakeholders will include the Employer and his Safety Agent, the Engineer and the Contractor's employees and consultants.

Effective communication will ensure that those responsible for implementing the risk management process and those with a vested interest, understand the basis on which decisions are made and why particular actions are taken. It will also ensure that the perceptions of all those involved are noted and accommodated during the process.

5. RESOURCES

5.1 General

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health And Safety Act, 1993 and all its Regulations and related incorporated standards with regards to the resources and facilities intended for use on the temporary and permanent Works.

5.2 Employees

5.2.1 Inspectors, supervisors and Issuers

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Contractor shall provide in his Health and Safety Plan his intended Staffing Organogram for the Works. The organogram should include those inspectors, supervisors and issuers as envisaged in the Construction Regulations, 2003 required for the Works and any additional supervisory staff members as the Contractor (having taken the scope of the Works into account) considers necessary.

Copies of the supervisory staffs' curriculum vitae or portfolio of evidence and their appointment letters should be appended to the Contractor's Health and Safety Plan.

The Contractor's Health and Safety Plan should in addition cover at least the following aspects:

The number of unskilled, semi-skilled and skilled (including Foreman, Charge hands, Artisans, Operators, Drivers, Clerks, Storeman and Team Leaders) employees he intends employing on the Works,
The health and safety training to be provided to the Contractor's employees, The programme of the health and safety training,
Systems for the review of the effectiveness of the training provided, and
Systems to determine further training requirements throughout the construction period.

In preparing his Health and Safety Plan, the Contractor shall ensure compliance with Clause PS 22 in Section 4.2 of the Project Specifications.

Pro-forma letters of appointment for the various inspectors, supervisors and issuers as contemplated in the Construction Regulations, 2003 are included in Annexure 1 to this specification for use by the Contractor. The Contractor shall ensure that he includes in his Health and Safety Plan the appointment letters for all his inspectors, supervisors and issuers appointed for the Works.

5.2.2 Subcontractors

The Contractor shall with reference to the use of subcontractors on the Works and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

The steps intended to ensure that his Subcontractors prepare, implement and maintain Health and Safety Plans,
How health and safety information will be made available to his Subcontractors when changes are brought about to the design,
How he intends determining that his Subcontractors are registered and in good standing with the compensation fund or with a licensed compensation insurer prior to the commencement of the Works,

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

How he intends determining if his Subcontractors have made provision in their tenders for the cost of health and safety measures during the construction of the Works,

How he intends satisfying himself on the competencies and resources of Subcontractors he intends appointing, and

How he intends ensuring that his Subcontractors perform risk assessments prior to commencing their respective portions of the Works.

5.2.3 Competencies

The Contractor shall establish if a person is competent to perform a certain duty or be appointed in a certain capacity by requesting all candidates to supply the required certificates of competency. Where certificates of competencies cannot be delivered, the Contractor shall request a portfolio of evidence from the respective candidates.

Contractors should do enquiries at the South African Qualifications Authority (SAQUA) relating to the qualifications required for appointment of competent persons.

5.2.4 Physical and Psychological Fitness

Were required by the Occupational Health & Safety Act and its regulations the contractor shall ensure that his employees are in possession of a valid medical certificate of fitness to work in such an environment.

In terms of the Construction Regulations 2003 medical certificates of fitness are required for persons working at elevated positions (Regulation 8(2)(b)), persons working on suspended platforms (Regulation 15(12)a) tower crane operators (Regulation 20 (g)) and construction vehicle and mobile plant operators (Regulation 21 (1)(d)(ii)).

5.3 Plant, Vehicles and Equipment

5.3.1 Suspended platform

The Contractor shall with reference to Regulation 15: Suspended platforms of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends complying with SABS 1808 and SABS 1903,

What systems he intends using to ensure the safety of all suspended platforms,

What tests will be performed to establish the safety of suspended platforms,

How he intends maintaining suspended platforms being used, and

How he will document the design, testing, maintenance and inspections of the suspended platforms.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

5.3.2 *Boatswains chairs*

The Contractor shall with reference to Regulation 16: Boatswains chairs of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Explain what systems he intends using to ensure the safety of all boatswains chairs, Explain how he intends maintaining boatswains chairs in use,
What tests will be performed to establish the safety of boatswains chairs, and
How he will document the design, testing, maintenance and inspections of the boatswains chairs.

5.3.3 *Material hoists*

The Contractor shall with reference to Regulation 17: Materials Hoist, of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends confirming the construction stability of the material hoists,
What systems he intends using to ensure the safety of all material hoists,
What tests will be performed to establish the safety of all material hoists,
How he intends maintaining the material hoists being used, and
How he will document the design, testing, maintenance and inspections of all material hoists, and
What safety procedures and precautions are envisaged to ensure safe operation of the materials hoists.

5.3.4 *Batch Plants*

The Contractor shall with reference to Regulation 18: Batch plants of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

What systems he intends using to ensure the safety of all batch plants,
How he intends maintaining the batch plants in use, and
How he will document the design, testing, maintenance and inspections of batch plants in use.

5.3.5 *Explosive powered tools*

The Contractor shall with reference to Regulation 19: Explosive powered tools, of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

How he intends controlling the issuing of explosive powered tools,
How he intends implementing safety procedures prior to use of explosive powered tools, and
What safety measures will be required during the use of explosive powered tools.

5.3.6 *Cranes*

This section of the specification shall be read in conjunction with the provisions of the Driven Machinery Regulations, 1988.

The Contractor shall with reference to Regulation 20: Cranes, of the Construction Regulations, 2003 and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How will environmental factors be taken into account in respect to the use of cranes,
What systems he intends using to ensure the safety of all cranes in use,
How he intends maintaining cranes in use,
What tests will be performed to establish the safety of all cranes in use,
What safety procedures and precautions are envisaged to ensure the safe operation of all cranes in use,
How he will document the design, testing, maintenance and inspections of all cranes in use, and
The contractor shall proof compliance of the Driven Machinery Regulation, 1988, with reference to the lifting machinery and tackle being used.

5.3.7 *Construction vehicles and mobile plant*

The Contractor shall with reference to Regulation 21: Construction vehicles and mobile plant of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends ensuring that construction vehicles and mobile plant are:

- o Of acceptable design and construction,
- o Maintained and in good working order,
- o Used according to design specifications, and
- o Are protected from falling into excavations, water or areas lower than the working surfaces,

How he intends ensuring that workers are trained, authorised and physically fit to operate construction vehicles and mobile plant,
What traffic arrangements and safety precautions will be implemented to ensure safe operation of construction vehicles and mobile plant on the Works, and
How he intends safeguarding employees against construction vehicles and

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

mobile plant moving on the construction site.

5.3.8 *Electrical Installation and Machinery on construction sites*

This section of the specification shall be read in conjunction with the provisions contained in the Electrical Installation Regulations, 1992.

The Contractor shall with reference to Regulation 22: Electrical Installation and machinery on construction sites of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends safeguarding employees against electrical cables or apparatus under, over or on site, and

How he will ensure that electrical installations are of adequate strength to withstand working conditions on a construction site.

5.3.9 *Ladders*

The Contractor shall with reference to Regulation 13A of the General Safety Regulations and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How he intends ensuring that ladders used are safe and constructed of materials approved for its intended use, and

What precaution will be made to ensure the stability of ladders in use.

6. MATERIALS

6.1 General

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health and Safety Act, 1993 and all its regulations and related incorporated standards with regards to the design, supply, storage and erection of materials used for the temporary and permanent Works.

6.2 Fall Protection Equipment

The Contractor shall with reference to Regulation 8: Fall Protection Equipment of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Compilation of a fall protection plan,

How the fall protection plan will be implemented and maintained,

How employees will be screened and declared medically fit to work in areas

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

where fall protection equipment is needed,
How the safeguarding of persons, plant, vehicles, equipment and facilities on the construction site is contemplated,
Training of staff working at heights and in the use of fall protection equipment, How a continuous assessment of the situation will be executed,
How fall protection equipment will be inspected for safety, and
How corrective actions will be implemented
Emergency plans and procedures for treatment of incidents relating to falls from height.

6.3 Scaffolding

The Contractor shall with reference to Regulation 14: Scaffolding of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and

Safety Plan:

How compliance with SABS 085 will be ensured,
How scaffolding in use will be maintained,
What systems are intended to ensure the safety of scaffolding used, and
What tests will be performed to establish the safety of scaffolding used Training plan for scaffold erectors and inspectors.

6.4 Use and temporary storage of flammable liquids on construction sites

This section of the specification shall be read in conjunction with the provisions for the use and storage of flammable goods as determined in the General Safety Regulations.

The Contractor shall with reference to Regulation 23: Use and temporary storage of flammable liquids on construction sites of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How flammable liquids will be stored to minimize the risk of fire or explosions,
How the contractor will identify a flammable store
What safety precautions will be employed if ventilation of the flammable store is not possible.
How access to flammable stores will be controlled,
How empty vessels used for the storage of flammable liquids will be disposed of,
What quantity of flammable liquids will be stored on the construction site,
What systems are intended to ensure the safe storage of flammable liquids, and
What retaining methods will be used to prevent the spreading of any spillage.

6.5 Stacking and storage

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

This section of the specification shall be read in conjunction with the provisions for the stacking of articles contained in the General Safety Regulations.

The Contractor shall with reference to Regulation 26: Stacking and storage on construction sites of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

Who will supervise the stacking and storage of materials on site, and
What systems are intended to ensure the safe stacking and storage of materials on the site

6.6 Personnel Safety Equipment and Facilities

The Contractor shall comply with Section 2 of the General Safety Regulations, and shall in particular provide all necessary personnel protective equipment for his personnel for the duration of the construction period. To this end the Contractor shall without limiting his obligations indicate in his Health and Safety Plan:

Identify training requirements in the Contractors Training plan in the use and maintenance of personal protective equipment,
The type of personnel safety equipment he will provide, How he intends issuing it to his employees, and
How he will maintain the personnel safety equipment issued.

6.7 First Aid, Emergency Equipment and Procedures

The Contractor shall comply with Section 3 of the General Safety Regulations regarding first aid, emergency equipment and procedures.

7. CATEGORIES OF WORK

In this section of his Health and Safety Plan, the Contractor will be required to state how he intends to comply with the requirements of the Occupational Health and Safety Act, 1993 and all its regulations and related incorporated standards with regards to the execution of the following categories of work.

7.1 General

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.1.1 Construction welfare facilities

Contractors will be required to adhere to Regulation 28: Construction welfare

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

facilities of the Construction Regulations, 2003.

This regulation must be read in conjunction with the provisions of the Facilities Regulations, 1990 (as amended) and SANS 0400.

The Contractor must discuss the following in detail in his safety plan:

How will the Contractor establish the amount of facilities required for employees to shower, change, eat and attend to sanitary needs

What measures will the employer take to house employees on site who lives far from their residences or for the provision of transport

7.1.2 Environmental regulations for workplaces

The Contractor shall comply with the Environmental Regulations for Workplaces, 1987, and shall address the following aspects as described in the regulations in his Health and Safety plan:

Thermal requirements, Lighting, Windows, Ventilation, Housekeeping, Noise and hearing conservation, Precautions against flooding, and Fire precautions and means of egress.

7.1.3 Housekeeping on construction sites

Contractors will be required to adhere to Construction Regulation 25: Housekeeping on construction sites, of the Construction Regulations, 2003.

This regulation must be read in conjunction with the provisions of the Environmental Regulations for Workplaces, 1987 (as amended).

The Contractor must discuss the following in detail in his safety plan:

How will contractors ensure the neatness of construction sites

What measures does the Contractor envisage to

- o Store and/or stack materials,
- o Remove debris from site,
- o Prevent unauthorized entrance to the site
- o Protect employees or passers-by from falling objects

7.1.4 Fire precaution on construction sites

Contractors will be required to adhere to Construction Regulation 27: Fire precautions on construction sites, of the Construction Regulations, 2003.

This regulation must be read in conjunction with the provisions of the Environmental Regulations for Workplaces, 1987 (as amended).

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Contractor must discuss the following in detail in his safety plan:

- How the Contractor will minimize the risk of fire on the site
- How the Contractor will identify potential fire hazards
- What prohibitions the Contractor will implement to manage risk areas
- How many employees the Contractor will train in fire fighting
- What organization the Contractor envisage to combat fires on sites
- What precautions and procedures will be followed to evacuate employees in the case of a fire

7.1.5 *Water Environments*

The Contractor will be required to adhere to Construction Regulation 24: Water Environments, of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan:

- What precautions will the Contractor take to identify dangers where employees may fall into water,
- What safety procedures and equipment will the Contractor implement to safeguard employees working at water environments.

7.1.6 *Structures*

The Contractor will be required to adhere to Construction Regulation 9: Structures, of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan:

- Explain what controls, test or precautions will be made to prevent structures from collapsing during construction,
- The Contractor shall indicate what steps will be taken and implemented to ensure that structures or parts thereof will not be loaded in such a manner that it may collapse, and
- What procedures does the Contractor envisage to implement in order to obtain all relevant data on structures before commencement of construction work.

7.1.7 *Watching, barricading and lighting*

The Contractor will be required to adhere to regulations 11.3.(i) and 11.3.(l) of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan in respect of any excavation or other dangerous activity adjacent to public roads and thoroughfares:

Type of barrier or fencing to be used,

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

Type and spacing of warning lights and warning signs, and
Control systems and personnel he intends employing to ensure that the
above items are maintained.

7.1.8 Hazardous Chemical Substances

The Contractor will be required to adhere to the Regulations for Hazardous Chemical Substances 1995 as amended in the handling and storage cement of and other hazardous chemical substances.

The Contractor must discuss the following in detail in his safety plan in respect of each hazardous chemical substance that will be used in the works:

- Storage of substance
- Handling of substance
- Protective clothing and other devices to be used while handling the substance
- Medical surveillance.

7.2 Site Clearance

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.2.1 Demolition work

Contractors will be required to adhere to Construction Regulation 12: Demolition work, of the Construction Regulations, 2003.

The Contractor shall discuss the following in detail in his safety plan:

- Briefly explain how he will safeguard people and property during and after demolition works
- Briefly explain how he will protect staff from dangerous situations
- Discuss the methods proposed to safeguard the public and property against harm during demolition works
- Discuss what type of equipment he envisage to use during demolition work
- How will the Contractor ensure the safety of equipment used during demolition work
- What steps will the Contractor deem necessary to take where hazardous materials is encountered
- Dust control measures
- Noise control measures

7.3 Earthworks

The Contractor shall, without limiting his obligations, cover at least the following matters

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

in his Health and Safety Plan under this category of work:

7.3.1 Excavation work

Contractors will be required to adhere to Construction Regulation 11: Excavation work, of the Construction Regulations, 2003.

The Contractor must discuss the following in detail in his safety plan:

How will the Contractor establish the stability of ground prior to excavations,
What steps will the Contractor follow to ensure that bolstering, shoring and bracing is sufficient to ensure the safety of the excavation, and
What steps will the Contractor follow to ensure the equipment used to safeguard an excavation is sufficient and safe.

7.4 Concrete

The Contractor shall, without limiting his obligations, cover at least the following matters in his Health and Safety Plan under this category of work:

7.4.1 Formwork and support work

The Contractor shall with reference to Regulation 10: Formwork and support work, of the Construction Regulations, 2003, and without limiting his obligations, cover at least the following matters in his Health and Safety Plan:

How the design of formwork and support work will be carried out,
How the erection of formwork and support work will be managed,
How the continuous assessment of the safety of formwork will be done,
How the loading of formwork and support work will be managed or limited,
and
How he intends keeping records of the above.

7.5 Pipes

The Contractor shall comply with Section 9 of the General Safety Regulations, with regards to the welding, flame cutting, grinding, soldering or similar operations associated with pipework.

8 IMPLEMENTATION OF CONTRACTOR'S HEALTH AND SAFETY PLAN

8.1 General

The Contractor shall describe in his Health and Safety Plan how he intends implementing his plan. The Contractor shall indicate the methods he intends using to ensure accurate record keeping of all critical elements identified in his risk assessment and covered in

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

his Health and Safety Plan.

The Contractor shall indicate how internal audits will be carried out, how shortcomings will be addressed, how he intends to review the safety plans, how he would train staff and how he would implement the findings and recommendations of internal audits or inputs of employees.

8.2 Administrative Systems

The Contractor shall comply with Section 9 of the General Administrative Regulations, 1996. The Contractor's administrative system shall without limiting his obligations, cover the following:

- Up keep of a safety file on site,
- Maintenance of his Health and Safety plan,
- Procedures to follow for the appointment of competent persons,
- Application for permits,
- Procedures to follow for notifications, Injury on duty [IOD] administration,
- Recording of minutes of safety meetings, Recording of checklists,
- Safe keeping of checklists, and
- Internal audits.

The Contractor shall in particular ensure that at least one copy of the Occupational Health and Safety Act, 1993 and its Regulations is available on the for every 20 employees employed.

8.3 Reporting Systems

The Contractor shall comply with Section 9 of the General Administrative Regulations, 1996 and shall in particular (in accordance with section 12) furnish an inspector with information relating to health and safety on the construction site, when requested to do so.

The Contractor shall notify the Employer of any investigations, complaint or criminal charge which may arise as a consequence of the provision of the Occupational Health and Safety Act, 1993 and its Regulations, pursuant to work performed in terms of this Contract.

8.4 Training

The Contractor shall train all his employees in accordance with the requirements of section 13 of the Occupational Health and Safety Act, 1993. The Contractor shall ensure that every employee is informed of the following:

The hazards of any work he has to perform or plant machinery or equipment he is

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

permitted to use, and

The precautionary measures which should be taken regarding the above.

The Contractor shall, without limiting his obligations, indicate in his Health and Safety Plan how he intends:

Identifying the training needs of the personnel he intends employing, and

Implementing the training identified

What proof of induction training will be carried by his employees (e.g. laminated type identification card).

8.5 Safety Meetings

The Contractor shall conduct at least one formal safety meeting per month with his employees to ensure safety awareness and shall maintain appropriate records of attendance and meeting content. Such records shall be made available to the Employers Safety Agent. Such meetings shall address at least the following:

Accident / safety incidents

Hazardous conditions

Hazardous materials / substances

Job or work projections

Work procedures

Protective clothing / equipment

Housekeeping

General safety topics

8.6 Inspections and Monitoring

The Contractor shall be required to inspect each workplace prior to works commencing to ensure that all protective equipment is in place and that by entering the workplace no person will be exposed to any hazard which could affect his health or safety. The Contractor shall without limiting his obligations, indicate the following in his Health and Safety Plan:

The inspection and monitoring procedures he intends employing to determine the safety of workplaces, and

Who will be responsible for the checking of each workplace at the commencement of each shift.

The Contractor shall include in his Health and safety Plan all the checklists he intends using during the inspection and monitoring of the implementation of his Health and Safety Plan.

The Contractor can expect inspections of the works by any of the following parties:

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

The Employer or his Safety Agent,
The Employer's Occupational Safety Officer, or
The designated officer serving in the Department of Manpower and appointed by
the Minister as Chief Inspector or his representative.

In addition to site inspections performed by the Employer or his safety agent they shall also do audits and assess the safety situation at the works and investigate incidents. Follow-up inspections will be performed to ensure compliance to recommendations done.

The Employer, his Safety Agent or his Occupational Safety Officer may stop the work at any time under the following conditions:

If the Contractor is not compliant with his Health and Safety Plan Imminent threat to the health and safety of any person on site Continuous non-conformance to corrective action requests.

Inspections by the Chief Inspector or his representative will be by appointment and the purpose would be to investigate complaints received by the Inspector or to investigate serious incidents.

The Chief Inspector or his representative may issue prohibition notices to stop the activities at the works until the situation investigated has been resolved or he may issue an improvement notice whereby the Contractor will have a period to rectify any hazard identified by the inspector.

9. AUDITING

9.1 Internal Audits

The audits contemplated in regulation 4.(1)(d) of the Construction Regulations, 2003 will be carried out by the Employer or his appointed Safety Agent.

The intervals for the audits shall be agreed between the Contractor and the Employer or his Safety Agent during the preparation of the Contractor's Health and Safety Plan, but shall be carried out at least once every month or at such shorter interval that an inspector may require. The Employer or his Safety Agent shall provide at least 7 calendar days notice prior to the conducting of an audit.

The findings of each audit will be made known to the Contractor and the Employer in a report prepared by the Employer or his Safety Agent and will be submitted to all parties within seven working days of the respective audit being completed. Any shortfalls identified will be documented in the audit report together with the Contractor's proposals to rectify the same. All audit reports will be filed in the Health and Safety File.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

A date for a follow up audit will be negotiated with the Contractor to verify the implementation of all actions to rectify shortfalls as identified in the audit report .

The Contractor will ensure that the same arrangement detailed above be implemented with his Contractors to ensure his compliance with the Construction Regulations and contemplated in regulation 5. (3)(c).

The audits described above only constitutes part compliance by the Employer or the Safety Agent with regulation 4.(1)(c) of the Construction Regulations, 2003.

9.2 Audits by Employer or Safety Agent

The Employer or Safety Agent will be entitled to carry out additional audits or follow-up audits, as the case may be, at any time during the construction period provided that:

- i) The audit or follow-up audit are carried out during ordinary working hours, and
- ii) The Employer or Safety Agent gives the Contractor at least 24 hours notice of his intention to carry out such audits.

The Contractor's employees indicated in Section 9.1 will be present during any audit carried out by the Employer or his Safety Agent.

10. MEASUREMENT AND PAYMENT

10.1 Measurement and Payment

10.1.1 The scheduled items for health and safety will be as specified in clause 31 of section 001 of the Standard Specifications.

10.1.2 The Contractor shall price all items scheduled in this section of the schedule of quantities to enable the Employer to comply with clause 4.1.(h) of the Construction Regulations, 2003. Failure by the Contractor to price these items will force the Employer to reject the Contractor's tender in terms of clause 4.(4) of the Construction Regulations, 2003.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ANNEXURE 1

**APPOINTMENT LETTERS
PRO-FORMA'S**

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

COMPANY LETTER HEAD

Attention: (**Assistant Construction Supervisor's Name**)

APPOINTMENT OF THE ASSISTANT CONSTRUCTION SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 6(2)

I, (**contractor's name**) hereby appoint (**assistant construction supervisor's name**) as the assistant supervisor responsible for (**site address**) to carry out the construction work of (**description of construction work and area of responsibility**).

In terms of this appointment you are required to ensure that all construction work performed under your supervision is carried out as follows:

1. By persons suitably trained and competent to do such work;
2. That all persons are aware and understand the hazards attached to the work being carried out;
3. That the required risk assessments are carried out;
4. That precautionary measures are identified and implemented;
5. That discipline is enforced at the construction site at all times;
6. That all identified statutory requirements are met; and
7. That any other interest in terms of health and safety with respect to the responsible area is met.
8. You will accept the duties of the Construction Supervisor in his absence.

You are required to report any deviations of the above-mentioned instruction to (**construction supervisor's name**) and in his absence to the contractor's representative.

This appointment is valid from (**date**) to the completion of the stipulated construction work.

You shall submit a written weekly report any non-compliance with the construction Regulations, 2003.

Contractor's Representative full name Signature Date
.....

Kindly confirm your acceptance of this appointment by completing the following:

I, (**assistant construction supervisor**) understand the implications of the appointment as detailed above and confirm my acceptance.

Assistant construction supervisor's Signature Date

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: (**Safety Officer's Name**)

APPOINTMENT OF THE CONSTRUCTION HEALTH AND SAFETY OFFICER IN TERMS OF CONSTRUCTION REGULATION 6(6)

I, (**contractor's name**) hereby appoint (**safety officer's name**) as the Construction Health and Safety Officer responsible for (**site address**) to manage all the health and safety issues as required in terms of the Act by establishing a health and safety program with elected health and safety Representatives.

You shall ensure that all the requirements in terms of the Act and in particular in terms of the Construction Regulations, 2003 are met. You shall also ensure that all appointed sub-contractors comply with the requirements as stipulated in the Construction Regulations, 2003.

You shall further ensure that all records, registers and required lists are maintained and shall stop construction work upon identifying any non-compliance by any contractor; this includes stopping any work should the competency of the person carrying out such work be questionable.

This appointment is valid from (**date**) to the completion of the stipulated construction work.

_____	_____	_____
Contractor's Representative full name	Signature	Date

.....

Kindly confirm your acceptance of this appointment by completing the following:

I, (**construction health and safety officer's name**) understand the implications of the appointment as detailed above and confirm my acceptance.

_____	_____	_____
Construction Health & Safety Officer's full name	Signature	Date

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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: (**Construction Vehicle and Mobile Plant Inspector**)

**APPOINTMENT OF THE CONSTRUCTION VEHICLE AND MOBILE PLANT INSPECTOR
IN TERMS OF CONSTRUCTION REGULATION 21(1)(j)**

I, (**contractor's name**) hereby appoint (**construction vehicles and mobile plant inspector's name**) as the construction vehicles and mobile plant inspector responsible for (**site address**) to inspect on a daily basis all construction vehicles and mobile plant, as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to construction vehicles and mobile plant that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from (**date**) to the completion of the stipulated construction work.

Contractor's Representative full name Signature Date

.....
Kindly confirm your acceptance of this appointment by completing the following:

I, (**construction vehicles and mobile plant inspector's full name**) understand the implications of the appointment as detailed above and confirm my acceptance.

Construction vehicles and mobile plant Signature Date
inspector's full name

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: **(Sub-Contractor's Name)**

APPOINTMENT OF SUB-CONTRACTOR IN TERMS OF THE CONSTRUCTION REGULATION 5(3)(b)

I, **(contractor's name)** hereby appoint **(sub-contractor's name)** as the sub-contractor responsible for **(site address)** to carry out the construction work of **(description of construction work)**.

You shall ensure that you meet all the requirements in terms of the Act and in particular in terms of the section 37(2) agreement and the Construction Regulations, 2003. You shall also ensure that all contractors appointed by yourself and reporting to you comply with the requirements as stipulated in the Construction Regulations, 2003.

You shall also ensure that all the information and specifications to ensure that the construction work is carried out in a safe manner are carried over to all contractors appointed and reporting to you.

You shall further ensure that all records, registers and required lists are maintained and that all persons appointed to carry out tasks as stipulated by these regulations are competent and have the necessary resources to complete their tasks effectively in such a manner that health and safety is not in any manner compromised.

This appointment is valid from **(date)** to the completion of the stipulated construction work.

You shall submit a written weekly report on all shortfalls that have not been met in terms of these regulations.

Contractor's Representative full name Signature Date

.....
Kindly confirm your acceptance of this appointment by completing the following:

I, **(sub-contractor's name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Sub-Contractor's Representative full name Signature Da

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: **(Construction Supervisor's Name)**

**APPOINTMENT OF THE CONSTRUCTION SUPERVISOR IN TERMS OF
CONSTRUCTION REGULATION 6(1)**

I, **(contractor's name)** hereby appoint **(construction supervisor's name)** as the Supervisor responsible for **(site address)** to carry out the construction work of **(description of construction work and area of responsibility)**.

In terms of this appointment you are required to ensure that all construction work performed under your supervision is carried out as follows:

1. By persons suitably trained and competent to do such work;
2. That all statutory appointments have been completed;
3. That, where required, health and safety committees are established and that meetings are accordingly held;
4. That all persons are aware and understand the hazards attached to the work being carried out;
5. That the required risk assessments are carried out;
6. That precautionary measures are identified and implemented;
7. That discipline is enforced at the construction site at all times;
8. That all identified statutory requirements are met; and
9. That any other interests in terms of health and safety with respect to the responsible area is met.
10. You will in writing delegate your duties to the Assistant Construction Supervisor while absent from site.

You are required to report any deviations of the above-mentioned instructions to **(contractor's name)**. This appointment is valid from **(date)** to the completion of the stipulated construction work. You shall submit a written weekly report on all shortfalls that have not been met in terms of these regulations.

Contractor's Representative full name

Signature

Date

.....
Kindly confirm your acceptance of this appointment by completing the following:

I, **(construction supervisor)** understand the implications of the appointment as detailed above and confirm my acceptance.

Construction Supervisor's full name

Signature

Date

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

COMPANY LETTER HEAD

Attention: **(Excavation Work Supervisor's Name)**

**APPOINTMENT OF THE EXCAVATION WORK SUPERVISOR IN TERMS OF
CONSTRUCTION REGULATION 11(1)**

I, **(contractor's name)** hereby appoint **(excavation work supervisor's name)** as the excavation work supervisor responsible for **(site address)** to supervise and carry out all the necessary inspections in terms of all excavation work as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to excavation work that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations are at all times met. This appointment is valid from **(date)** to the completion of the stipulated construction work.

Contractor's representative full name Signature Date

.....
Kindly confirm your acceptance of this appointment by completing the following:

I, **(excavation work supervisor's full name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Excavation Work Supervisor full name Signature Date

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: **(Form work and Support work supervisor's name)**

APPOINTMENT OF THE FORMWORK AND SUPPORT WORK SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 10(a)

I, **(contractor name)** hereby appoint **(form work and support work supervisor's name)** as the formwork and support work supervisor responsible for **(site address)** to supervise and carry out all the necessary inspections in terms of all formwork and support work as per the provided checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to formwork and support work that the necessary precautionary measures are taken and enforced. Hazards are reported in writing to the Construction, Health and Safety Officer and the Construction Supervisor.

You shall further ensure that the requirements of the Construction Regulations are at all times met. This appointment is valid from **(date)** to the completion of the stipulated construction work.

Contractor's representative full name	Signature	Date
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Kindly confirm your acceptance of this appointment by completing the following:

I, **(formwork and support work supervisor's full name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Formwork and Support Work Supervisor's full name	Signature	Date
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Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: **(Ladder Inspector's Name)**

APPOINTMENT OF THE LADDER INSPECTOR IN TERMS OF CONSTRUCTION REGULATION 13(A)

I, **(contractor's name)** hereby appoint **(ladder inspector's name)** as the ladder inspector responsible for **(site address)** to manage ladders on site. You should inspect the ladders as per the checklist at least once a week.

You shall ensure that when becoming aware of any health and safety hazards in respect to ladders that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from **(date)** to the completion of the stipulated construction work.

Contractor's representative full name Signature Date

Kindly confirm your acceptance of this appointment by completing the following:

I, **(ladder inspector's full name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Ladder inspector's full name Signature Date

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: **(Risk Assessor's Name)**

**APPOINTMENT OF THE CONSTRUCTION SITE RISK ASSESSOR IN TERMS OF
CONSTRUCTION REGULATION 7(1)**

I, **(contractor's name)** hereby appoint **(risk assessor's name)** as the construction site risk assessor responsible for **(site address)** to carry out risk assessments prior to the commencement of construction work and any other risk assessment that may be required for the duration of the construction work.

You shall ensure that all risks are identified and analyzed and that safe working procedures are drafted and implemented to reduce, mitigate or controls the hazards that were identified.

You will at least use the risk evaluation program with the provided checklists.

This appointment is valid from **(date)** to the completion of the stipulated construction work.

Contractor's representative full name

Signature

Date

Kindly confirm your acceptance of this appointment by completing the following:

I, **(construction site risk assessor's name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Construction site Risk Assessor's
full name

Signature

Date

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

COMPANY LETTER HEAD

Attention: **(Scaffolding Supervisor's Name)**

APPOINTMENT OF THE SCAFFOLDING SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 14(2)

I, **(contractor's name)** hereby appoint **(scaffolding supervisor's name)** as the scaffolding supervisor responsible for **(site address)** to supervise and carry out all the necessary inspections in terms of all scaffolding work. (Whether newly erected, altered or moved as per the provided checklist)

You shall ensure that when becoming aware of any health and safety hazards in respect to scaffolding work that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations, 2003 are at all times met.

This appointment is valid from **(date)** to the completion of the stipulated construction work.

Contractor's Representative full name

Signature

Date

Kindly confirm your acceptance of this appointment by completing the following:

I, **(scaffolding supervisor's full name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Scaffolding Supervisor's full name

Signature

Date

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

COMPANY LETTER HEAD

Attention: **(Stacking and Storage Supervisor's Name)**

APPOINTMENT OF THE STACKING AND STORAGE SUPERVISOR IN TERMS OF CONSTRUCTION REGULATION 26(a)

I, **(contractor's name)** hereby appoint **(stacking and storage supervisor's name)** as the stacking and storage supervisor responsible for **(site address)** to manage all stacking and storage on site.

You shall inspect all new stacking and thereafter as often as needed according to the checklist.

You shall ensure that when becoming aware of any health and safety hazards in respect to stacking and storage that these hazards are reported in writing to the Construction Health and Safety Officer and Construction supervisor and the necessary precautionary measures are taken and enforced.

You shall further ensure that the requirements of the Construction Regulations are at all times met. On identifying any shortfalls or hazards convey such information in writing to the construction supervisor.

This appointment is valid from **(date)** to the completion of the stipulated construction work.

Contractor's Representative full name

Supervisor

Date

Kindly confirm your acceptance of this appointment by completing the following:

I, **(stacking and storage supervisor's full name)** understand the implications of the appointment as detailed above and confirm my acceptance.

Stacking and Storage Supervisor's
Full name

Signature

Date

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURE 2

NOTIFICATION TEMPLATES

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

COMPANY LETTER HEAD

Attention: The Provincial Director
The Department of Labour
[Postal Address*]

NOTIFICATION OF CONSTRUCTION WORK ON CONTRACT [NUMBER] [CONTRACT DESCRIPTION]

In terms of regulation 3.(1) of the Construction Regulations , 2003 promulgated on 18 July 2003 in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), we hereby notify you of our intention to commence construction works on the abovementioned contract, which:

Includes the demolition of a structure exceeding a height of 3 meters,
Includes the use of explosives to perform the construction work,
Includes the dismantling of fixed plant at a height greater than 3 meters,
Will exceed 30 days or will involve more than 300 person days of construction,
Includes excavation work deeper than 1 meter, or
Includes working at a height greater than 3 meters above ground or a landing.

1. Parties involved on the Contract

1.1 The Principal Contractor is: [Contractor's Name]
[Contractor's postal address]
[Contractor's postal address]
Att: [Contractor's contact person and telephone number]

1.2 The Client (Employer) is: [Employer's Name]
[Employer's postal address]
Att: [Employer's contact person and telephone number]

1.3 The Client's Safety Agent is: [Safety Agent's Name]
[Safety Agent's postal address]
Att: [Safety Agent's contact person and telephone number]

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

1.4 The Contractor's Construction Supervisor is: [Contractor's Construction Supervisor's name and telephone number]

2. Details of the construction works

2.1 The physical address of the works is: [Physical address of works]
[Physical address of works]

2.2 The nature of the construction works is: [Provide a description of the works].

2.3 The expected commencement date of the Works is : [Insert expected commencement date]

2.4 The expected completion date of the works is : [Insert expected completion date]

2.5 The estimated maximum number of persons on the construction site:

2.6 A total of _____ contractors will be accountable to the Principal Contractor on the construction site during the execution of the Works. The names of the contractors already chosen are as follows: [Provide a list of the Contractor's subcontractors already appointed]

3. Other details

3.1 The Principal Contractor's compensation registration number is: _____

3.2 In terms of regulation 3.(3) a copy of this notification will be kept on site for

inspection. We trust the above is in order.

Yours faithfully,

Signature

Date

* Postal Address of Provincial Director as indicated in regulation 1 of the General Administrative Regulations, 1996.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ANNEXURE 3

IDENTIFIED HEALTH AND SAFETY HAZARDS

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

ANNEXURE 3: IDENTIFIED HEALTH AND SAFETY HAZARDS

In terms of Regulation 4(1)(b) of the Construction Regulations 2003 the following hazards anticipated with the scope of work have been identified.

NOTE: The list of potential hazards is by no means intended to be all inclusive and is not limited to this list, and it remains the responsibility of the Contractor to identify all possible hazards with regards to his scope of work and to put measures in place to mitigate, reduce or control these hazards.

Potential Hazards

1. Commissioning of new installations
2. Confined space entry
3. Demolition/breaking into existing structures
3. Excavation shoring / brazing
4. Excavations been flooded during rain season
5. Explosives
7. Hazardous material handling / storage / management
8. Heat stress
9. Loading and off loading vehicles
10. Manual handling of materials
11. Plant and equipment integrity
12. Public and traffic safety
13. Requirements for plant isolations
14. Roofing and Cladding operations
15. Safe usage and storage of Oxygen, Acetylene and LPG cylinders
16. Scaffolding
17. Stacking and storage of equipment / materials
18. Tie-ins into existing equipment
19. Usage of compressed air and equipment
20. Work involving radioactive sources
21. Working in operational areas
22. Working on live electrical installations / sub-stations / MCC rooms
23. Working on moving equipment.

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2

ANNEXURE 4

COMPLIANCE COVID-19 OCCUPATIONAL HEALTH AND SAFETY MEASURES IN WORKPLACES COVID-19 (C19 OHS), 2020

Contractor	Witness 1	Witness 2	Employer	Witness 1	Witness 2