DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

CONTRACT 2334-50-02/03

Remedial work to 491 RDP Houses

VOLUME 1
PORTION 2: CONTRACT

Section C3.5
Management

DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

CONTRACT 2334-50-02/03

Remedial work to 491 RDP Houses

C3.5 MANAGEMENT

C3.5.1 Management of the Works

C3.5.1.1 Concurrent Construction Contracts

The Contractor's attention is drawn to the fact that other contiguous works will be executed concurrently by independent Contractor's under separate contracts on Site or in the vicinity of the Site.

The Contractor shall ensure that neither his operations nor those of his subcontractors nor the activities of his employees shall interfere with or hinder the operations of the Employer or of other Contractors and he shall indemnify the Employer against all claims arising through default of this requirement.

The Contractor shall hand over portions of the Site of the Works (whether completed or not), or completed portions of the Works, to these Contractors when required by the Employer or detailed elsewhere in this document. The Contractor shall cause no interference with or delays in the execution of these contiguous contracts.

No discount or commission for the Contractor is allowed on these contracts, and it will be assumed that he has fully allowed in the Contract Price for the presence of these Contractors on Site. Any service rendered or assistance given by the Contractor to these Contractors, save as are provided for in the Project Specifications, shall be for their accounts only since the Employer shall in no way be responsible to the Contractor for any payments in this respect.

The Contractor shall protect all known existing services as well as all work being carried out and structures being erected on the Site by other Contractors. Any damage caused

to these services or structures, or any obstructions or hindrance caused to other contractors by the Contractor, and all claims arising there from, will be the sole responsibility of the Contractor.

All repair work shall be carried out at the Contractor's expense to the entire satisfaction of the Principal Agent.

The same obligations shall be imposed on the Employer and on other Contractors in respect of the Works being executed under this Contract.

C3.5.1.2 Contractor's Project Management Plan

The Contractor is required to prepare and submit a project management plan for the construction. The particular contents that should be included in the Contractor's Project Management Plan are listed below:

- Project structures and agreements

  The Contractor shall indicate how responsibility for the various work packages will be divided between joint venture partners (where applicable) and sub-contractors. A contract organogram shall be provided showing work apportionment and project management responsibilities. The particular division of work shall match the established capabilities and capacities of each particular partner or subcontractor.

- Plant, materials and equipment

  The Contractor shall prepare a Plant and Materials procurement plan, indicating the source of key Plant and Materials designated for inclusion in the Works, and demonstrating that such Plant and Materials have a proven track record of successful maintenance support in South Africa.

  The Contractor shall also prepare a plan of Contractor's Equipment, indicating the source and details of construction equipment planned for use on the Contract and based on the Contractor's particular approach.

- Staffing plan

The Contractor shall prepare a detailed staffing plan showing in an organogram all key members of the Contractor's Personnel, providing a detailed CV for each such key position. The Contractor shall also show the numbers and source of all non key staff and indicating the particular local content offering of the Contractor.

- Method statements

  The Contractor shall clearly describe the overall methodology proposed for construction of the Works and include particular method statements for each work discipline included in the Works.

C3.5.1.3 Construction Programme

The Contractor shall submit within the period stated in the Contract Data a suitable and realistic construction programme for the consideration of the Principal Agent.

Please note that the penalty for delay specified in the Contract Data will be applicable.

The programme shall be in the form of a Gantt chart and shall include the following details:

- A work breakdown structure, identifying the major activity groups.
- For each activity group further details shall be provided with regard to the scheduled start and end dates of individual activities.
- The linkages between activities shall be clearly indicated and the logical network upon which the programme is based shall be separately submitted to the Principal Agent if requested. Any constraints shall be classified as being time-related or resource-related.
- The critical path(s) shall be clearly indicated and floats on non-critical activities shall be shown.
- The Contractor shall indicate the working hours per day, night, week and month allowed for in the programme.
- Where relevant the Contractor shall state the production rates for key activities, e.g. earthworks, etc.

- Sectional completion in accordance to the Layout Plan

Together with the programme as detailed above the contractor shall submit to the principal agent a cash flow projection, indicating projected monthly invoice amounts. The cash flow projection shall be updated at monthly intervals to reflect actual payments to date and anticipated further payments.

The programme will be reviewed at the monthly site meetings at which the Contractor shall provide sufficient detail that will allow the comparison of completed work per activity that has fallen behind. The updated programme shall be submitted to the Principal Agent at least two days prior to the monthly meetings.

If the programme has to be revised by reason of the Contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the Works within the time for completion or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by providing more labour and plant on site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit the programme or to work according to the programme or revised programmes shall be sufficient reason for the Principal Agent to take steps as provided in the JBCC Contract.

The approval by the Principal Agent of any programme shall have no contractual significance other than that the Principal Agent will be satisfied that the work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Principal Agent to instruct the Contractor to vary the programme if required by circumstances.

C3.5.1.4 Quality Assurance

The Contractor shall institute a quality assurance system and provide experienced personnel as well as all the necessary transport, instruments and equipment, to ensure adequate supervision and positive control of the works at all times in order to comply with the requirements. The Contractor shall deliver to the Principal Agent, for his consideration, quality assurance programmes prior to the Contractor's appointment of any suppliers or commencement of the Works. Failure to comply with these requirements shall be just cause for the Principal Agent to order supervision of the

Works without additional remuneration or for him to recommend termination to the Employer in terms of the JBCC Contract.

The Contractor shall do at least the quality control tests at the frequencies specified in the Part C3.1 to Part C3.4 of the contract document. If the scale of the works, construction methods or any other circumstances dictates, the Contractor shall do more tests when required for quality assurance purposes.

The Contractor shall keep systematic records of the test results and all worksheets relating thereto. All test results obtained by the Contractor in the course of his process control of the Works shall be submitted to the Principal Agent or his/her Agents prior to requesting inspection of the relevant portions of the Works. Any request for inspection shall be submitted on the prescribed forms.

The employer is at liberty to carry out such tests as he deems necessary to determine compliance with the contract requirements and will make available the results of all tests to the contractor.

Acceptance control, record keeping and payment certificates shall be done in accordance with the Principal Agent's standard system except if the Principal Agent approves that the Contractor's standard system may be used. An index to the Principal Agent's standard site administration forms is appended as Annexure A to section C3.5.

All material used in the Works shall, where such mark has been awarded for a specific type of material, bear the SABS mark. Alternatively, the Contractor shall furnish the Principal Agent with certificates of compliance of materials, which bear the official mark of the appropriate standard.

C3.5.1.5 Site Administration

- Daily Site Diary

  The daily site diary in accordance with the pro forma appended in Annexure A to section C3.5 shall be kept up to date by the Contractor's Site Agent and will be signed on a daily basis by the Principal Agent or Agents to the employer.

- Information in Respect of Plant

Information relating to plant on Site shall be recorded in the daily site diary. In addition, the Contractor shall deliver to the Principal Agent or the Agents to the employer, on a monthly basis, a detailed summary of construction plant kept on the Site, full particulars given for each day of the month. Distinction shall be made between plant in working order and plant out-of-order. Such inventory shall be submitted by the first day of the month following the month to be reported.

- Information in Respect of Employees

Information relating to labour and management on Site shall be recorded in the daily site diary. In addition, the Contractor shall deliver to the Principal Agent or the Agents to the employer, on a monthly basis, a detailed summary of supervisory staff, labour employed (own and local labour) by category, and sub-contractors (both local and imported) for each day of the month. Such return shall be submitted by the first day of the month following the month to be reported.

- Rainfall Records

Rainfall records for the period of construction shall be taken on Site and recorded in the daily site diary. The Contractor shall provide and install all the necessary equipment for accurately measuring the rainfall. The Contractor shall also provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost. The Principal Agent or the Agents to the employer shall take and record the daily rainfall readings. The Contractor shall be permitted to attend these readings, in the company of the Principal Agent or the Agents to the employer. Access to the measuring gauge(s) shall at all times be under the Principal Agent's or the Agents to the employer's control.

C3.5.1.6 Site Instructions

Site instructions by the Principal Agent, addressed to the Contractor at his office on the Site, will be numbered consecutively and will be deemed to have been received by the Contractor's Representative unless a break in the sequence of numbers is brought to the notice of the Principal Agent in writing immediately.

C3.5.1.7 Site Meetings

The Contractor and his authorised representative shall attend all meetings held on the Site with the Employer and the professional team at dates and times to be determined by the Principal Agent. Such meetings will be held to evaluate the progress of the Contract, and to discuss matters pertaining to the Contract which any of the parties represented may wish to raise. It is not the intention to discuss day-to-day technical matters at such meetings.

C3.5.1.8 Payment Certificates

Refer to: C1.2.2 JBCC, Contract Data, B 15.0 Changes made to JBCC® documentation, clause 25.10.

All quantity calculations and certificates submitted by the Contractor for checking shall be in accordance with the standard JBCC prescribed format for Edition 6.2 (May 2018).

Where dayworks have been instructed by the Principal Agent or the Agents to the employer, the Contractor shall submit the returns to the Principal Agent or the Agents to the employer for signature and approval within twenty-four (24) hours of the end of the working day on which the work was executed. Daywork returns shall be submitted on forms following the standard format included in Annexure A to Section C3.5 for this purpose. Failure to comply with the terms of this clause will result in non-payment for such dayworks.

All costs for the preparation and submission of progress certificates shall be borne by the Contractor.

C3.5.1.9 Drawings, Operation and Maintenance Manuals

All information in the possession of the Contractor that is required by the Principal Agent or the Agents to the employer in order to complete the As-Built drawings and to prepare a completion report for the Employer must be submitted to the Principal Agent or the Agents to the employer before a Certificate of Practical Completion will be issued for the Works. Similarly, the Contractor will be required to submit full details of all pipes, valves, meters and specials in a suitable loose bound format, including any special operational and maintenance procedures related thereto, for incorporation in the overall operation

and maintenance manual for the Scheme prior to the issue of a Certificate of Completion for the Works.

Only figured dimensions on the Drawings may be used in the interpretation thereof, and the Drawings shall not be scaled unless the Contractor is so instructed by the Principal Agent in writing. The Contractor shall notify the Principal Agent in writing of any lack of information or conflict in the information on the Drawings. The Principal Agent will upon written request provide any dimensions that may have been omitted from the Drawings.

C3.5.1.10 Record of Decision and Environmental Management Plan

The Contractor shall comply with all the conditions of the Record of Decision and the Environmental Management Plan appended as Annexure B and D respectively in Section C3.5

C3.5.1.11 Community Liaison and Community Relations

The Contractor (with communication through the SPLM) shall appoint a Community Liaison Officer (CLO) from the local community after the person has been identified by the Ward Councillor and Ward Committee.

The Community Liaison Officer shall perform the following duties:

- Meet regularly with Ward Councillor, ward committee and the community;
- Attend and report at site meetings and PSC meetings;
- Coordinate community activities with construction works;
- Arrange special meetings;
- Interact with the Contractor daily
- Facilitate in resolving community disputes;
- Manage the labour desk:
    - Coordinate local labour matters,
    - Give feedback to the community on local labour matters,
    - Recruit local labour and local entrepreneurs,
    - Keep record of the wages and labour force,
    - Facilitate in resolving labour disputes.

The contract with the CLO shall make provision for payment by the Contractor to the CLO of a maximum amount calculated as follows:
Wage per Month = As per COGSTA minimum requirement

The contractor shall also be responsible for the payment of contributions to all statutory charges. The employer will compensation the contractor for such CLO services under the Provisional Sums.

Only one CLO shall be appointed per project, however, the functions of CLO and labour desk may be split between persons with the understanding that the remuneration will also be split.
Should the Contractor experience any difficulty with community matters, these matters shall immediately be brought to the attention of the Principal Agent who shall arrange a meeting with the relevant Ward Councillor(s) and the CLO to resolve such matters.

In all dealings with communities through which the Works are to be executed, and in all dealings with workers employed from within such communities, the Contractor shall take due cognisance of the character, culture and circumstances of the specific community, and shall at all times use his best endeavours to avoid the development of disputes and rather to foster a spirit of co-operation and harmony towards the project.

The Contractor shall at all times, keep the Principal Agent fully informed regarding all matters affecting or negotiated between the Contractor and the community, and he shall attend all liaison meetings as may be arranged by the Principal Agent and/or the Employer. All matters concerning the community shall be discussed and where possible, resolved at such meetings.

Where any resolution during such negotiations or at such meetings shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Principal Agent. Where the Contractor is of the opinion that any instruction of the Principal Agent issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and prices and/or that a delay in the progress of the Works will result, he shall be entitled to submit a claim in terms of the Contract.

C3.5.1.12 Built-up Areas

The Contractor's attention is drawn to the fact that the Works will be constructed inside built-up areas. The Contractor shall exercise all necessary precautions and take all necessary steps to ensure the safety and convenience of the public. In addition, the Contractor shall provide access for traffic over and through the works, and for residents

to their places of abode, all as described in the Scope of Work. Allowance must be made by the Contractor in his programming for delays resulting from the aforesaid.

The Contractor shall give the Employer a minimum of 4 days written notice of his intent to close access to residential stands. No traffic access to a residential stand shall be closed for longer than 48 hours.

C3.5.1.13 Care of the Site

At all times during construction of the Works and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store all materials and equipment for which he is responsible in an orderly manner, and shall keep the Site free from debris and obstructions.

C3.5.1.14 Control of Water

The Contractor shall at all times and in all respects be responsible for the handling of stormwater from higher-laying areas above the Works, and for the handling of any sub-surface water that may affect the Works. No separate payment shall be made in this regard, as all costs related thereto shall be deemed to be included in the rates tendered for the various items of work that are included in the Bill of Quantities.

C3.5.1.15 Survey and Setting Out

The Principal Agent has established survey beacons on site from which the Contractor can set out the Works. The position and co-ordinates of the permanent survey beacons have been shown on the drawings. The Contractor shall be responsible for the protection of all these survey beacons and reference points from handing over of the beacons to the Contractor to completion of the Works. Property beacons and trigonometrical survey beacons that are disturbed or destroyed during the course of the contract shall be replaced at the Contractor's cost by a registered land surveyor who shall verify such replacement.

The Contractor shall be responsible for the true and proper setting out of the Works and for the correctness of the position, levels, dimensions and alignment of all parts of the Works from the beacons established above and for the provision of all necessary instruments, appliances and labour in connection therewith. Such setting out shall be executed by a qualified surveyor. No separate payment shall be made in respect of

setting out, such work being deemed as included in the rates tendered for construction of the Works.

The checking of any setting-out or of any line or level by the Principal Agent shall not relieve the Contractor of his responsibility for the correctness thereof.

If at any time during the progress of the Works, any error shall appear or arise in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required to do so by the Principal Agent, shall at his own expense rectify such error to the satisfaction of the Principal Agent, but if such error is based on incorrect data supplied in writing by the Principal Agent shall, in respect of cost of such rectification, be entitled to make a claim in accordance with the Contract Data.

END OF SECTION

DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

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Management
Annexure A1: Index to Site Forms

INDEX TO SITE FORMS

Document Number	**E4A02**	
Document Name	**Index to Site Forms**	
Last revised	**2013-10-09**	**Rev 03.1**

System Group	**Site**	
Systems Group Leader	**Flo Vrba**	
Original Author	**L Stander**	
Last revised by	**M Grobler**	
Approved by	**M Grobler**	
Enquiries	**Flo Vrba**	

INDEX TO SITE FORMS

Item No.	Form No.	Form Description	Date created	Date Last Modified
1		**Site Records**		
	E4F0101	Site Diary Cover		2013/02/19
	E4F0102	Site Diary		2009/09/15
	E4F0103	Site Diary: Additional Information / Comments		2007/10/30
	E4F0104	Site Instructions		2007/11/01
	E4F0105	Rainfall Calculations		2010/07/07
	E4F0106	Re-instatement of Fences		
	E4F0107	Existing Building Status Report		
	E4F0108	Report by LDO		
	E4F0109	Report by CLO		
	E4F0110	Visitor sign in book		2013/10/09
		Site Meeting Agendas		
	E2AM0203	Master - Pre-site Hand Over	20/02/2006	24/10/2007
	E2AM0204	Master - Site Meeting	20/02/2006	24/10/2007
	E2AM0206	Master - Site Hand Over	20/02/2006	08/01/2008
	E2AM0207	Master - Site Inspection	22/07/2008	22/07/2008
2		**Financial**		
	E4F0201	Payment Certificate submission information		2008/03/07
	E4F0202	Engineer's Certificate EC1 – EC11 : EC1 – Engineer's Certificate EC2 – Monthly Financial Contract Progress Report EC 3 – Contract Price Adjustment EC 4 - Penalty Calculation EC 6 - Materials on Site EC 6.1- Cession of Ownership Rights (material delivered to site) EC 7 – Contract information EC 8 – Payments to date EC 9 – Final Summary of Schedules EC 10 – Summary of Variation Orders EC 11 – Completion Estimate	2007/10/30	2010/07/23
	E4F0203	Cession of Ownership Rights	2009/09/29	
	E4F0204	Cession Agreement	2009/09/29	
	E4F0205	*For future use*		
	E4F0206	*For future use*		
	E4F0207	Variation Order		2009/07/03
	E4F0208	*For future use*		
	E4F0209	*For future use*		
	E4F0210	Daywork Summary		
	E4F0211	Daywork Return		
	E4F0212	QS Requisition Bill of Quantities		2008/03/07
	E4F0213	QS Requisition Estimate		2008/03/07
	E4F0214	Measurements Calculation Sheet		2007/11/01
	E4F0215	Engineer's Facilities		2007/11/01
	E4F0216	Cash flow		2007/11/01

INDEX TO SITE FORMS

Item No.	Form No.	Form Description	Date created	Date Last Modified
	E4F0217	*For future use*		
3		**Quality Control**		
3.1		**General**		
	E4F030101	ER's Quality Control Plan		2007/10/30
	E4F030102	Inspection Request Sheet		2007/11/01
	E4F030103	Blasting Checklist		
3.2		**Concrete**		
	E4F030201	Excavation to Structures		
	E4F030202	Req for checking prior to pouring of Concrete		
	E4F030203	Pre-Concrete Inspection Checklist		
	E4F030204	Post Concrete Inspection Report for Civil Works		
	E4F030205	Backfill to Structures : Checklist		
	E4F030206	Concrete Cube Test Report		
	E4F030207	Req for checking prior to pouring concrete (Building)		
	E4F030208	Reinforced Concrete – Inspection request	2010/09/06	
3.3		**Roads**		
	E4F030301	Requisition for checking Earthworks up to Base Course		
	E4F030302	Requisition to evaluate Asphalt Premix		
	E4F030303	Evaluation of Road Levels		
	E4F030304	Requisition for checking Road Signs & Traffic Marking		
	E4F030305	Requisition for Approval of Prime		
	E4F030306	*For future use*		
3.4		**Stormwater**		
	E4F030401	Requisition for checking earthworks : Stormwater		
	E4F030402	Requisition for checking pipelines, culverts, kerb inlets, junction boxes		
	E4F030403	Requisition for checking kerbs and channels		
3.5		**Sewers**		
	E4F030501	Requisition for checking earthworks : Sewers		
	E4F030502	Requisition for checking the laying of sewer pipes		
	E4F030503	Requisition for air testing sewers		
	E4F030504	Inspection Request – Pipework – Sewer		2009/08/28
3.6		**Water**		
	E4F030601	Requisition for checking earthworks		
	E4F030602	Requisition for checking pipelines, valve chambers, fire hydrants, pipeline markers, yard connections		
	E4F030603	Requisition for hydraulic testing of water pipes		
	E4F030604	Commissioning test sheet – Centrifugal Pumps	2008/08/14	2009/09/17
	E4F030605	Req for checking steel pipes prior to installation	2009/08/12	
	E4F030606	Inspection Request – Pipework – Water		2009/08/28
	E4F030607	Commissioning Test Sheet Borehole Pumps	2009/09/15	2009/09/17
3.7		**Electrical**		
	E4F030701	Requisition for Checking of Electrical: Street Light	2007/10/30	

Item No.	Form No.	Form Description	Date created	Date Last Modified
		Reticulation		
	E4F030702	Requisition for Checking of Electrical: LV Reticulation	2007/10/30	
	E4F030703	Requisition for Checking of Electrical: MV Lines	2007/10/31	2013/02/26
	E4F030704	Requisition for Checking of Electrical: Transformers	2007/10/31	2013/02/26
	E4F030705	Requisition for Checking of Electrical: Service connections & SPU/LPU	2007/10/31	2013/02/27
	E4F030706	Requisition for Checking of Electrical: Overhead line switching equipment	2007/10/31	2013/02/27
	E4F030707	Requisition for Checking of Electrical: LV Feeders	2007/10/31	2013/02/27
	E4F030708	Technical Data Project Sheet	2007/10/31	
	E4F030709	Miniature substation checklist	2007/11/21	2008/11/11
3.8		**Structures**		
	E4F030801	House Structures Checklist	2010/05	
	E4F030802	Structural Steel – Inspection request	2010/09/06	
	E4F030803	Pile Foundations – Confirmation of Inspection	2010/09/06	
	E4F030804	Inspection form check list (Rural): Top Structures	2010/11/16	
	E4F030805	Inspection form check list (Rural): Approval to pour slab	2010/11/16	
	E4F030806	Inspection form check list (Rural): Roof & Completions	2010/11/16	
	E4F030807	Final Retention Inspection (Rural).doc	2011/04/21	
	E4F030808	Inspection Form Check list (Rural) Rainwater.docx	2012/06/05	
	E4F030809	Beneficiary Removal & Relocation	2013/02/11	
	E4F030810	House Demolition form	2013/02/11	
	E4F030811	Platform Cutting check list	2013/04/22	
4		**General Forms**		
	E4F0401	Certificate of Practical Completion (GCC 1990)		2008/02/29
	E4F0402	Certificate of Completion (GCC 1990)		2008/02/29
	E4F0403	Certificate of Final Approval (GCC1990)		
	E4F0404	Certificate of Completion (GCC 2004)		2008/02/29
	E4F0405	Certificate of Final Approval (General GCC 2004)		2008/02/29
	E4F0406	Certificate of Final Approval – Mechanical (1985)		
	E4F0407	Certificate of Practical Completion – Mechanical (1985)		
	E4F0408	Internal Audit Requirements on Site		
	E4F0409	Certificate of Practical Completion (GCC 2004)		
	E4F0410	Snag List		
	E4F0411	Certificate of Performance (FIDIC)		2008/02/29
	E4F0412	Taking Over Certificate (FIDIC)		2008/02/29
	E4F0413	NEC Certificate of Completion		2008/03/07
	E4F0414	NEC Certificate of Completion – 2nd Edition		2008/03/07
	E4F0415	NEC Defects Certificate		2008/03/07
	E4F0416	NEC Defects Certificate – 2nd Edition		2008/03/07
	E4F0417	Site File System		
	E4F0418	Certificate of Practical Completion – GCC 2010	2013/02/26	
	E4F0419	Certificate of Completion – GCC 2010	2013/02/26	
	E4F0420	Certificate of Final Approval (GCC2010)	2014/02/10	
	E1F03	**As-built Forms**		
	E1A30	Quality Management of As-built drawings		

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Annexure A2: Quality Assurance Forms

House Certificate Index

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the required standards and specifications, as set out in the document and drawings.

House Number

		To be signed by Principle Agent / Representative after verifying	
No	Description	Has the certificate / document been filed (Sign only if completed and filed)	Does the certificate / document comply to minimum requirements? (Sign only if comply)
1	House Plans		
2	Site Development Plan		
3	Certificate of Site Possession		
4	Pre Inspection list (Compile by Contractor - Signed by Beneficiary, CLO & Contractor with evidence and photos)		
5	Assessment Pre Refurbishment		
6	Soil Poisoning Certificate (if required)		
7	Platform and Raft Checklist		
8	Raft Engineer Certificate		
9	Raft concrete test cube results		
10	Wall plate Checklist		
11	Wall plate Engineer Certificate		
12	Brick test results		
13	Mortar mix test cube results		
14	Roofing Checklist		
15	Roofing certificate		
16	Finishing Checklist		
17	Sanitary Fittings Checklist		
18	Electrical Installation Checklist		
19	Glazing certificate		
20	Plumbing certificate of compliance		
21	Electrical certificate of compliance		
22	Structural Crack Repair		
23	List for Completion		
24	Certificate of Practical Completion		
25	Beneficiary Happy Letter		
26	List for Final Completion		
27	Certificate of Final Completion		

CONTRACTOR **DATE**

PRINCIPLE AGENT **DATE**

Certificate of Site Possession

Employer	:	
Project	:	
Contract	:	
Contractor	:	
Date	:	
File	:	

House Number

Note: The site (erf pegs) were installed by a professional Land Surveyor (registered) appointed by the Employer

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The following particulars of the **site** were pointed out to the **contractor** by the **agent**

Pegs	
Benchmark	
Other features	
Information attached hereto:	Site Development Plan House Drawings

This certificate records the hand-over of the **site** to the **contractor** for the purpose of constructing the works in terms of the **agreement**. A copy of this certificate shall be provided to the **contractor,** agent and kept in the house file.

Upon signing this certificate; the Contractor accepring responsibility for the erf pegs. Should the erf pegs be disturbed from now to issue of the Certificate of Completion; then the Contractor will be responsible to reinstate the erf pegs at his own cost. Erf pegs may only be reinstated by a professional Land Surveyor (registered) which must furnish the Contractor/ Principle Agent with a setting out certificate for the reinstating of the erf pegs.

SIGNED	NAME	SIGNATURE	DATE
Contractor's Representative			
Principle Agent / Representative			

Assessment: Pre Refurbishment

Employer	:	
Project	:	
Contract	:	
Contractor	:	
Date	:	
File	:	

The Contractor has established that these remedial works are as set out in the document and drawings and will be regared as the scope of works for the set house prior construction. A portfolio of evedance of remedial work to be exercised and completed works would be required for payment of Items listed.

House Number

Bill Item No	Description	After Completion Approval	
		Contractor	Engineer

Assessment Pre Refurbishment (Page 2)

House Number

Assessment Pre Refurbishment

Contractor

Name	Signature	Date

Engineer

Name	Signature	Date

Completion of Refurbishment

Contractor

Name	Signature	Date

Engineer

Name	Signature	Date

Requisition for checking raft / platfrom and concrete works (page 1)

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the correct horizontal and vertical alignment and position, that such work has been carried out to the required standards and specifications, as set out in the document and drawings.

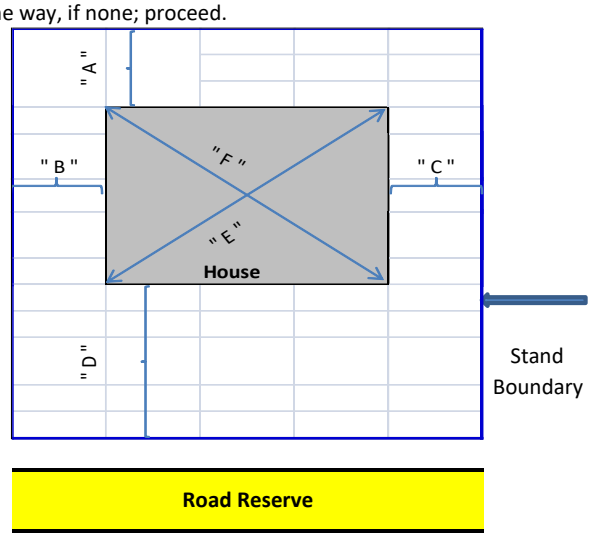
House Number

	YES	NO
Has the builder had the position of the stand boundary beacons confirmed?	YES	NO
Has the House footprint been set out according to SDP?	YES	NO

Note: Inform the Principle Agent of any existing services that are in the way, if none; proceed.

Contractor to confirm the following dimensions:

A=		**E =**	
B=		**F =**	
C=			
D=			



Contractor to provide DCP readings as follows:

DCP test no 1

5		35	
10		40	
15		45	
20		50	
25		55	
30		60	

DCP test no 2

5		35	
10		40	
15		45	
20		50	
25		55	
30		60	

DCP test no 3

5		35	
10		40	
15		45	
20		50	
25		55	
30		60	

Note: Max 15mm per blow. Minimum of 2 DCP per platform.

Are the DCP tests done, and to minumum required compaction and attached?	YES	NO
Is the platform higher than the surrounding area (as per specification) so that storm water does not affect the house ? And is the platform comstructed wider (as per specification) - surface bed?	YES	NO
Does the platform complies with all dimensional specifications (size, slope & drainage)?	YES	NO

FORMWORK

Is formwork cleaned and treated with a releasing agent ?	YES	NO
Is the formwork lying perpindicula and in line with the outside trench?	YES	NO
Is formwork 100% secured and achored into position to prevent movement during pour?	YES	NO
IS the formwork adequate to requirements and not damaged or out of shape that will result incorrect slab form or inperfections?	YES	NO
Is the formwork square and the diagonals equal when measured (3:4:5 check for squareness)?	YES	NO
Is the formwork square and the diagonals equal when measured (3:4:5 check for squareness)?	YES	NO
Is the slab thickness uniform, to specification and the pods level?	YES	NO
Is the required distance between the top of the formwork to the top of the pod satisfied to confirm with the slab thickness dimension?	YES	NO
Is the required distance between the top of the formwork to the bottom of the beam satsfied to conform with the beam thickness dimension?	YES	NO

Requisition for checking raft / platfrom and concrete works (page 2)

House Number

BEAMS (CUT LINES)

Are beams excavated in the correct position?	YES	NO
Are beams straight ?	YES	NO
Is the top of beam chamfered 50mm and 45 deg as per detail?	YES	NO
Has all the loose soil and material in the beam excavation been removed?	YES	NO

SOIL POISONING

Has the soil poisoning been done as specified?	YES	NO
Is the soil poisoning certificate attached?	YES	NO

DAMP COURSE LAYER

Has the damp proof membrane layer (DPM) been installed under slab and pods?	YES	NO
Is the DMP USB green 170 Micron?	YES	NO
Is there a join in the DPM, if yes; is te overlap/join equeal or more than 200mm?	YES	NO
Does the DPM overlap and run over down the inside face of the trench wall?	YES	NO
Is the DMP layed correctly and without any obstruction to the reinforcing?	YES	NO

REINFORCING

Has the correct reinforcing been used?	YES	NO
Specify reinforcing used		
Is the reinforcing overlap length as per specification?	YES	NO
What is the lap length?		
Are the stirrups in ground beams spaced correctly?	YES	NO
Is the reinforcement correctly placed and supported to prevent it being in contact with the excavations.	YES	NO
Is there adequate cover crated between the top of the Pod and the slab reinforcing to satisfy the specific cover throughout the slab?	YES	NO
Is the adequate cover throughout the whole slab area, between the top of the reinforcing to the top of the shutter?	YES	NO
Is the adequate cover from the beam reinforcing to the beam inside wall?	YES	NO
Is the adequate cover from the beam reinforcing to the beam outside wall?	YES	NO

Upon sign off of this form to this stage, then the concrete may be casted.

ENGINEER **DATE**

CONCRETE

Is there a concrete vibrator at the raft site prior to placing of concrete?	YES	NO
Check concrete slump with slump cone. (75mm to 125mm is acceptable). What is the slump?		
Do not add water to the concrete!! Confirm that no water was added by marking Yes.	YES	NO
Is there a screed bar on site to ensure the concrete is placed to the correct level? **(SCREED PIPE)**	YES	NO
Is there a powerfloat machine on site?	YES	NO
Is the concrete strenght delivered to site (as per delivery docket) as per required specification (20Mpa)?	YES	NO
Write down the concrete readymix delivery docket numbers for this foundation.		
Was concrete cubes taken (6 samples from every 50m³ casted or a minimum per lot)?	YES	NO

POWER FLOATING

Is power floating completed to Engineer's satisfaction	YES	NO
If "NO", the Contractor must provide method statement to correct the work		

CONCRETE CURING

What curing method will be used? Ponding / water

ARTICULATION JOINTS

The Engineer to indicate if any articulation joints are required	YES	NO
If required, indicate details		

Requisition for checking raft / platfrom and concrete works (page 3)

House Number

POST CONCRETE INSPECTION

Are the sides of the slab smooth and free of honeycombing?	YES	NO
Are the side of the slab straight?	YES	NO
Are the corners of the slab square?	YES	NO
Are the edges and corners of the slab free from damage when stripping the formwork?	YES	NO
Is the surface of the slab smooth and levels, confirmed with a Dumpy Level?	YES	NO
Is the surface of the slab free from surface powder or signs of towelling?	YES	NO
	YES	NO

ENGINEER **DATE**

Upon sign off at this stage, brickwork may commence after curing period

CONCRETE STRENGHT

Has the Engineer's received the concrete test cube results (are the results attached)?	YES	NO
Does the concrete test cube results reach the minimum required?	YES	NO
Has Raftcerete submitted the Certificate of Completion?	YES	NO

Upon sign off of this form complying to all requirements the raft may be certified as complete

ENGINEER / PA **DATE**

CONTRACROR **DATE**

Requisition for checking house wallplate (page 1)

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the correct horizontal and vertical alignment and position, that such work has been carried out to the required standards and specifications, as set out in the document and drawings.

House Number

BRICK WORK

Is the bricks SABS 0400 approved (Contractor to provide certificate from supplier)?	YES	NO
Are the minimum strength of the bricks as per specification (7Mpa minimum)?	YES	NO
Is the surface of the bricks unifoems without voids, cracks, holes and micro cracks?	YES	NO
Does mortar mix comply with SABS 0164?	YES	NO
- 1 part ordinary portlant cement to 4 parts of sand	YES	NO
- Minimum 28 day strength > 5 MPA	YES	NO
- Sand comply to SABS 1090 and to be free of organic material	YES	NO
Was a mortar strenght test cube taken (1 test per lot) and is test results filed (in house file)?	YES	NO
Is damp proof menbrane installed between the slab (raft) and all external and internal walls (170 micron DPM)?	YES	NO
Is the brick force installed according to the specification?	YES	NO
- Minimum diameter of brickforce to be 2.8mm	YES	NO
- Every 4th course starting at the second course	YES	NO
- All consecutive courses above doors and windows	YES	NO
- Brickforce to be bent at right angles at corners	YES	NO
Does the wall have a 20mm overlap on the raft to create a foundation drip overhang?	YES	NO
Have the walls been set out according to the layout plan?	YES	NO
Are the walls built true, plum (perpendicular), level and and from right angles?	YES	NO
Does the size of each room, position of walls, doors and windows conform to the drawing?	YES	NO
Are there no strainght joints evident in the brickwork?	YES	NO
Do all perpendicular (vertical) and bed joints have a nominal thickness of between 10mm to 15mm?	YES	NO
Are all perks (pips) closed and not corked after erecting walls?	YES	NO
Are all the walls being constructed concurrently to ensure proper interlock between internal and external walls? (Every 4th course starting at the second course)	YES	NO
Has all excess mortar been removed from the brickwork and there is no visble brickforce protruding from the joints as per specification?	YES	NO
Have all the door frames been placed in the correct position? Ensure that the hinges are in the correct position for correct opening and closing?	YES	NO
Have all the door frames and window frames been built in plumb and level as per specifications?	YES	NO
Are all the spaces between the door frames and brick work and window frames and brick work filled with mortar as per specification?	YES	NO
Are there no cracks or micro cracks, specifically near building corners, under windowsills, above door frames and over construction joints?	YES	NO
Are the thickness of doors and frames according to specification?	YES	NO
Are the doors, door frames and window frames comply to SABS specifications?	YES	NO

Requisition for checking house wallplate (page 2)

House Number

Are the roof ties according to specification (Minimum depth of roof ties is 6 cources)?	YES	NO
Are the roof ties built into brickwork as per specification (position under brick and not in the pips)?	YES	NO

Note: If the roof ties are not built in, then the roof ties must be drilled through (not hammered through)

Principal Agent, Engineer or Clerk of Works

Name

Signature

Date

Upon sign off at this stage, roofing may commence!

MORTAR STRENGHT

Has the Engineer's received the mortar test cube results (are the results attached)?	YES	NO
Does the mortar test cube results reach the minimum required?	YES	NO

Upon sign off at this stage the brickwork is considered to be accepted

ENGINEER / PA **DATE**

CONTRACTOR **DATE**

Requisition for checking house brickwork - Disabled (page 1)

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the correct horizontal and vertical alignment and position, that such work has been carried out to the required standards and specifications, as set out in the document and drawings.

House Number

BRICK WORK

Is the bricks SABS 0400 approved (Contractor to provide certificate from supplier)?	YES	NO
Are the minimum strength of the bricks as per specification (7Mpa minimum)?	YES	NO
Is the surface of the bricks unifoems without voids, cracks, holes and micro cracks?	YES	NO
Does mortar mix comply with SABS 0164?	YES	NO
- 1 part ordinary portlant cement to 4 parts of sand	YES	NO
- Minimum 28 day strength > 5 MPA	YES	NO
- Sand comply to SABS 1090 and to be free of organic material	YES	NO
Was a mortar strenght test cube taken (1 test per lot) and is test results filed (in house file)?	YES	NO
Is damp proof menbrane installed between the slab (raft) and all external and internal walls (170 micron DPM)?	YES	NO
Is the brick force installed according to the specification?	YES	NO
- Minimum diameter of brickforce to be 2.8mm	YES	NO
- Every 4th course starting at the second course	YES	NO
- All consecutive courses above doors and windows	YES	NO
- Brickforce to be bent at right angles at corners	YES	NO
Does the wall have a 20mm overlap on the raft to create a foundation drip overhang?	YES	NO
Have the walls been set out according to the layout plan?	YES	NO
Are the walls built true, plum (perpendicular), level and and from right angles?	YES	NO
Does the size of each room, position of walls, doors and windows conform to the drawing?	YES	NO
Are there no strainght joints evident in the brickwork?	YES	NO
Do all perpendicular (vertical) and bed joints have a nominal thickness of between 10mm to 15mm?	YES	NO
Are all perks (pips) closed and not corked after erecting walls?	YES	NO
Are all the walls being constructed concurrently to ensure proper interlock between internal and external walls? (Every 4th course starting at the second course)	YES	NO
Has all excess mortar been removed from the brickwork and there is no visble brickforce protruding from the joints as per specification?	YES	NO
Have all the door frames been placed in the correct position? Ensure that the hinges are in the correct position for correct opening and closing?	YES	NO
Have all the door frames and window frames been built in plumb and level as per specifications?	YES	NO
Are all the spaces between the door frames and brick work and window frames and brick work filled with mortar as per specification?	YES	NO
Are there no cracks or micro cracks, specifically near building corners, under windowsills, above door frames and over construction joints?	YES	NO
Are the thickness of doors and frames according to specification?	YES	NO
Door lever to be atleast 150mm long and installed 1000mm above floor level	YES	NO
Provide 250mm high aluminium kick plate over the width of the door on both sides	YES	NO
External doors (814X2032X40mm) and internal doors (864X2032X32mm)	YES	NO
Are the doors, door frames and window frames comply to SABS specifications?	YES	NO

Requisition for checking house brickwork - Disabled (page 2)

House Number

Are the roof ties according to specification (Minimum depth of roof ties is 6 cources)?	YES	NO
Are the roof ties built into brickwork as per specification (position under brick and not in the pips)?	YES	NO

Note: If the roof ties are not built in, then the roof ties must be drilled through (not hammered through)

Principal Agent, Engineer or Clerk of Works

Name

Signature

Date

Upon sign off at this stage, roofing may commence!

MORTAR STRENGHT

Has the Engineer's received the mortar test cube results (are the results attached)?	YES	NO
Does the mortar test cube results reach the minimum required?	YES	NO

Upon sign off at this stage the brickwork is considered to be accepted

ENGINEER / PA **DATE**

CONTRACTOR **DATE**

Requisition for checking roofing

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the correct horizontal and vertical alignment and position, that such work has been carried out to the required standards and specifications, as set out in the document and drawings.

House Number _____

ROOFING

Are the roof ties built into brickwork according to specification (Minimum depth of roof ties is 6 cources)	YES	NO
Has the beam filling completed to specification	YES	NO
Has the sprockets been covered with DPC before beamfilling is done (bondbreaker)?	YES	NO
Visual inspection of roof ridge and packing of roof tiles (including alignment)	YES	NO
is all rooftiles (including ridge) in line and straight?	YES	NO
Has a DPC under roof ridge installed?	YES	NO
Was the stormclips installed on the last 2 rows (at overhang) of roof tiles?	YES	NO
Has the facia boards been installed to specification?	YES	NO
Has the barge boards been installed to specification?	YES	NO
Are there any signs of roof leaks?	YES	NO
Is the roof structure installed as per design?	YES	NO
Is the roofing certifcate attached (SAGGA certificate)?	YES	NO

Upon sign off at this stage the roof is considered to be accepted

ENGINEER / PA _____ **DATE** _____

CONTRACTOR _____ **DATE** _____

Requisition for Checking House Sanitary fittings

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the required standards and specifications, as set out in the document and drawings.

House Number

Fitting installed	Is the fitting secured well?	Is the fitting level and plumb? And installed in the correct position as per drawing	Is the fitting connected correctly to the plumbing?	Is the pipework secured with sufficient holder bats?	Are all waste pipe connections secure?
Bathroom					
Water Closet Pan (glazed fire clay or glazed porciline)					
Porceline water cistern (11 litres)					
Ceramic hand wash basin (min 300mm dia)					
1700mmX700mm perspex type bath					
Bath to be installed in a riversandbed and securely installed into brickwork					
Bath to be installed in a riversandbed and securely installed into brickwork					
Kitchen					
Stainless steel sink (min 900mm) as per specification fixed to wall with 2 brackets					
Outside					
Concrete gulley					
Biptap					
Geyser					
Geyser Bracket					
Geyser					
Solar Panel					
Mains inlet connected					
Hot water connected to house					
CoC issued	YES	NO			

Has the above installation been carried out without damage to ceiling, walls or any other item of the property?	YES	NO
Is the external drain pipe been installed and connected to the sewer main according to specification (including verification of falls/slope))?	YES	NO
Is the vent pipe airvalve higher than the WC bowl?	YES	NO
Is there a Gully Trap installed?	YES	NO
Has the external feed pipe been connected to the main water supply (class B galvanised pipe)?	YES	NO
Is there a Rodding Eye at change of sewer direction and corners?	YES	NO
Is there an Inspection Eye at bends and Juctions?	YES	NO
Are there any water leaks visible	YES	NO
Is the minimum cover above the pipe according to specification	YES	NO
Is the Certificate of Compliance from the registered Plumber attached?	YES	NO

The above plumbing work will only be accepted as complete once the Certificate of Compliance from the registered Plumber has been issued and submitted.

ENGINEER / PA		**DATE**	
CONTRACTOR		**DATE**	

Requisition for Checking House Sanitary fittings - Disabled unit

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the required standards and specifications, as set out in the document and drawings.

House Number

Fitting installed	Is the fitting secured well?	Is the fitting level and plumb? And installed in the correct position as per drawing	Is the fitting connected correctly to the plumbing?	Is the pipework secured with sufficient holder bats?	Are all waste pipe connections secure?
Bathroom					
Water Closet Pan (glazed fire clay or glazed porciline), seat to be heavy duty, pan to be 470mm above floor level					
Paraplegic Porceline water cistern (11 litres)					
Ceramic hand wash basin (min 300mm dia), to be installed 750mm above floor level					
1700mmX700mm perspex type bath					
Shower					
Provide 60mm recess in raft and provide min 30mm waterproofed trowelled grano screed laid to fall to shower rap with 75mm grano fillt skirting against wall in shower area					
Kitchen Stainless steel sink (min 900mm) as per specification fixed to wall with 2 brackets. To be installed 750mm above floor level					
Outside					
Concrete gulley					
Biptap					
Geyser					
Geyser Bracket					
Geyser					
Solar Panel					
Mains inlet connected					
Hot water connected to house					
CoC issued	YES	NO			

Has the above installation been carried out without damage to ceiling, walls or any other item of the property?	YES	NO
Is the external drain pipe been installed and connected to the sewer main according to specification (including verification of falls/slope))?	YES	NO
Is the vent pipe airvalve higher than the WC bowl?	YES	NO
Is there a Gully Trap installed?	YES	NO
Has the external feed pipe been connected to the main water supply (class B galvanised pipe)?	YES	NO
Is there a Rodding Eye at change of sewer direction and corners?	YES	NO
Is there an Inspection Eye at bends and Juctions?	YES	NO
Are there any water leaks visible	YES	NO
Is the minimum cover above the pipe according to specification	YES	NO
Is the Certificate of Compliance from the registered Plumber attached?	YES	NO

The above plumbing work will only be accepted as complete once the Certificate of Compliance from the registered Plumber has been issued and submitted.

ENGINEER / PA		**DATE**	
CONTRACTOR		**DATE**	

Requisition for Checking House Electrical Installation

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the required standards and specifications, as set out in the document and drawings.

House Number

Fitting installed	Is the fitting secured well?	Is the fitting level and installed in correct position as per the drawing?	Is the fitting connected correctly to the DB?
Living Room			
Distribution Board			
1 number electical plug			
1 number light switch			
1 number light fitting			
Bedroom 1			
1 number electical plug			
1 number light switch			
1 number light fitting			
Bedroom 2			
1 number electical plug			
1 number light switch			
1 number light fitting			
Bathroom			
1 number light switch			
1 number light fitting			
Fitting installed			
Kitchen			
1 number electical plug			
1 number light switch			
1 number light fitting			
1 number stove isolator			

Has the above installation been carried out without damage to ceiling, walls or any other item of the property?	YES	NO
Is the unit connected to the main electrical grid?	YES	NO

Is the Certificate of Compliance from the registered Electrician attached (this document also to confirm that all materials and fittings is to SABS standards)?	YES	NO

The above electrical work will only be accepted as complete once the Certificate of Compliance from the registered Electrician has been issued and submitted.

ENGINEER / PA		**DATE**	
CONTRACTOR		**DATE**	

REQUISITION FOR CHECKING HOUSE FINISHINGS (PAGE 1)

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the required standards and specifications, as set out in the document and drawings.

House Number

Windows

Are the window frames as as per specification and comply to SABS 727 (Clisco 1.2mm)?	YES	NO
Is a ND 4 type window frame been installed to the living room?	YES	NO
Is a ND 2 type window frame been installed to the bedrooms?	YES	NO
Is a NC 1 type window frame been installed to the kitchen?	YES	NO
Is a NE 1 type window frame been installed to the bathroom?	YES	NO
Are all the window frames plum & level.	YES	NO
Has the corking (sealing) between window frame and bricks been done to specification?	YES	NO
Is the window frame free (clean) of mortar and painted with a primer plus two coats gloss enamel (in addition to factory painter red oxide)?	YES	NO
Is the latch and locking mechanism to specification and do the mechanisms works?	YES	NO
Is the thickness of the glass installed a minimum of 3mm?	YES	NO
Is the bathroom glass 4mm obscured glass?	YES	NO
Is the window pane glazed fully into the frames and glass pane is bedded with glazing putty against window frame?	YES	NO
Is the glazing certificate attached?	YES	NO

Doors

External Door

Does the external door comply to specification (2 or 4 panel Meranti/Seligna/Harwood door with timber frame)?	YES	NO
Is the door levelled and plumb and free from damage (not twisted, bent or dented)? After hanging the door, the door frame has remained perfectly rectangular)?	YES	NO
Do the doors close and open without catching on the floor and door frame?	YES	NO
Is the gap between the floor level and the bottom of the door frame not more than 20mm?	YES	NO
Are the doors face sanded down where curring and/or planning has taken place?	YES	NO
Is the door furniture installed (3 lever lock) and hinges free of damage? Is it fixed with no screws missing ansd SABS approved?	YES	NO
Is the external doors finished of as per GDHS spesification (mixture of linseed oil and terpantine and finished with one coat polyurathane varnish)?	YES	NO
Has the corking between and around door frame and bricks been done to specification?	YES	NO

REQUISITION FOR CHECKING HOUSE FINISHINGS (PAGE 2)

House Number

Internal Doors

Does the internal door comply to specification (hallowcore door with timber frame)?	YES	NO
Are the doors levelled and plumb and free from damage (not twisted, bent or dented)? After hanging the door, the door frame has remained perfectly rectangular)?	YES	NO
Do the doors close and open without catching on the floor and door frame?	YES	NO
Is the gap between the floor level and the bottom of the door frame not more than 20mm?	YES	NO
Are the doors face sanded down where curring and/or planning has taken place?	YES	NO
Is the door furniture installed (2 lever lock) and hinges free of damage? Is it fixed with no screws missing ansd SABS approved?	YES	NO
Is the internal doors finished of as per GDHS spesification (one SABS approved universal under coat and two coats of final SABS approved paint)?	YES	NO
Has the corking between and around door frame and bricks been done to specification?	YES	NO

PLASTERING

Has the roofsprockets been wrapped with DPC prior to beamfilling?	YES	NO
Has beamfilling been competed as per specification?	YES	NO
Does plaster mortar mix comply with SABS 0164?	YES	NO
- 1 part ordinary portlant cement to 4 parts of sand	YES	NO
- Minimum 28 day strength > 5 MPA	YES	NO
- Sand comply to SABS 1090 and to be free of organic material	YES	NO
Has all conduits and water pipework been chased to a maximum of 30mm?	YES	NO
Ensure that all penetrating pipes and cables are drilled through the wall (and not hammerred through).	YES	NO
Has all chase work been covered by mesh (overlap 100mm each side) before plastering?	YES	NO
Has a 150mm plaster band been plastered around external door and window frames?	YES	NO
Has window sill been plastered to allow for proper water drainage away from window frame?	YES	NO

Wall Finishes (Paint)

Has internal walls been painted with one SABS approved universal under coat?	YES	NO
Has internal walls been painted with two coats of final SABS approved PVA paint?	YES	NO
Has external walls been painted with one SABS approved universal under coat?	YES	NO
Has external walls been painted with two coats of final SABS approved PVA paint?	YES	NO
Has the 150mm plaster band been painted with a contracting colour?	YES	NO

Roof treatment Finishes

Has all exposed roofparts been treated with wood creosote (if timber trusses is installed)?	YES	NO
Has the barge and facia boards been painted with the same contrasting colour as the plaster	YES	NO

Ceilings

Has the ceiling been installed as per SANS 10400XY?	YES	NO
Has 135mm aerolite installation been installed?	YES	NO
Does ceiling material comply to specifications (6.4mmm gypsum board)?	YES	NO
Has the ceiling been installed at the minimum height of 2.5m?	YES	NO
Has a 610mm X 610mm standard trap door been installed as per position shown on drawing?	YES	NO
Has the ceiling been painted as per specification?	YES	NO

REQUISITION FOR CHECKING HOUSE FINISHINGS (PAGE 3)

House Number _____

Concrete Aprons

Are the dimensions of the excavation as per drawings?	YES	NO
Is the compaction to minimum requirements?	YES	NO
Are the levels as per specification?	YES	NO
Is the apron sloping away (as per specification) from the structure?	YES	NO
Are the levels as per specification?	YES	NO
Is the floating done to acceptable standard (as set out as per specification)?	YES	NO
Is the expansion joints installed as per specifications (maximum of 3m apart)?	YES	NO
Is the concrete strenght test results attached?	YES	NO
Is the concrete strenght casted (minimum 15Mpa) as per specification?	YES	NO
Has the site been cleaned and cleared of all building rubble, excess building material and damage to existing services repaired after building work completed?	YES	NO

ENGINEER / PA		**DATE**	
CONTRACTOR		**DATE**	

Structural Crack Repairs

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

The Contractor has established that these controlled works have been constructed to the correct horizontal

House Number

Type 1 - Structual Crak Repair	Aplicable	Not Appicable
1) Removal of plaster acoording to specifications?	Yes	No
2) 2mm expanded galvanised metal mesh fiited according to	Yes	No
3) Plaster work done according to specifications?	Yes	No

Type 2 - Structural Crak Repair	Aplicable	Not Appicable
1) Removal brickwork mortar 60mm deep every 3rd coarse according	Yes	No
2) Install two Y5.6 - 1300mm long high tenstile steel long every 3rd	Yes	No
3) Patch and grout with "Rockset" or similar approved to level of	Yes	No

Contractor

Name _____ Signature _____ Date _____

Engineer

Name _____ Signature _____ Date _____

List for Completion (Practical)

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

House Number

Item No.	Description	Action by Contractor	Checked by Principle Agent

SIGNED	NAME	SIGNATURE	DATE
Principle Agent			
Contractor			
COGSTHA Inspector			

Certificate of Practical Completion

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

Certificate of Practical Completion House Number

Issued in terms of clause 20.0 of the Principal Building Agreement Edition 6.1 © March 2014

Has the beneficiary accepted and signed the Happy Letter?	YES	NO
Has All the items on the list for completion (practical) and beneficiary complaints been completed and rectified by the contractor?	YES	NO
Has the beneficiary signed the Happy Letter and is the Happy Letter attached?	YES	NO
Has the CLO informed the home owner with their responsibilities on how to maintain their toilet? And is this confirmed in the Happy Letter? Has the CLO informed the home owner that the toilet may only be used after the sewer and water network has been commissioned and hnded over to CoT?	YES	NO
Has the keys been handed to the home owner? And is this confirmed in the Happy Letter?	YES	NO
Pre-paid control panel installed?	YES	NO

The **Principal Agent** certifies that **Practical Completion is i**ssued in terms of clause 20.0 of the Principal Building Agreement Edition 6.1 © March 2014

(Clause 20) **sectional completion:** House Number

was achieved on ... Date

*Where **Practical Completion** has been certified the Defects Liability Period ends ninety (90) calendar days from the date of **Practical Completion** subject to clause 21 (**final completion**)* Date

Signed by the P**rincipal Agent** who, as A**gent** for the **Employer**, certifies that the **works** has been completed in accordance with the specified criteria for **Practical Completion** on the date stated**,** irrespective of the date of signature of this certificate

SIGNED	NAME	SIGNATURE	DATE
Contractor's Representative			
Principle Agent / Representative			
COGSTHA Inspector			

DEPARTMENT CO-OPPERITVE
GOVERNANCE, HUMAN SETLEMENTS
AND TRADITIONAL AFFAIRS

Occupation Certificate /
Certificate of Acceptance
(Happy Letter)

Project Name: _____

Project No: _____

Name of Beneficiary:		Identity Number:	
Stand Number:		House Type:	

1. LOCAL AUTHORITY

It is hereby certified that the top structure on this stand has been completed in full compliance with all statutory obligations, and is fit for occupation. (This section must be completed unless a separate Occupation Certificate is issued).

_____
For and on behalf of the Local Authority

_____ _____
Name to be printed Date Official Local Authority Stamp

2. PROFESSIONAL ENGINEER/COMPETENT PERSON

It is hereby certified by me, in my capacity as Professional Engineer, that the requirements of my appointment to carry out the structural design with provision for adverse geo-technical conditions and supervision of the foundation for the new dwelling erected on this erf has taken place in accordance to my design and specification and all statutory requirements have been fulfilled.

_____ _____
Competent Person Name to be printed

_____ _____
Pr. Eng. Number Date

3. CONTRACTOR

It is hereby certified that:

3.1 The dwelling on this stand has been built and completed in accordance with COGSTHA Norms and Standards.
3.2 All requirements as set by the Agreement with COGSTHA have been complied with.

_____ _____ _____
For Developer Name to be printed Date

4. BENEFICIARY

I _____, the beneficiary, hereby declare that I accept and take possession of the above property and that the structure has been completed in accordance with the building contract and house plan.

_____ _____
Beneficiary Date

List for Final Completion

Employer	:
Project	:
Contract	:
Contractor	:
Date	:
File	:

House Number

Item No.	Description	Action by Contractor	Checked by Principle Agent

SIGNED	NAME	SIGNATURE	DATE
Beneficiary			
Contractor			
Principle Agent			
COGSTHA Inspector			

Certificate of Final Completion

Employer	**:**
Project	**:**
Contract	**:**
Contractor	**:**
Date	**:**
File	**:**

Certificate of Final Completion House Number

Issued in terms of clause 20.0 of the Principal Building Agreement Edition 6.1 © March 2014

Has All the items on the list for completion (final) and beneficiary complaints been completed and rectified by the contractor?

YES NO

The **Principal Agent** certifies that Fin**al Completion is i**ssued in terms of clause 20.0 of the Principal Building Agreement Edition 6.1 © March 2014

(Clause 20) **sectional completion:** House Number

was achieved on ... Date

*Where **Final Completion** is certified the Latent Defects Liability Period ends 5 years from the date of **Final Completion*** Date

---

Signed by the **Principal Agent** who, as **Agent** for the **Employer**, certifies that the **works** has been completed in accordance with the specified criteria for **Final Completion** on the date stated**,** irrespective of the date of signature of this certificate

SIGNED	NAME	SIGNATURE	DATE
Beneficiary			
Contractor's Representative			
Principle Agent / Representative			
COGSTHA Inspector			

DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

CONTRACT 2334-50-02/03

Remedial work to 491 RDP Houses

VOLUME 1
PORTION 2: CONTRACT

Section C3.5

Management
Annexure B: Record of Decision

DEPARTMENT OF TOURISM, ENVIRONMENT AND CONSERVATION
ISEBE LEZOKHENKETHO, INDALO NOLONDOLOZO
LEFAPHA LA BOJANALA, TIKOLOGO LE TSHOMARELO
DEPARTEMENT VAN TOERISME, OMGEWING EN BEWARING

224 Du Toitspan Road
Private Bag X6102
KIMBERLEY
8300

224 Du Toitspan Road
Kgetsanaposo X6102
KIMBERLEY
8300

224 Du Toitspan Road
Inqxowa yeposi X6102
KIMBERLEY
8300

Du Toitspanweg 224
Privaatsak X6102
KIMBERLEY
8300

Tel. (053) 807-4800

Fax (053) 831-3630

Enquiries :
Dipatlisiso :
Imibuzo :
Navrae :

S.G Mbanjwa

Date :
Latlha :
Umhla :
Datum :

03 July 2006

Reference :
Tshupelo :
Isalathiso :
Verwysings :

NNO 25/19
NC/KIM 39/155/2005

Sol-Plaatje Local Municipality
Mr. de Bruyn
C/o 3 Lodge Road
Kimberley
8300

Fax 053-832 6518

Dear: Mr. G. de Bruyn

APPLICATION FOR AUTHORIZATION: THE CHANGE OF LAND USE FROM: AGRICULTURAL OR UNDERTERMINED USE TO ANY OTHER LAND USE: UPGRADING OF THE LERATO PARK FROM INFORMAL SETTLEMENT TO FORMAL INTERGRATED SETTLEMENT, SOL-PLAATJE MUNICIPALITY, NORTHERN CAPE PROVINCE.

By virtue of the powers delegated to me in terms of Section 33(1) of the Environment Conservation Act, 1989 (Act No. 73 of 1989), I hereby in terms of Section 22(3) of the Act authorize: ***Application for Authorization: THE CHANGE OF LAND USE FROM: AGRICULTURAL OR UNDERTERMINED USE TO ANY OTHER LAND USE: UPGRADING OF THE LERATO PARK FROM INFORMAL SETTLEMENT TO FORMAL INTERGRATED SETTLEMENT, SOL-PLAATJE MUNICIPALITY, NORTHERN CAPE PROVINCE*** Schedule *1/2* of Government Notice No. R. 1182: activity 2 (c): a detailed description of the activity is given in the final ***scoping report*** dated (MAY 2006), subject to the conditions listed in the record of decision.

The record of decision including the conditions under which the application is authorized is attached. This authorization is valid for a period of *(3)* years from the date of issue and if the activity is not undertaken within this period the authorization will be invalidated.

An appeal against this authorization or conditions of authorization may be lodged in writing with: **The Member of the Executive Council, Ministry of Tourism, Environment & Conservation, Private Bag X6102, Kimberley 8300, Fax. (053) 8321026**, within 30 calendar days from the date issue of this authorization, setting the grounds of appeal and including all relevant documentation as required by Section 35 of the Environment Conservation Act, 1989 (Act No. 73 of 1989).

Yours Faithfully

Mrs. P. M. N. Mokhali
HOD: DEPARTMENT OF TOURISM, ENVIRONMENT AND CONSERVATION
Date: 06. 07. 04

Permit No 81/2006

A DESTINATION IN HARMONY WITH NATURE

Northern Cape Province
DEPARTMENT OF TOURISM, ENVIRONMENT & CONSERVATION

Porofensi Ya Kapa Bokone
LEFAPHA LA BOJANALA, TIKOLOGO LE SHOMARELO

RECORD OF DECISION

In terms of Section 22(3) of the Environment Conservation Act, 1989 (Act No 73 of 1989) with regard to the undertaking of the activity described below as required by Government Notice No R. 1183 of 5 September 1997

Reference number: NC/KIM39/155/05

Permit number: 81/2006

Project title:	The change of land use from : agricultural or undetermined use to any other land use : Upgrading of Lerato Park from informal to formal Integrated settlement				
Brief description of project:	The development will consist of the following: • A full formal integrated settlement				
Project location:	KIMBERLEY, NORTHERN CAPE				
Co-ordinates:	Latitude:	28°	40′	50″	So
	Longitude:	24°	42′	40″	Ea
District Municipality	Frances Baard Local Municipality				
Local authority/municipality:	Sol Plaatje District Municipality				
Name of Property:	Remainder of portion 59 of farm Roodepaan 70				
Farm/Erven Name and Number	As above				
Size of Property:	200 ha				
Closest City/Town:	In Kimberley	Distance (in km)	-		
Project Applicant:	Sol Plaatje Municipality				
Business Reg. No./ID No.	NC091				
Contact person:	MR G de Bruyn				
Postal Address:	C/o 3 Lodge Road, KIMBERLEY				
Telephone:	053 832 6518		Cell:	082 822 8201	
Email:			Fax:	053-832 6518	
Environmental Consultant(s):	B H Erasmus				

				Mr B H Erasmus		
				7 Edgar Davis Str, Kimberley		
				053 832 6518	Cell:	082 822
				–	Fax:	053 832 6518
Site visit	Yes	X	No		Date of site visit	
Persons present: D Moleko, B H Erasmus						

DECISION

After due consideration of the facts presented to the Northern Cape Department of Tourism, Environment & Conservation (hereafter referred to as the Department), authorization is hereby granted in terms of Section 22(3) of the Environment Conservation Act, 1989 (Act No 73 of 1989) ***the proposed upgrade of Lerato Park from informal to integrated formal settlement*** (Schedule 1 of Government Notice No R.1182: *Activity 2(c) A change of undetermined use to any other land use.* The authorization is granted subject to the following condition

CONDITIONS

General conditions:

1. This authorization is granted only in terms of Section 22(3) of the Environment Conservation Act, 1989 (Act No 73 of 1989) and does not exempt the holder thereof from compliance with any other legislation.
2. This authorization refers only to the project as specified and described in the final scoping report dated **MAY 2006.** Any other activity listed under Section 21 of the Environment Conservation Act, 1989 (Act No 73 of 1989) which is not specified above, is not covered by this authorization and a separate application will have to be launched and must therefore comply with the requirements of the Environment Conservation Act, 1989 (Act No 73 of 1989) and Government Notice No. R. 1183 of 5 September 1997 and its amendments.
3. **This authorization is subject to the approval by the relevant local authorities i.e. in terms of any relevant legislation administered by those authorities.**
4. No development may take place on the area of concern without the necessary permits/approvals and/or service agreements, where it is relevant, from or between the following authorities, including:

- National Department of Environmental Affairs & Tourism
- National Department of Agriculture
- Department of Housing & Local Government
- Department of Water Affairs & Forestry.
- Department of Minerals & Energy
- Department of Transport, Roads & Public Works
- McGregor Museum
- South African Heritage Resources Agency
- Civil Aviation Authority, and
- Any other relevant authority whether national, provincial or local

5. The applicant shall within 5 (five) days of receipt of this authorization, provide all interested and affected parties identified during the public consultation process, with copies of this authorization, including all the conditions attached thereto.
6. One week written notice must be given to the Department before commencement with construction activities.
   6.1 Such notice shall make clear reference to the site location details and the reference number given above.
   6.2 The notice must include proof of compliance with the following conditions described herein:
   i.e. conditions: 5 & 14
7. All mitigation measures and recommendations as laid down in the Scoping Report are binding and must be implemented, unless stated differently in this ROD.
8. The Environmental Control Officer must ensure that changes in the project resulting in significant environmental impacts and that differ from what was authorized by the Department, must be submitted to this Department for approval prior to such changes being effected.
9. The applicant must notify this Department, in writing, within 24 hours thereof if conditions of the authorization are not complied with.
10. Non-compliance with, or any deviation from, the conditions set out in this authorization constitutes a failure in compliance with the authorization. Such failure in compliance is regarded as an offence and will be dealt with in terms of Sections 29, 30 and 31 of the Environment Conservation Act, 1989 (Act No. 73 of 1989), as well as any other appropriate legal mechanisms.
11. The Department must be notified of any change of address of the applicant.
12. The Environmental Management Plan (EMP) for construction and management of activities relating to the protection of the natural environment during the construction phase and must be adhered to at all times unless stated differently in this ROD.
13. An Environmental Control Officer (ECO) must be appointed to oversee the implementation of the EMP. The ECO or his representative must visit the site at least once a week for the duration of the construction phase.
14. The conditions of the authorization should be brought to the attention of all persons (employees, sub-consultants, etc) associated with the undertaking of this activity and the applicant should take such measures necessary to bind such persons to these conditions.
15. A copy of the authorization shall be available on site during construction. The applicable conditions of this authorization must form part of all contractors' and sub-contractors' conditions of contract.
16. The applicant must apply the principle of best practicable environmental option for all technologies used/ implemented during construction.
17. Appropriate toilets must be supplied for the entire construction period and must be serviced on a regular basis.
18. All waste including general litter must be removed from site and disposed off at an applicable licensed disposal site. No waste material shall be left on site.
19. No fires are permitted on site.
20. No plants must be removed other than required for the layout of the site. However, if the affected plant(s) is endangered or protected, permission must be sought from Northern Cape Department of Tourism, Environment & Conservation for the removal thereof.
21. All forms of pollution must be prevented, or where it cannot, should be minimized or remedied.

22. Records relating to the compliance/non-compliance with the conditions of the authorization must be kept in good order. Such records must be made available to the Department within 7 (seven) days of receipt of a written request by the Department for such records and also included in the Environmental Audit report.
23. Any complaints regarding the said development must be brought to the attention of the Department within 24 working hours after receiving the complaint. A complaints register must be kept up to date for inspection by the Department.
24. This Department may add to, change and/or amend any of the conditions in this authorization if, in the opinion of the department, the addition, change of amendment is environmentally justified. In event that such impacts exceed its significance as predicted in the independent consultant's environmental scoping report and supporting documentation, the authorization may be withdrawn after proper procedures were followed.
25. In the event of any dispute concerning the significance of a particular impact, the opinion of this department in respect of its significance will prevail.
26. The Department must be notified, within 30 days thereof, of any change of ownership and/or project developer. Conditions imposed in this ROD must be made known to the new owner and/ or developer and are binding on the new owner and/or developer.
27. In the event of sharing the Conditions imposed in this ROD must be made known to the sharing party. All conditions in this ROD are binding on the sharing party. The applicant is responsible to ensure that all these conditions are complied with.
28. National government, provincial government, local authorities or committees appointed in terms of the conditions of this application or any other public authority or organization shall not be held responsible for any damage of losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of approval as set out in this document or any other subsequent document emanating from these conditions of approval.
29. If any condition imposed in terms of this authorization is not being complied with, the authorization may be withdrawn after 30 days written notice to the applicant in terms of Section 22 (4).
30. The applicant shall be responsible for all costs necessary to comply with the above conditions unless otherwise specified.
31. In the event that any archaeological material is found and it is likely that it will be disturbed, the Department must be alerted immediately.
32. The Department must be supplied with an approval from the landowner giving consent for the applicant to proceed with the project, before construction/upgrading takes place.

Special conditions:

1. All mitigation measures and recommendations as laid down in the Scoping Report by **B H ERASMUS dated MAY 2006** are binding and must be implemented, unless stated differently in this ROD.
2. The measures outlined in the Geo-technical report to favorably design the houses to meet the required conditions, specific to Lerato Park must be adhered to
3. The Environmental Management Plan Report as submitted by **B H ERASMUS** on the **23rd MAY 2006** must be implemented to the latter, throughout the pre and post development phases of Lerato Park

KEY FACTORS AFFECTING THE DECISION

The Department's authorization is based upon a review of the final scoping report and appendices dated **MAY 2006**. The Scoping Report findings, given the nature of the projects and the selected sites and study area, concludes that the potential impacts associated with the proposed development are of a nature and extent that can be reduced, limited and eliminated by the introduction of appropriate mitigation measures. The conditions of the ROD and the recommendations made in the final scoping report and appendices dated **MAY 2006** should be sufficient to mitigate and manage the impacts associated with the development.

The legal and procedural requirements have been complied with and the information contained in the Scoping Report and appendices is to the satisfaction of the Department.

PERIOD OF VALIDITY AND RENEWAL OF AUTHORIZATION

This authorization is valid for 3 (three) years from the date of issue and must be renewed 6 (six) months prior to the expiry date. The Department reserves the right to review and amend the conditions of the authorization at any given time.

APPEAL

The applicant must, within 5 calendar days of receipt of this record of decision (ROD) inform all interested and affected parties registered during the EIA process of at least the following:

i. That an authorization has been issued to the applicant to proceed with the construction and operation of the facilities.

ii. That any appeal in terms of the Section 10 (1) of regulation 11 of the environmental assessment regulations (Government Notice No R. 1183 of 5 September 1997) against the issuing of the authorization must be lodged with the MEC for Tourism, Environment & Conservation within 30 (thirty) days from the date on which the ROD has been issued to the applicant and at the address stipulated in the authorization.

iii. Include the date on which the ROD was issued to the applicant in terms of regulation 10 (1) and the date by which the appeals must reach the MEC.

iv. Indicate where copies of the authorization and ROD can be viewed/obtained

Yours Faithfully

Mrs. P. M. N. Mokhali: HOD
Department of Tourism, Environment and Conservation

Date: 06. 07. 06

DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

LERATO PARK INTEGRATED HOUSING DEVELOPMENT

CONTRACT 2334-50-02/03

Remedial work to 491 RDP Houses

VOLUME 1
PORTION 2: CONTRACT

Section C3.5

Management
Annexure C: Health and Safety Specification

CLIENT HEALTH AND SAFETY SPECIFICATIONS

AS PER CONSTRUCTION REGULATION 5(1)(b), 2014

OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

COGHSTA
Department of Co-operative Governance,
Human Settlements & Traditional Affairs Northern Cape

PROJECT:

Remedial work to 491 RDP Houses

CONTRACT 2334-50-02/02

PREPARED BY

MINDSHAPE DEVELOPMENTS (PTY)LTD

CONTENTS

CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

1 PURPOSE

This Health & Safety specification identifies and encompasses the working behaviors and safe work practices that are expected of all employees, vendors and Principal Contractors, Sub-contractors and visitors, engaged on COGHSTA managed projects.

It provides a guideline to comply with COGHSTA best Health & Safety practices and the **Occupational Health and Safety Act 85/1993** as amended, including reference to applicable legislative requirements.

In exceptional circumstances, deviations from this Plan may be approved by COGHSTA subject to:

- a motivation letter to COGHSTA that the deviations will not result in a reduction of the safety of the project deliverable, and
- the deviation being well documented.

In terms of the Construction Regulation 5(1)(b), 2014 of the Occupational Health and Safety Act, No. 85 of 1993, the Client, is required to compile an Health & Safety Specification for any intended project and provide such specification to Contractor.

The Project is located in Kimberley, Northern Cape, South Africa.

2 DEFINITIONS

Act: means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

Client: means any person for whom construction work is being performed.

Competent person: means any person having the knowledge, training, experience and qualifications specific to the work or task being performed.

Construction work: means any work in connection with—

- the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure;
- the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling;
- the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work;

Contractor: means an employer, as defined in section 1 of the Occupational Health and Safety Act, who performs construction work and includes principal contractors;

Hazard identification: means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed;

Health and safety file: means a file or other record in permanent form, containing the information required as contemplated in these regulations;

Health and safety plan: means a documented plan, which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified;

Health and safety specification: means a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons;

HCS: Hazardous Chemical Substances

MSDS: Material Safety Data Sheet

PPE: Personal Protective Equipment

Medical Certificate of Fitness: means a certificate contemplated in Construction Regulation 7(8);

Occupational Health Practitioner means an occupational medicine practitioner or a person who holds a qualification in occupational health recognized as such by the South African Medical and Dental Council as referred to in the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act No. 56 of 1974), or the South African Nursing Council as referred to in the Nursing Act, 1978 (Act No. 50 of 1978);

Principal contractor: means an employer, as defined in section 1 of the Occupational Health and Safety Act who performs construction work and is appointed by the client to be in overall control and management of a part of or the whole of a construction site;

Risk assessment: means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard;

Structure: means any building, steel or reinforced concrete structure

SACPCMP means the South African Council for the Project and Construction Management Professions

Designer: means a competent person who

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter or landscape architect;

Construction manager: means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

Construction site: means a work place where construction work is being performed.

3 SCOPE

Principal Contractors and service providers are required to read and take note of the requirements within this specification and ensure that they provide the required budget for stipulated safety requirements.

This specification applies to **Remedial work to 491 RDP Houses** construction project only.

Scope of work:

Remedial work on Houses

Repairing of 491 RDP houses to a final standard as per the drawings included in Volume 2 and specifications under part C3.4. This includes but not limited to, remedial work to previously constructed works: masonry, waterproofing, carpentry and joinery, ceilings, ironmongery, metal works, plastering, tiling, plumbing and

drainage, internal and external electrical works, glazing, paintwork, external works (landscaping, paving), etc. (Refer to Structural and Architect drawings for additional information)

The 491 RDP houses comprise of three topologies:

Freestanding houses

- Number of houses = 240 (x1 to be demolished and rebuilt)
- 40.6m²
- 2 bedrooms
- 1 bathroom with
  - Toilet
  - Bath
  - Basin
- 1 Kitchenette
  - Stainless steel washing basin

Semidetached houses

- Number of houses = 116 (x2 to be demolished and rebuilt)
- 40.6m²
- 2 bedrooms
- 1 bathroom with
  - Toilet
  - Bath
  - Basin
- 1 Kitchenette
  - Stainless steel washing basin

Duplex houses

- Number of houses = 135
- 44m²
- 2 bedrooms
- 1 bathroom with
  - Toilet
  - Shower
  - Basin
- 1 Kitchenette
  - Stainless steel washing basin

<u>Remedial work on Structural works</u>

- Repair structural cracks
- Insert new movement joints with relevant cover strips and joint sealants
- Carefully dismantle illegal structures connected to the building. All materials to be issued back to the owner/tenant. Details of the illegal structure shall be individually identified on site
- Alterations to the Duplex units, which include:
- Removing existing cast in-situ slab and staircase and install in new location.
- Remove and rebuild footings, walls (with finishes) and floors to accommodate the new staircases.
- Install new roof structure and roof tiles over new extended staircase

<u>Remedial work on Architectural works</u>

- Remove and re-fix roof and ridge tiles correctly
- Replace roof underlay
- Replace pvc ceiling with gypsum ceiling and cornices and install insulation
- Replace damaged doors and door frames
- New plaster band around external windows and doors or if budget allows, re-plastering of all exterior walls.
- Rebuild brickwork above doors and windows that are affected by structural cracks so that lintels can be installed above doors.
- Repair substandard floor screed and tiled splash backs
- Repaint interior and exterior of houses (All surfaces)
- Re-fixing/Tightening of screws, bolts, etc. to all existing electrical fittings, ironmongery fittings, cupboards, curtain rails, doors (Including supplying missing screws, plugs, bolts, etc.)
- Repair work to the surrounding aprons with a combination of in-situ concrete and paving
- Waterproofing and tiling shower walls
- Replace faulty door and window furniture
- Replace glazing to windows

Remedial work on Wet Services

- Replace outside water taps and install new stand pipe
- Replace inferior quality fiberglass baths
- Repair and replace cold/fresh water and waste water reticulation (pipework)
- Repair and replace external gullies
- Replace or repair faulty plumbing fittings

Remedial work on Civil Works

- Shaping of soil away from houses
- Platforms for three demolished houses

Remedial work on Electrical Works

- Refer to the C3.4.3.1 for details on the electrical scope of work
- Testing and commissioning as well as the issue of a Certificate of Compliance (COC) for each house

Demolition and Construction of New Houses

3 of the 491 units will be demolished and reconstructed due to excessive cracking (Included in the structural engineer's drawings). The house topologies include the following:

- Freestanding houses – 1 House
- Semidetached houses – 2 Houses

This includes but not limited to, demolishing existing building, earthworks, concrete, formwork, reinforcing, masonry, waterproofing, roof covering, carpentry and joinery, ceilings, ironmongery, metal works, plastering, tiling, plumbing and drainage, internal and external electrical works, glazing, paintwork, external works (landscaping, paving), etc.

CLIENT HEALTH AND SAFETY SPECIFICATIONS
AS PER CONSTRUCTION REGULATION 5(1)(b), 2014
OCCUPATIONAL HEALTH AND SAFETY ACT, NO. 85 OF 1993

This contract provides for the supply, delivery to site, installation, testing, and handing over in good working order of the complete house as specified or implied herein and/or in the accompanying specifications and on the drawings.

The Tenderer shall allow in his Tender price for all material, Labour, supervision, transport, tests and all other items necessary to complete the contract in its entirety and to the satisfaction of the Principal Agent and Employer's Agents.

In the event where the supply and/or installation of any item, material or equipment do not form part of this contract, it will be specifically indicated as such in this specification and/or on the accompanying drawings.

Other information

The Construction period will be 159 working days for the repair work to 95 RDP houses and 21 decanting houses (The number of RDP houses can be adjusted based on the tender contract sum) during for this financial year and 233 working days (adjusted pro rata if the number of 95 RDP houses within the first financial year are adjusted) for the remainder of the RDP houses and an additional 21 decanting houses, during the next financial year.

Refer to Section C3.3 with regards to the local Labour requirement.

There is an agreed budget for the financial year ending 31 March 2021 and the number of houses being completed in this period may vary dependent on the successful tenderer contract sum.

The planning and coordination of how the sections will be implemented shall be the responsibility of the Contractor. The Contractor shall include within their planning the critical houses/sections (identified by the Engineer) which need immediate attention. Only on completion of the critical houses/sections will the Contractor be allowed to commence with the remainder of the houses.

The contractor shall install a temporary 1.8m high fence (covered with shade netting) to separate the areas under construction and the public. This will only be applicable to the 135 duplex units, x1 freestanding unit (to be demolished and rebuilt) and x 2 semidetached units (to be demolished and rebuilt). This is to safeguard the public. After a section is handed over (on every unit) to the inhabitants of the homes, the fencing shall be moved to the new unit. On completion of all of the works, the temporary fencing shall be spoiled off site.

References

- Occupational Health and Safety (OH&S) Act 85/1993 as amended and regulations (Including Construction Regulations 2014)
- Compensation of Injuries and Diseases Act 133/1993

4 REQUIREMENTS

4.1 LEADERSHIP AND COMMITMENTS

The Principal Contractor acknowledges COGHSTA strong commitment to Health & Safety and the Principal Contractor affirms that it has a written Health & Safety Policy, supporting COGHSTA and its Health & Safety Management Plan that has been signed, and is actively supported and endorsed by the Principal Contractor's management team. The Principal Contractor represents that its written policy is widely disseminated and understood among its employees, and that its policy includes a description of the Principal Contractor's organization, procedures and methods of communication to and from personnel. The Principal Contractor must provide copies of its policy and policy statement to COGHSTA upon request.

4.1.1 LEGAL REQUIREMENTS AND REGULATIONS FOR HEALTH & SAFETY

The Principal Contractor warrants that it is familiar with the contents and implications of the applicable legislation (latest reprints), codes of practice, guidelines and standards applicable to the services to be provided.

The Act and the regulation, where applicable, require development and implementation of Work Method Statements for a range of high-risk construction activities and prescribed demolition activities. Where applicable, the Principal Contractor must develop and implement.

The Principal Contractor must ensure that its personnel and its Sub-contractors personnel have been informed of all such laws, Acts, regulations, codes of practice, guidelines and standards.

4.1.2 NOTIFICATION OF CONSTRUCTION WORKS

A contractor who intends to carry out any construction work other than work contemplated in regulation 3(1), must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will-

(a) include excavation work;
(b) include working at a height where there is risk of falling;
(c) include the demolition of a structure; or
(d) include the use of explosives to perform construction work.

A contractor who intends to carry out construction work that involves construction of a single storey dwelling for a client who is going to reside in such dwelling upon completion, must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2

4.1.3 PRINCIPAL CONTRACTORS' GENERAL REQUIREMENTS OF HEALTH & SAFETY

The Principal Contractor is solely responsible for carrying out the work under the Contract having the highest regard for the health and safety of its employees, COGHSTA employees and persons at or in the vicinity of the site, the works, temporary work, materials, the property of third parties and any purpose relating to the Principal Contractor carrying out its obligations under this Contract.

The Principal Contractor must initiate and maintain safety precautions and programmes to conform to all applicable Health & Safety laws or other requirements, including requirements of any applicable government body, and COGHSTA corporate, business unit and site requirements. The Principal Contractor must, at its own cost, erect and maintain safeguards for the protection of workers and the public. The Principal Contractor must manage all reasonably foreseeable hazards created by performance of the work.

The Principal Contractor must:

- Provide all things and take all measures necessary for maintaining proper personal hygiene, ensuring safety of persons and property and protecting the environment at or near the site.
- Avoid unnecessary interference with the passage of people and property at or near the site.
- Prevent nuisance, excessive noise and unreasonable disturbances in performing the services.
- Be responsible for the adequacy, stability and safety of all of its site operations, methods of design, construction and work.
- Costs for the above are the responsibility of the Principal Contractor.

The Principal Contractor must comply and is responsible for ensuring that all of its Sub-contractors comply with the relevant legislation(s) and statutory regulations for health and safety, COGHSTA Health & Safety requirements included in the Contract and other documents pertaining to health and safety contained in the Health & Safety Management System and include standards, policies, procedures, guidelines and safe work instructions.

4.1.4 PRINCIPAL CONTRACTOR'S HEALTH & SAFETY MANAGEMENT PLAN

The Principal Contractor must prepare, implement and administer a Health & Safety Management Plan. The Plan is in writing and forwarded, prior to site handover to the construction site for work under the Contract, to COGHSTA Health and Safety Representative for review. The Health & Safety Management Plan must comply with the Contract including Project Site Rules & Requirements, and applicable laws relating to workplace health and safety and environmental health. Any proposed amendments or revisions to the Principal Contractor's Safety Management Plan are submitted to COGHSTA for acceptance.

The Health & Safety Management Plan must provide a systematic method of managing hazards according to the risk priority, and must include all mobilisation and site set-up activities.

The Plan will be audited for completeness by COGHSTA representative using an audit tool, and a score of 80% will be a required before it will be "accepted with comments".

The Plan is presented and at least "accepted with comments" by COGHSTA BEFORE permission will be granted to the Principal Contractor to mobilise to site.

The Principal Contractor's Health & Safety Management Plan must demonstrate management's commitment to safety and must include, but not be limited to, the following minimum auditable elements:

Legal & Site Specific Requirements

The Principal Contractor shall develop, implement and administer the Health & Safety Plan. The plan shall be in writing and shall be submitted to COGHSTA representative prior to the commencement of work under the Contract at site.

The plan shall demonstrate management's commitment to safety and include, but not be limited to, the following minimum auditable elements:

- The Principal Contractor's Safety Policy (**OH&S Act – Section 7**), how safety responsibilities are assigned to different roles within the organisation, and identification of the Safety Co-coordinator role, and on site agent/managers. (**OH&S Act – Section 8 & Construction Regulations**)
- Assessment of Sub-contractors and service providers, including requirements for Health & Safety Plans.
- Safety awareness promotions.

- Nomination of personnel to carry out safety inspections. The task may be shared with other duties and provided within the resources of individuals and may be rotated.
- Occupational Health & Safety Workplace Environment, including provision for monitoring employee exposures to noise, dust, etc. (**OH&S Act – Environmental & Facilities Regulations**).
- Rules and regulations including safety procedures the Principal Contractor has in place for recurring work activities.
- Personal protective equipment rules **(OH&S Act – General Safety Regulation 2)**.
- Control of dangerous and hazardous substances **(OH&S Act – Hazardous Substance Regulations)**.
- System of hazard identification and risk control, such as risk assessments, Daily Safe Task Instructions and communication **(OH&S Act – Construction Regulation)**.
- Verification procedures including **(OH&S Act – Construction Regulations)**:
  - Monthly internal safety audits to ensure compliance with Health & Safety Plans.
  - Daily site safety inspections.
  - Inspection of plant, tools and equipment prior to introduction to site and at least monthly thereafter.
  - Accident/incident reporting, recording, investigation and analysis, which ensure that corrective action is taken and this action is communicated to report initiators (OH&S).
  - Evacuation and emergency planning
  - Rehabilitation procedures that encourage an early return to work.

The Principal Contractor must provide both electronic and hard copies of its safety manuals, policies and procedures to COGHSTA and must ensure that its personnel, at all times, strictly observe and comply with the procedures set out therein. COGHSTA or COGHSTA representative may from time to time request safety procedures applicable to the area of operations. The Principal Contractor must forward to COGHSTA any updates or revisions to its safety manuals, policies or procedures as soon as practicable following revision or update.

Hazard Identification, Risk Assessment and Risk Control

- The development of a project/work scope and activity risk profile identifying and considering, safety, health and environmental hazards and exposures, for example excavations, working at height, welding, confined spaces, delivery, uploading materials and equipment from trucks, hazardous substances, etc.
- How controls to manage risks are identified within the risk profile and will be formalised and implemented.
- Personal Protection Equipment (PPE)
- The hazard identification and risk assessment process for specific operations and activities and for new activities after the development of the project/work scope and activity risk profile. (Considers methodology, expert advice and selection of participants.)
- The process to be used to review the effectiveness of risk controls.
- Workplace hazard inspections.
- The implementation of a safety observation (behaviour audit) and coaching process conducted as a minimum by persons in leadership roles.
- Method by which daily activities will be assessed for hazards and controls defined before work commences.
- Principal Contractor will carry out inspections and maintain requests for the identification and implementation of inspection and maintenance controls for mobile plant, equipment and tools requiring formal management, including and not limited to:
  - Vehicles
  - Scaffolding
  - Hoists and winches
  - Lifting gear

  - PPE
  - Ladders
  - Pressure vessels
  - Elevated work platforms
  - Material hoists
  - Explosive powered tools
  - Portable electrical equipment
  - Confined spaces
  - MSDS Register and Information
  - Demolition work
- The process for identifying, developing and communicating site rules and standards.
- Control of dangerous and hazardous substances.

Injury Management

- Processes to ensure employees are medically fit and suited to perform their functions safely.
- An incident reporting and investigation structure which includes root cause establishment and corrective action taken.
- Experienced / trained investigators on all projects.
- A process to review the effectiveness of incident investigation action plans.
- The conducting of first aid needs and emergency response risk assessments.
- A return to work programme (restricted duties).
- A rehabilitation programme includes:
  - Trauma counselling
  - Processes to ensure the appropriate authorities are notified in the event of a reportable incident.

Health & Safety Communication and Consultative Processes

- Project leadership will ensure all personnel are kept regularly up-to-date with Health & Safety information and prompt feedback will be given to personnel for issues they raise, for example, hazard reports.
- The establishment and maintenance of a consultative process for the duration of the project.
- Daily pre-start discussions that encourage staff and leaders to try to anticipate and pre-empt potential hazards within the day's activities along with "toolbox" meetings and project safety meetings.
- Implementation of improvement programmes that encourage and recognise personnel suggestions to enhance Health & Safety on site.
- Health & Safety publicity and awareness programmes, for example, competitions and lifestyle improvement.
- Attendance at site safety meetings by Project Manager, Safety Manager and Safety Representatives. To be elected and appointed per work area and discipline and comply with the **OH&S Act**

Education, Training and Competency

- Identification of the competencies required by employees along with selection, placement and any training requirements.
- Identification and implementation of the process that will be used to ensure that employees hold the required competencies.
- The identification of minimum core and Health & Safety skills required by persons in leadership and supervisory roles.
- Identification, assessment and management of hazards.

- The establishment of a training and development plan that ensures personnel attains the desired skills and is also able to monitor refresher-training requirements.
- Mechanisms to review the effectiveness of training where appropriate.
- A site induction and orientation system that includes specific site issues and requirements and compliments the general induction.
- Methodology for briefing personnel on new or changed standards, site rules and or procedures, particularly after absence from site.
- Compliance with COGHSTA training and competency requirements.

4.1.5 SITE SUPERVISION

The Principal Contractor shall comply with **OH&S Act – Section 8, 9, 13 and 16** and the Construction Regulations.

The Principal Contractor must nominate and appoint a person on site to whom COGHSTA may refer in connection with the works. Persons are nominated for all shifts worked or whilst any activity relating to the Contract is being performed on site, and must have the authority to bind the Principal Contractor with respect to the Contract (**OH&S Act – 16 Section (2)**).

The Principal Contractor must ensure that the performance of all specified works is supervised throughout the sufficient number of qualified and competent appointed representatives of the Principal Contractor, who have experience in the type of work specified **(OH&S Act – Construction Regulation 8 (1) and 8 (2)).**

Note: No work may commence and/or continue without Construction Manager and Supervisor present on site.

The Site Supervisor must be equipped with a mobile telephone with message bank and/or pager or an equivalent communication device so that communication throughout the Contract can be maintained at all times.

The Site Supervisor must provide a list of names and contact telephone numbers of all Principal Contractor's and Sub Contractor's contact persons on site. This list is updated as a new Sub-contractor employee commences on site.

The Site Supervisor must keep a record of all employees, including date of induction, relevant skills and licences, and be able to produce this list at the request of COGHSTA representative.

COGHSTA representative is notified of any new starter with evidence of induction and site specific induction prior to commencement of work.

4.1.6 PRINCIPAL CONTRACTOR'S SAFETY OFFICER

Appointment in terms of the **Construction Regulations 8.5**, the Principal Contractor's Safety Officer is on site when work commences and is present until all activities for the day (including Sub-contractors) are finished.

He must report functionally to COGHSTA Safety Manager on site. He is equipped with a phone and a PC to ensure his duties and functions can be met.

A Full-time Safety Officer must be appointed and must be a competent person registered with SACMCMP.

- At least 3 years' experience as a Safety Officer on construction projects.
- Sound knowledge of the **Occupational Health and Safety Act** and Regulations.

- Sound knowledge of hazard identification and risk management processes.
- Sound knowledge of incident causation phenomena.
- Sound knowledge of incident investigation procedures.
- Valid First Aid Certificate
- Training Certificates such as SAMTRAC, NEBOSH, COMSOC or equivalent.

Prior to work commencing, the Principal Contractor must submit a CV of their proposed Site Safety Officer to COGHSTA Health & Safety Representative for approval.

The Principal Contractor must notify COGHSTA in writing of the name, qualifications, and duties and responsibilities of the Safety Officer proposed. When approval is obtained from COGHSTA the person can be appointed and mobilised, prior to the Principal Contractor mobilising to site.

4.2 COVID 19

The purpose of this section is to stipulate measures that must be taken by the principal contractor in order to protect the health and safety of workers and members of the public who enter their sites or are exposed to their working activities.

The principal contractor must ensure that the measures taken under OHSA are consistent with the overall national strategies and policies to minimize the spread of COVID-19.

The OHSA, read with its regulations and incorporated standards, requires the Principal Contractor to provide and maintain as far as is reasonably practicable a working environment that is safe and without risks to the health of workers and to take such steps as may be reasonably practicable to eliminate or mitigate the hazard or potential hazard.

The OHSA further requires The principal contractor, to ensure, as far as is reasonably practicable, that all persons who may be directly affected by their activities (such as contractors and their workers who enter their site or come into contact with their employees) are not exposed to hazards to their health or safety.

Although OHSA requires the principal contractor to review and update risk assessments on a regular basis, the new hazard posed by COVID-19 is clearly identifiable and the basic measures to eliminate or minimize the risk are now well known. The object of conducting or updating a risk assessment in respect of COVID-19 is to provide specific focus on COVID-19 and adapt the measures required by these Specifications to specific working environments taking into account the Risk Assessment Guides published online by the National Department of Health. This Specification is based on infection transmission prevention and specific occupational hygiene practices that focus on the need for the principal contractor to implement measures to mitigate or eliminate the transmission of the virus at the construction site.

The principal contractor must establish the following administrative measures:

It must undertake a risk assessment to give effect to the minimum measures required by these specifications taking into account the specific circumstances of the site. This risk assessment must be updated regularly with all the relevant tasks and exposure of employees to the virus.

It must notify all workers of the contents of these Specifications and specifically the safety requirements for COVID 19 and the manner in which it intends to implement it.

Employees must be notified that if they are sick or have symptoms associated with the COVID–19 that they must not come to work and to take paid sick leave in terms of section 22 of the BCEA.

A Dedicated person must be employed to enforce all the safety measures for COVID 19 on site ensure that the measures required by this Specifications and the risk assessment plan are strictly complied with through monitoring and supervision.

As far as practicable, the principal contractor must minimize the number of workers on at the site at any given time through rotation, staggered working hours, shift systems, remote working arrangements or similar measures in order to achieve social distancing and must take measures to minimize contact between workers as well as between workers and members of the public.

The principal contractor must provide workers with information that raises awareness in any form or manner, including where reasonably practicable leaflets and notices placed in conspicuous places in the site informing workers of the following

- dangers of the virus,
- the manner of its transmission,
- the measures to prevent transmission such as personal hygiene,
- social distancing,
- use of masks,
- cough etiquette
- where to go for screening or testing if presenting with the symptoms

If a worker has been diagnosed with COVID-19, the Principal Contractor must inform the Department of Health and the Department of Employment and Labour; and investigate the cause including any control failure and review its risk assessment to ensure that the necessary controls and PPE requirements are in place; and it must give administrative support to any contact-tracing measures implemented by the Department of Health.

Social distancing measures

The principal contractor must arrange the site to ensure minimal contact between workers and as far as practicable ensure that there is a minimum of one and a half meters between workers while they are working. If it is not practicable to conduct an activity without social distancing, the time spent on this activity must be limited.

Persons in the site office must be spaced at least one and a half meters apart and the Principal Contractor must arrange physical barriers to be placed between work stations or erected on work stations to form a solid physical barrier between workers while they are working.

Supply the employees, free of charge with appropriate PPE based on a risk assessment of the work place.

The principal contractor must ensure that social distancing measures are implemented through supervision on site. These measures may include dividing the workforce into groups or staggering break-times to avoid the concentration of workers in common areas.

Health and safety measures

The principal contractor must implement the following health and safety measures.

Symptom screening:

- The principal contractor must take measures to screen ALL PERSONS, at the time that they report for work, to ascertain whether they have any of the observable symptoms associated with COVID-19, namely fever, cough, and sore throat, redness of eyes or shortness of breath (or difficulty in breathing).
- Every person must report whether they suffer from any of the following additional symptoms: body aches, loss of smell or loss of taste, nausea, vomiting, diarrhea, fatigue, weakness or tiredness
- Workers must immediately inform the Principal Contractor if they experience any of the symptoms while at work.
- Twice Daily temperature checks (morning and afternoon) must be done for all employees using a no-contact thermometer.
- Information must be well documented and registers kept.
- EVERY PERSON ENTERING THE SITE MUST COMPLETE THE SYMPTOM AND TEMPRETURE CHECK DOCUMENTS.
- No person/worker may be allowed on site until the symptom and temperature check documents have been completed.
- The RE on site must comply with the requirements as set out for the contractor.

The principal contractor must comply with any guidelines issued by the National Department of Health.

- If a worker presents with symptoms, or advises the Principal Contractor of these symptoms, the Principal Contractor must not permit the worker to enter the site or report for work; or if the worker is already at work immediately isolate the worker, provide the worker with a FFP1 surgical mask and arrange for the worker to be transported in a manner that does not place other workers or members of the public at risk either to be self-isolated or for a medical examination or testing. Immediately asses the risk of transmission, disinfect the area and the worker's workstation, refer those workers who may be at risk for screening and take any other appropriate measure to prevent possible transmission
- Ensure that the worker is tested or referred to an identified testing site and place its employee on paid sick leave in terms of section 22 of the BCEA or if the employee's sick leave entitlement under the section is exhausted, make application for an illness benefit in terms of clause 4 of the Specifications issued on 25 March 2020 on the COVID-19 Temporary Principal Contractor Relief Scheme under regulation 10(8) of the Regulations promulgated in terms of section 27(2) of the Disaster Management Act.
- Ensure that the employees are not discriminated against on grounds of having tested positive for COVID-19 in terms of section 6 of the Employment Equity Act, 1998 (Act No. 55 of 1998).
- If there is evidence that the worker contracted COVID-19 as a result of occupational exposure, lodge a claim for compensation in terms of the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993) in accordance with Notice 193 published on 3 March 2020.

If a worker has been diagnosed with COVID-19 and isolated in accordance with the Department of Health Guidelines, a Principal Contractor may only allow a worker to return to work on the following conditions:

- The worker has undergone a medical evaluation confirming that the worker has been tested negative for COVID-19;
- The Principal Contractor ensures that personal hygiene, wearing of masks, social distancing, and cough etiquette is strictly adhered to by the worker
- The Principal Contractor closely monitors the worker for symptoms on return to work.

Sanitizers, disinfectants and other measures

A hand sanitizer must be one that has at least 70% alcohol content and is in accordance with the recommendations of the Department of Health. The principal contractor must, free of charge, ensure that there are sufficient quantities of hand sanitizer based on the number of workers or other persons who access the site at the entrance of, and in, the site which the workers or other persons are required to use. Every employee who works away from the site, other than at home must be provided with an adequate supply of hand sanitizer.

If a worker interacts with the public, the Principal Contractor must provide the worker with sufficient supplies of hand-sanitizer at that worker's workstation for both the worker and the person with whom the worker is interacting.

The principal contractor must take measures to ensure that all work surfaces and equipment are disinfected before work begins, regularly during the working period and after work ends

All areas such as toilets, common areas, door handles, and shared equipment are regularly cleaned and disinfected.

The Principal Contractor must ensure that there are adequate facilities for the washing of hands with soap and clean water and only paper towels are provided to dry hands after washing – the use of fabric toweling is prohibited.

The workers are required to wash their hands and sanitize their hands regularly while at work.

Masks

The main benefit of everyone wearing a cloth mask is to reduce the amount of virus droplets being coughed up by those with the infection and transmitted to others and to surfaces that others may touch. Since some persons with the virus may not have symptoms or may not know they have it, the Department of Health requires that all persons wear cloth masks when in a public place. For the reasons underlying the Department of Health's requirement, the principal contractor must –

- provide each of its employees, free of charge, with a minimum of three cloth masks, which comply with the requirement set out in the Guidelines issued by the Department of Trade, Industry and Competition, for the employee to wear while at work and while commuting to and from work
- The principal contractor must ensure that workers are informed, trained and instructed as to the correct use of cloth masks.
- The general requirement for workers to wear masks does not derogate from the fact that, where a risk assessment indicates that PPE is required, those categories of workers must be provided with the accredited PPE in accordance with Department of Health guidelines.
- In addition to cloth masks the employees must also be provided with dust masks as and when required as indicated by the risk assessment
- Dust masks must be replaced on a daily basis and may not be re-used
- Additional masks must be kept on site to provide to any visitor entering the site who is not wearing a mask

Measures in respect of sites to which public have access

The principal purpose of the measures contained in the following clause is to protect workers from being exposed to the virus through their interaction with the public and to protect members of the public from being exposed to virus through their interaction with workers or other persons present at such a site.

- Depending on what is reasonably practicable given the nature of the site, the principal contractor must arrange the site to ensure that there is a distance at least one and a half meters between workers and members of the public.
- undertake symptom screening measures of persons other than the employees entering the site
- display notices advising persons other than employees entering the site of the precautions they are required to observe while in the site

Members of the public, including suppliers, must wear masks when entering the site.

Ventilation

The principal contractor must keep the site office well ventilated by natural or mechanical means to reduce the SARS-CoV-2 viral load. Where reasonably practicable, have an effective local extraction ventilation system with high-efficiency particulate air HEPA filters, which is regularly cleaned and maintained, and its vents do not feedback in through open windows. Ensure that filters are cleaned and replaced in accordance with the manufacturer's instructions by a competent person.

Other PPE

The principal contractor must check regularly on the websites of the National Department of Health, National Institute of Communicable Diseases and the National Institute for Occupational Health whether any additional PPE is required or recommended in any guidelines given the nature of the site or the nature of a worker's duties.

Disposing of contaminated PPE

A marked container must be provided in the workplace only to be used for possibly contaminated waste and PPE. This container must be clearly marked and have a refuge bag inside and a proper lid.
When taken out of the drum or container a double-bagged system must be used. It is important that all PPE used in the workplace, for example hardhats, dust masks, earplugs, goggles and gloves are not handled or used by different workers. It is also important that disposable PPE items are not lying around in the workplace, but are disposed of in the container provided. No PPE may be shared between employees.

The principal contractor must implement a procedure to properly and safely discard of this waste.

Principal contractor and Worker obligations

In addition to the obligations of employees under the OHSA, every worker is obliged to comply with measures introduced by their Principal Contractor as required by these Specifications. To address the Principal contractors commitment to the fight and protection of employees in the workplace, against the hazards and risks associated with COVID-19, the current OHS Policy must be updated to include the COVID 19 measures and requirements. The policy must include rules and consequences of non-compliance to the requirements.

MEETINGS FACILITIES

Where possible meetings must be held outside in "Open Air" where staff can maintain social distancing. If meetings are held inside a building the area must be well ventilated through natural or mechanical means. People must be seated least 2 meters apart from each other.

Consideration must be given to those not working on the premises or site and who can attend meetings via Skype or Zoom or Telephone Conference, is allowed to do so in order to minimize contact with people from "Outside" the premises/site.

All stationary, tables and chairs being used during meetings must be sanitized/disinfected after use. All people attending meetings must wear Face masks.

Symptom screening must be done for all persons attending the meeting.

Monitoring and enforcing the Specifications

A dedicated person to act as the COVID 19 Compliance officer must be appointed to monitor compliance with these Specifications and all COVID 19 health and safety measures. This person must be qualified in first aid. In so far as any contravention of these Specifications constitutes a contravention of an obligation or prohibition under OHSA, the offences and penalties provided for in section 38 of OHSA will apply.

4.3 PERFORMANCE MEASUREMENT AND REPORTING

4.3.1 HEALTH & SAFETY STATISTICS

The Principal Contractor and each of its Sub-contractors must complete and submit Health & Safety statistics to COGHSTA nominated representative, or as amended by COGHSTA, before mid-day on the Thursday of each week. The Principal Contractor must submit monthly Health & Safety statistics before mid-day on the 23rd of each month to COGHSTA representative.

- Man-hours
- Incidents
- Near Misses
- Observations
- COVID 19 cases

4.3.2 SAFETY AUDIT BY COGHSTA / HEALTH SAFETY REPRESENTATIVE

COGHSTA has the right to conduct audits/inspections of the Principal Contractor's Safety Management Plan implementation, operations, equipment, emergency procedures, etc. at any time, and the Principal Contractor must fully cooperate with COGHSTA or COGHSTA nominated representative during such audits/inspections. Where such audits/inspections reveal deficiencies in the Principal Contractor's procedures, drills, training or equipment, or non-compliances with the Principal Contractor's accepted project Safety Management Plan, OHS Act and Regulations and COGHSTAs Health and Safety Specifications. The Principal Contractor must investigate the cause of the non-compliance and initiate corrective and preventive action to rectify such deficiencies and non-compliances and prevent recurrence as soon as practicable. Where such audits/inspections reveal deficiencies of a major non-compliance. The Principal Contractor **must stop work on the operation/activity concerned, immediately investigate the cause of the non-compliance, and initiate corrective actions to rectify such deficiencies and non-compliances and to prevent recurrence.** These corrective action plans are submitted to COGHSTA for review and comment within 24 hours of the audit finding.

Where such deficiencies include an unsafe practice, a statutory breach or a breach of the Contract's requirements, COGHSTA or COGHSTA nominated representative **may in accordance with the General Conditions of Contract suspend the work associated with the unsafe practice or breach until the deficiency is rectified.**
COGHSTA or its nominated representative will establish a schedule of regular field safety audits which will be based on an audit tool aligned to the Principal Contractors Safety Management Plan and site operations and activities. The Principal Contractor's audit conformance will be assessed as a percentage and where conformance is better than 90%, it will be considered satisfactory and the Principal Contractor must develop and

implement an action plan within 4 weeks. Conformance will be reviewed at the next regular audit. Where the Principal Contractor's level of conformance is between 80 – 90%, a corrective action plan will be required to be developed and implemented within 2 weeks or less depending on the non-compliance. A follow up audit will be carried out. **Where the Principal Contractor's conformance is less than 80% the Principal Contractor must stop work until an investigation of the cause(s) has been completed and corrective actions have been developed and implemented by the Principal Contractor.**

The Principal Contractor must provide to COGHSTA or its nominated representative, at a time to be agreed and not to exceed monthly intervals, a regular status report on all outstanding corrective actions until they are successfully closed out.

4.3.3 UNSAFE ACTS/CONDITIONS

The Principal Contractor must implement a system to recognize, correct, and report unsafe acts/conditions (Unsafe Act/Condition Auditing) associated with all site activities.

4.4 INVOLVEMENT COMMUNICATION AND MOTIVATION

The Principal Contractors and Sub-contractors workforce must, through their supervision, safety notice boards, toolbox meetings and daily pre-start meetings be kept aware of safety related matters.

4.4.1 SAFETY MEETINGS

The Principal Contractor must implement and comply with **OH&S Act, Section 19**.

The Principal Contractor must conduct weekly toolbox talks with his employees to foster safety awareness. Copies of minutes and action items arising from such "toolbox" meetings are submitted or otherwise made available for review by COGHSTA or its nominated representative (Toolbox Talk).

Such meetings should at least address:

- Incidents
- Hazardous conditions
- Hazardous materials / substances
- Work procedures
- Protective clothing / equipment
- Housekeeping
- General safety topics
- Job or work look-ahead issues
- Safety statistics
- Significant Safety Occurrences (SSO)
- COVID 19

The Principal Contractor must conduct at least one formal safety meeting per month and must maintain appropriate records of attendance and meeting content. Such records are to be made available to COGHSTA representative.

In addition to weekly toolbox, the Principal Contractor must conduct at daily DSTI training and monthly Planned Task Observations (PTO) for all employees.

4.4.2 PRE START SAFETY BRIEFINGS

The Principal Contractor must hold documented Daily Safe Task Instructions with each work team before the start of each shift. The DSTI must include all tasks for the day and a new form must be completed daily. All employees on site must sign the training register on a daily basis. Daily pre-start symptom and temperature checks must be done. The DSTI must include COVID 19 exposure and control measures for all activities on a daily basis and this must be discussed with all employees.

4.4.3 EMPLOYEE HEALTH & SAFETY REPRESENTATIVE

In all cases where 20 or more people work on a project, a Health & Safety representative shall be elected and appointed, as described in the **OHS Act Section 17**, at a rate of one Health & Safety representative for every 50 employees or part thereof.

The Principal Contractor must ensure that sufficient elected and/or appointed Health & Safety representative(s) represent all workers employed by the Principal Contractor. Each elected and/or appointed Health & Safety representative is required to attend an accredited Health & Safety representatives training course, at the expense of the Principal Contractor, in accordance with the provisions of the applicable legislative requirements.

The Principal Contractor must ensure that elected and/or appointed Health & Safety representatives execute their functions as under the provisions of applicable legislation.

An appropriate sticker is to be issued by the Principal Contractor and affixed to a **DARK GREEN** helmet to identify each Health & Safety representative.

4.4.4 HEALTH & SAFETY DISCIPLINE PROCEDURE

Where a breach of a Site Health & Safety rule or the Principal Contractor's Safety Procedure is identified, the Principal Contractor must ensure that any disciplinary action taken is in accordance with an approved procedure. In the absence of a disciplinary procedure and dependent on the nature of the breach, the process as outlined below should be used:

- First breach – verbal warning/counselling
- Second breach – written warning/counselling
- Third breach – appropriate disciplinary action taken

Where a breach of a Health & Safety rule has occurred and is considered blatant, the person's site access may be withdrawn at the discretion of COGHSTA Safety Representative or Construction Manager after consultation with the relevant persons.

4.5 PRINCIPAL CONTRACTOR MANAGEMENT

4.5.1 CONTRACTOR'S SAFETY MANAGEMENT PLAN

The Principal Contractor must ensure that all its Sub-Contractors have written Safety Management Plans in place and implemented that are of a standard suitable for the type of activity being undertaken, which address the hazards involved with the particular work activity and which support the Principal Contractor's accepted safety management approach. The Principal Contractor must ensure these plans are in place and approved before allowing Sub-contractors to mobilise to site. Sub-contractors Safety Management Plans must include management of transport and delivery Contractors entering the site delivering materials and/or equipment.

4.5.2 HEALTH & SAFETY FILE

The Principal Contractor must, in terms of Construction Regulation 7(1)(b), keep a health & safety file on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done.

The following documents must inter alia be kept in the OH&S file:

1. Notification of Construction work (Construction Regulation 4)
2. Copy of OH&S Act (updated) (General Administrative Regulation 4.)
3. Proof of Registration and good standing with a COID Insurer - Construction Regulation 5(1)(j)
4. OH&S Plan agreed with client including the underpinning Risk Assessment/s & Method Statements (Construction regulation 5(1)(l))
5. Policies
6. Risk assessment conducted and reviewed during works.
7. Safe Work Procedures
8. Health and safety specifications provided by the client.
9. Designs/drawings (Construction Regulation 6&7)
10. Traffic Management / Accommodation Drawings
11. A list of Contractors (Sub-Contractors) including copies of the agreements between the parties and the type of work being done by each Contractor (Construction Regulation 7)
12. Appointment/Designation forms as per 4.1.2 above.
13. Competency Certificates
14. Occupational Medical Certificates of all personnel working on site to proof Fitness to work
15. AIA Certificate of Service Provider responsible for Occupational Hygiene Monitoring
16. Minutes of Safety Committee Monthly meetings
17. Statistical Data
18. Registers as follow:
    - Risk Register
    - PPE - Personal Protective Clothing and Equipment issued
    - Daily Mobile Machinery Checklists
    - Generator and Other Fuel Driven Machinery Registers
    - Registers / Checklists for all Equipment being used on site
    - Stacking & Storage Inspection Register
    - Excavations Inspection Register – Daily
    - Barricading, Signage Inspection Register - Daily
    - Scaffold inspection Register - Daily
    - Monthly Environmental Checklist
    - Weekly Hygiene Facility Inspection Register – Ablutions and Eating areas
    - Incident Register
    - Safe Area Declarations
    - Fire Extinguishing Equipment Register
    - Training Attendance Registers
    - First Aid Box and Equipment Checklist
    - Dressing Record Register – To be placed in First Aid kit
    - Risk Assessment Communication Registers
    - Lock-out Request Forms (Water and Electricity)
    - Lock-out Permits (Water and Electricity)
    - SHE Officer Inspection Register (Non-Conformance Register) – Monthly checklist and deviations

4.5.3 SAFE WORK PROCEDURES

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- Site Establishment
- Offices
- Secure / safe storage for materials, plant and equipment
- Ablutions
- Sheltered eating area

- Vehicle access to the site
- Dealing with existing structures
- Location of existing structures
- Installation and Maintenance of temporary construction electrical supply
- Adjacent land uses / surrounding property exposures
- Boundary and access control
- Public liability exposures
- Health risks arising from neighboring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Dealing with HIV/Aids and other diseases
- Use of portable electrical equipment
- Excavations & Trenching
- Welding & Flame cutting
- Loading and offloading of trucks
- Manual and mechanical handling
- Lifting and lowering operations
- Working in elevated positions
- Erecting Scaffold
- Demolition of a building
- Working at heights
- Roof work
- Surveying an Setting Out
- Driving & Operation of Construction Vehicles and Mobile Plant
- Use and Storage of Flammable Liquids and other Hazardous Substances
- Reinforced steel fixing
- Concrete works
- General building work (brick laying & plastering)
- Electrical work
- Signage
- As discovered by the principal contractors hazard identification exercise
- As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site.
- As discovered from any accident / Incident Investigation

The following are in particular requirements of works and will form a basis for compliance audits.

1. Administrative & Legal Requirements
2. Education, Training & Promotion
3. Public Safety & Emergency Preparedness
4. Personal Protective Equipment
5. Housekeeping
6. Working at Heights
7. Temporary Structures
8. Traffic Control & Accommodation
9. Electrical Safeguarding
10. Emergency/Fire Prevention & Protection
11. Excavations (Foundations, Trenches, etc.)
12. Ladders & Tools
13. Lifting Equipment
14. Permits
15. Transport & Materials Handling
16. Site Plant & Machinery
17. Plant & Storage Yard
18. Occupational Health & Hygiene
19. Construction Activities

4.5.4 DEMONSTRATE CARE

The Principal Contractor and its Sub-Contractors must actively participate in any programmes and/or activities designed to improve the Health & Safety performance on the project.

4.6 TRAINING AND COMPETENCY

4.6.1 PRINCIPAL CONTRACTOR PERSONNEL COMPETENCY AND RESPONSIBILITY FOR HEALTH & SAFETY

Prior to commencement of work, including mobilisation and site set-up activities, the Principal Contractor must provide current documentation to the satisfaction of COGHSTA verifying that the Principal Contractors and Sub-contractors personnel are competent and have the appropriate qualifications, job skills and training as required by this Contract and applicable laws.

The Principal Contractor must ensure that all his employees and his Sub-contractors' employees working on the site are adequately trained in the type of work to be performed, are trained in relevant procedures and have the appropriate qualifications, certificates and are under competent supervision. Records are to be maintained on site for appropriate training and qualifications of all employees by each Contractor.

The Principal Contractor and all employees are holders of current certificates or licences, where the operations being performed requires such (for example, Scaffolds Certificate, Welding Certificate, etc.). All are to be in compliance with legislation. Certificates of training and/or a letter from 16(2) certifying a person's competency and test of competency is submitted.

When teams are working in separated areas COGHSTA representative may instruct the Principal Contractor to appoint First Aiders and safety representatives per work area regardless if less than fifty people are working in an area.

The Principal Contractor is responsible for off-loading all deliveries of materials, equipment, etc. delivered to the site, including the competency of transport and delivery Contractors entering the site.

The Principal Contractor represents and warrants that its supervisors are competent, and have been trained and advised in writing that they are responsible and have accepted and acknowledged such responsibilities in writing, for ensuring that the work is performed in accordance with all applicable laws, rules and regulations, good working practices, and any additional guidelines and/or operating standards provided to the Principal Contractor by COGHSTA.

The Principal Contractor must, develop a Personal Action Plan for each key staff member that lists actions to be taken and responsibilities. These plans are regularly audited by the Principal Contractor's Project Manager. The Principal Contractor's Project Manager will have his Personal Safety Action Plan audited by COGHSTA or its nominated representative.

The Principal Contractor must at COGHSTA request provide COGHSTA with organization charts, specifying the areas of safety responsibility of supervisors. The Principal Contractor's supervisors must assess and assure themselves that employees under their control have adequate skills and training to carry out their tasks and will not be permitted to perform tasks for which they have not been adequately trained.

The Principal Contractors and/or Sub-contractors employees must, required by legislation, be the holders of current relevant Government Department certificates or permits where the operation being performed requires such certification, for example:

- Scaffolds
- Plant Operators
- Explosive Tools Operation
- Demolisher
- Electricians
- Plumbers
- Steel Fixers
- Carpenters
- Concrete Finishers, etc.

The actual list will depend on applicable regulations regarding competency.

Principal Contractors' and Sub Contractors' employees carrying out the following designated tasks require specific authorisation by COGHSTA, including:

- Operation of mobile equipment and work platforms.
- Slinging of loads from, and the direction of movement of loads by lifting devices.
- Erection and dismantling of scaffolding in excess of 4.5 metres in height.
- Driving light vehicles, buses, trucks, etc.
- Supervising excavations deeper than 1 metre.

The Principal Contractor must request authorisation of persons nominated to perform these tasks, with 2 weeks' notice and must support that request with copies of competency certificates, including driving licence and relevant medical certification, copies of log books or work experience that can be verified and a written statement attesting to the fact that the employee is competent to perform the nominated function. Copies of all such evidence of competence are logged in a register maintained by the Principal Contractor. The Principal Contractor must provide electronic copies of such register(s) to COGHSTA upon request.

COGHSTA or its nominated representative may at any time conduct a task observation as to the ability of any operator of equipment or person carrying out a nominated specific task, to carry out that task in a safe and competent manner. If COGHSTA or its nominated representative is of the opinion that the person is not "currently competent", that person must cease work immediately, undergo the necessary retraining or be removed from that activity. Retraining is at the Principal Contractor's expense.

Induction in Health & Safety

Comply with OH&S Act – Section 8.

The Principal Contractor must also prepare and present to all its employees its own Principal Contractor Induction, explain the Principal Contractor's Safety Management Plan, the Principal Contractor's Rules, the obligations imposed by the Occupational Health and Safety Act and Regulations, as well as a site-specific induction, which must as a minimum consist of an introductory briefing explain the nature of the work, the general hazards which may be encountered during the operation, and the particular hazards attached to their own function within the operation and how these hazards is identified and accounted for.

This Project induction has a 'life" of 12 months, after which re-induction is required. Re-induction must also be done for employees absent for longer than 4 weeks.

The Principal Contractor must ensure that all its employees and the employees of its Sub-contractors working on-site are adequately trained in the type of work to be performed and are trained in relevant procedures and have the appropriate qualifications and certificates and are under competent supervision. Records are to be maintained for appropriate training and qualifications.

The Principal Contractor must ensure that all its personnel and its Sub-contractors personnel receive a copy of the Principal Contractor's Health & Safety training manuals relevant to their jobs which must detail Health & Safety code of conduct, personal safety protection, emergency Health & Safety response and personal health code of conduct. The Principal Contractor must provide COGHSTA with details of on-going training programmes and all related revisions during the term of this Contract. The Principal Contractor must provide programmes for the above to overcome any language, literacy or comprehension impairments. A full day is set-aside for induction and production of appropriate photo identification for all employees.

Prior to induction all employees must undergo a pre-employment medical examination and found fit for duty. A copy of the certificate of fitness is presented for permanent record retention at the induction centre and kept at the site office for permanent record retention. The record is transferred to COGHSTA on project completion. Employees found with health conditions and who need to receive chronic medication, shall be monitored as to the effect(s) of the medication being taken. All employees that are found temporarily unfit for duty must undergo re-testing before they may commence on site. If an employees is found un-fit he may not work on site. Exit medicals must be done at the end of the project.

Employees must not have access to the site until they have completed this induction. The Principal Contractor must keep a record of all inducted personnel.

Before commencing work the following induction-training courses are attended:

- Site induction for COGHSTA and COGHSTA
- Principal Contractors job specific induction.

In addition to the basic safe working practices induction, the Principal Contractor must ensure that all his employees and those of his Sub-contractors are inducted in site-specific safety issues.

The Principal Contractor must ensure exit medical certificates are submitted to COGHSTA Site Representative when people are demobilised.

Emergency Procedures

The Principal Contractor must ensure that all personnel on the site, including visitors, are properly instructed in the Site Emergency Response Procedures. The emergency plan must be site specific and updated with relevant contact details. Drawing and plans, indicating emergency equipment and escape routes shall be displayed on notice boards and other places as required.

4.6.2 WORK METHOD STATEMENT

Where required, the Principal Contractor must submit Work Method Statements to COGHSTA. These are submitted 24-hours prior to the work commencing, or on request of COGHSTA or its nominated representative.

Acceptance of a Work Method Statement by COGHSTA must not relieve the Principal Contractor of responsibility for ensuring full compliance with contract specifications and conditions. Specific Work Method Statements may also be required by legislation.

4.6.3 CRITICAL HAZARD MANAGEMENT PLAN

Where the Principal Contractor identifies a critical hazard, that is one that has the potential to cause multiple fatalities and the exposure is not an isolated occurrence, it must develop a Critical Hazard Management Plan to control the risk. These Plans are submitted to COGHSTA for review and entered into the Site Risk Register. Journey hazards to and from the site should be included. The plans are periodically reviewed (every four months) for applicability and suitability.

4.6.4 RISK ASSESSMENT

As described above, prior to the commencement of each work activity, or as requested by COGHSTA or its nominated representative, a risk assessment is completed and documented. The purpose of the RA is to identify all potential hazards associated with the work and the work environment, assess the risk these hazards present and then to provide risk control action that deals with those hazards, as well as providing to the workforce involved in the particular work activity, details of any hazards and the proposed controls.

The Principal Contractor must propose the RA process and record format to be used, considering the requirements below. The documented RA and/or resulting Work Instruction is completed by the work crew and job supervisor, and at least one team member who is skilled and experienced in the RA process. Completed RAs are available for review by the work crew, COGHSTA and its nominated representative upon request.

The risk assessment must:

- Describe the operation to be performed in the sequence of the basic job steps.
- Identify the hazards or potential hazards at each step.
- Identify the applicable site rules.
- Assess the risk the hazard presents.
- Describe how the hazard is controlled such that the residual risk is as low as reasonably practicable and is acceptable to the work crew.
- Identify the related Work Instruction if appropriate.
- Be acknowledged by way of signature of all personnel involved in the work activity.

4.6.5 UNSAFE OPERATIONS

If the Principal Contractor believes that the work cannot be safely undertaken or that continuance of the work may result in unsafe conditions, it must immediately cease the operation until a safe method of work has been identified. The Principal Contractor must at all times make every effort to control or overcome the cause, or minimise the effect of any unsafe condition.

4.6.6 WORK IN OPERATING AREAS

When the Principal Contractor is working in close proximity to roads, access ways or other equipment and a safety hazard has been identified, the Principal Contractor must provide safety watchers as necessary or as directed by COGHSTA or its nominated representative and must provide, erect and subsequently dismantle all the required barriers, flags, wheel stops, buffer stops, flashing lights or other safety equipment to enable its operations to proceed in a manner which satisfies COGHSTA or its nominated representative. At all times, defined access ways are kept clear of objects or obstructions which could cause injury to personnel or damage to equipment or plant.

4.6.7 HAZARDOUS MATERIALS

The Principal Contractor must set out its policy for the use, transportation, handling and storage of fuel and hazardous materials taking into account the legislative requirements.

The Principal Contractor must ensure that all hazardous materials and waste products are disposed of in accordance with applicable laws and regulations and any procedures published by COGHSTA or in the absence of any relevant law, regulation or procedure, in accordance with sound safe practice.

4.6.8 HIERARCHY OF CONTROL

The Principal Contractor must ensure that all risk and hazard controls are applied in accordance with the "Hierarchy of Control" methodology.

Control measures to eliminate or minimise the risk is considered and implemented in the following order of priority:

1. **Elimination** of the hazard is the main objective. If this is not possible, prevent or minimise exposure to the risk by one or a combination of:
2. **Substitution** – substituting a less hazardous material, process or equipment
3. **Isolation –** isolating the hazard from the person or the person form the hazard
4. **Engineering** – redesigning equipment or work processes
5. **Administration** – introduce administrative controls

As a last resort, when exposure to the risk is not (or cannot be) minimised by other means:

6. **PPE** – identify and use appropriate personal protective equipment

Management of Change

The Principal Contractor must develop a procedure and system to manage the change process. This procedure and system must address the required processes to ensure that proposed changes do not give rise to unacceptable risk to health, safety, assets and/or the environment. The change management process must aim to ensure the following:

- Changes are identified and recognised.
- Careful consideration is given to managing the risks associated with any change.
- Due diligence can be shown to have taken place.
- A reduction in the number of unsatisfactory or unnecessary changes.
- Involvement of the right people in the change process.
- All statutory requirements are met.

The change management controls must apply having regard to the fact that change may be planned, sudden or gradual

4.6.9 CONSTRUCTION REGULATION

In addition to COGHSTA risk assessment requirements above, the Principal Contractor must implement and ensure compliance with the **Construction Regulations, 2014**.

4.7 OCCUPATIONAL HEALTH AND HYGIENE

4.7.1 FITNESS FOR DUTY

The Principal Contractor must ensure that personnel under its control and authority comply with the requirements of the Fitness for Duty Policy and are bound by its disciplinary provisions, regarding the possible effects of:

- General level of personal fitness and/or medical conditions
- Consumption of alcohol
- Use of other drugs (prescription, pharmaceutical, dagga or illicit)
- Fatigue
- Stress
- Working at heights

Each employee must have proof of medical fitness issued by an Occupational Health Practitioner.

4.7.2 ALCOHOL AND OTHER DRUGS

The Principal Contractor must ensure that personnel under its control and authority do not at any time, during the performance of the work, take or work under the influence of any alcoholic and/or other drug other than for bona fide medical reasons or other proper reasons that have been approved in advance .

4.7.3 HEALTH ASSESSMENTS AND HEALTH MONITORING

The Principal Contractor must ensure that operators of mobile equipment undergo a “fit for work” medical examination every year. This medical is to certify that the medical practitioner has examined the operator and formed the opinion that the operator is free from deafness, defective vision, epilepsy, heart disease, and any other infirmity likely to cause the operator to lose control of the machine being operated.

4.7.4 HYGIENE

The Principal Contractor must ensure that its personnel and Sub-contractors’ personnel must maintain high standards of hygiene in connection with the performance of the work.

The Principal Contractor must maintain all work areas in a clean and tidy state and must promptly and appropriate dispose of waste material.

4.7.5 CLEANERS, SOLVENTS AND HAZARDOUS MATERIALS

No chemical, which is potentially hazardous, is brought into the site without the prior acceptance of COGHSTA or its nominated representative.

The Principal Contractor must submit to COGHSTA a Material Safety Data Sheet (MSDS) with its request for acceptance of each hazardous substance the Principal Contractor proposes to use at the site.

The Principal Contractor must ensure that all necessary transport, storage and usage precautions are taken and that safety equipment, including antidotes, if necessary, is available on the site.

4.7.6 FIRST AID SERVICES

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation.**

The Principal Contractor must provide a person qualified to give first aid attention on the site at all times the Principal Contractor is carrying out work on the site. The minimum qualification is that provided by the St John's Ambulance Brigade or as prescribed in the **OH&S Act – General Safety Regulation.**

The Principal Contractor must provide and maintain first aid equipment on the site. The equipment is to a standard as laid down by the Statutory Regulations.

4.7.7 FIRST AID BOXES

To be provided with contents as per minimum legal requirements. Boxes are provided in all working areas and kept locked. Record to be kept, in an appropriate register, of all treatment done. (**SABS** approved signs to indicate location of first aid boxes)

4.7.8 EMERGENCY NUMBERS

Lists with emergency numbers are to be posted at the site office. Workers are to be provided with stickers to be placed inside their hardhats with emergency numbers printed on the stickers.

4.7.9 SMOKING

The Principal Contractor must not permit smoking at the site except within designated smoking areas selected in accordance with applicable laws, rules, regulation, and policies.

4.7.10 SUN PROTECTION

The Principal Contractor must ensure that all personnel are protected in sunlight by the use of long sleeve shirts, long trousers, brims to safety helmets, UV factored sunscreen and shade structures.

The Principal Contractor must conduct training and awareness sessions with its workforce, advising on the risks of working in the heat and dehydration and the precautions to be taken including an acceptable fluid intake depending on conditions. The Principal Contractor must ensure that adequate clean drinking water is available to its workforce at all times.

4.7.11 WORKING HOURS

The Principal Contractor is responsible for the administration of the working hours of its employees and Sub-contractors. Maximum working hours per day and minimum rest times between shifts is specified in the Principal Contractor's Health & Safety Management Plan and must comply with the requirements for the project site unless specifically approved by COGHSTA.

4.8 SAFE SYSTEMS OF WORK

4.8.1 TYPICAL ACTIVITIES REQUIRING SAFE WORK PROCEDURES (SWPS)

Guidelines for typical construction activities for which SWPs are provided before starting work on site by the Principal Contractor (to be attached to Risk Assessments) include: site establishment, fire fighting and evacuation, rubble and refuse removing, stacking and storing, housekeeping, loading and off-loading of vehicles, excavations, building, etc.

4.8.2 GENERAL ACTIVITIES AND WORK AREAS

Include benches, containing of sparks, barricading and handrails, safe access and egress, evacuation and emergency procedures, backfilling and compacting, shuttering and form work, lifting and rigging, steel fixing, pouring of concrete and floating, elevated work, use of ladders, roadwork and fuelling of machines.

4.8.3 SCAFFOLDING

Erection, dismantling and all other activities pertaining to the safe usage of scaffolding.

4.8.4 SPECIALISED ACTIVITIES

Per Discipline include: civil, structural, pipefitting, mechanical, electrical, instrumentation, bricklaying, roofing and cladding, installation of cable racks, cable pulling work in confined spaces, stock keeping and control, demarcation.

People activities include: grinding, welding, operating of machines, cutting, compacting, etc.

4.8.5 PERSONAL PROTECTION

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation.**

Standard PPE

All Principal Contractors' personnel at the site, including visitors, must use the following minimum personal safety equipment at all times:

- Safety head protection (**SANS** approved).
- Safety footwear with steel toe protection
- Safety glasses with side shields (UVEX type or equivalent).
- Hand protection as required.
- At least 3 Overall per person
- High visibility vests or shirts as required.
- Hearing and respiratory protection as required.
- Suitable protective clothing (overalls for all employees conducting physical work).

Personnel exposed to noise levels exceeding 85dB (A) for any period of time or where signs indicate hearing protection is required to wear (**SANS** approved) hearing protection.

Other personal protection items such as gloves, face shields, leather spats, safety harnesses, aprons or other such items may be specified for use by legislation, the scope of work or COGHSTA representative. Personal protective equipment must be worn, if recommended by manufacturers of suppliers of proprietary products or equipment.

All personnel engaged in maintenance and operational activities must use the minimum personal protection applicable at the site.

Specific PPE

The Principal Contractor must provide and ensure usage and compliance with the following minimum PPE requirements for site work:

SANS approved hard hats and hard hats fixed side knobs for welding and grinding operations.

Approved and appropriate overalls.

Wearing of impact safety spectacles with side shields is compulsory on site and in workshops at all times. Prescription glasses must comply with the same standard or cover impact safety spectacles is worn over them.

Front flip goggles to be used for gas cutting.

Double Eye-Protection

- Welding – Impact Spectacles & Welding Hood
- Grinding – Impact Spectacles & Full Face Visor
- Cutting – Impact Spectacles & Full Face Visor
- Breaking of Rock using Jack Hammers/Chisels – Impact Spectacles & Full Face Visor

Specific PPE

- Welding – Spats/Apron/Yoke/Respirator (metal frame). Knee pads for welders in kneeling positions.
- Grinding – Spats and Apron
- Gas Cutting – Spats and Apron
- Boots / Shoes – "Fram" Safety Boots or equivalent
- Gumboots – Steel Cap Toe
- Ear-plugs (**SANS 11451** Approved) – Noise zones exceeding 85Db (including grinding/compacting, etc.)
- Nuisance Dust – Dust Masks – 3M Standard

Applicable gloves to be worn for all hand Operations

- Termination of cables – glass cutting gloves
- Using a Stanley knife – glass cutting gloves
- Welding – welding gloves, etc.
- Gas/Argon – cutting/welding gloves
- Symbolic signs (to comply with **SANS**) indicating the use of PPE is placed at construction site entrance.

Issue, Replacement and Control of PPE

A dedicated person must:

- Control the issue and replacement of equipment.
- Keep an up-to-date register, with signatures of the recipients, as proof of having been issued with such equipment will be free charge.

PPE and Related Safety Requirements are issued free by the Principal Contractor.

4.8.6 WORKING ON LIVE ELECTRICAL EQUIPMENT/SUB-STATION

The Principal Contractor may not allow any work on live electrical equipment but must appoint a competent qualified person/company to execute the work.

4.8.7 REQUIREMENTS WHEN OFF-LOADING VEHICLES

The Principal Contractor must ensure that drivers and/or their assistants, who are required to assist with the off-loading of material and/or equipment, are provided with the following minimum Personal Protective Equipment:

- Hard hat
- Safety boots / Shoes
- Gloves
- Glasses
- Reflective Vest / Jacket

4.8.8 DECANTING OF HOUSES

Alternative accommodation has to be arranged for residents during the time construction is taking place within the residence.

4.8.9 ELEVATED WORK

The Principal Contractor must implement and comply with **Construction Regulation**.

A contractor must—

(a) designate a competent person to be responsible for the preparation of a fall protection plan;
(b) ensure that the fall protection plan contemplated in paragraph (a) is implemented, amended where and when necessary and maintained as required; and
(c) take steps to ensure continued adherence to the fall protection plan.

(2) A fall protection plan contemplated in sub regulation (1), must include—

(a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
(b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
(c) a programme for the training of employees working from a fall risk position and the records thereof;
(d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
(e) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

(3) A contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

(4) A contractor must ensure that—

(a) all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
(b) no person is required to work in a fall risk position, unless such work is performed safely as contemplated in sub regulation (2);
(c) fall prevention and fall arrest equipment are—
  (i) approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and
  (ii) securely attached to a structure or plant, and the structure or plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and
(d) fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

(5) Where roof work is being performed on a construction site, the contractor must ensure that; in addition to the requirements set out in sub regulations (2) and (4), it is indicated in the fall protection plan that—

(a) the roof work has been properly planned;
(b) the roof erectors are competent to carry out the work;
(c) no employee is permitted to work on roofs during inclement weather conditions or if any conditions are hazardous to the health and safety of the employee;

(d) all covers to openings and fragile material are of sufficient strength to withstand any imposed loads;

(e) suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and

(f) suitable and sufficient guard-rails, barriers and toe-boards or other similar means of protection prevent, as far as is reasonably practicable, the fall of any person, material or equipment.

The Principal Contractor must:

- Submit a fall protection and rescue plan for approval, before any elevated work commences.
- Parachute type harness with shock absorber and double lanyard to be provided for all elevated work.
- Ensure that:
  - All tools in elevated positions are attached to lanyards and are attached to either the person or structure.
  - Equipment in elevated positions, e.g. bolts and nuts, is in pouches, not paper boxes.
  - Overhead work allowed only if area below is barricaded in accordance with COGHSTA barricading requirements.

Note: Employees are attached at all times when conducting elevated work.

Barricading Requirements

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation & Construction Regulations**.

- The Principal Contractor must ensure that:
  - All openings and edges are barricaded with solid barricading to withstand an impact of at least 100kg.
  - Only solid barricading covered with orange “snow netting” and or COGHSTA approved equivalent barricading is allowed to be used as barricade.
- Solid barriers to prevent persons falling into them must protect openings in floors, stairwells, staircases, open-sided buildings and any structure in the course of erection, where dangerous openings exist.
- Principal Contractors must pre-plan the delivery of floor grating, stair treads, landings and handrails to ensure safe access and protection for persons working on structures.
- Barricading must be tagged, placed on register, maintained and inspected daily – the owner of the barricades name and mobile number must appear on the tag.

All handrails and fencing must comply with COGHSTA standards, to be provided around all holes or openings to prevent any person being injured as a result of a fall. A solid framework with plastic barricading netting attached to it is required.

Where it is impracticable to provide fixed guard railing, effective removable barriers are to be provided at all unguarded openings in guard railing or floors and is maintained in position at all times until the hazard no longer applies.

Note: Danger tape will not be accepted as barricading!

4.8.10 ALTERATIONS TO EXISTING FACILITIES

All necessary alterations to existing details and connections between new and existing details is carried out by the Principal Contractor, including the making good of existing details on the completion of the work.

Where openings are left, due to the removal of access platforms, handrails, or steel work or where new details have not been installed, the Principal Contractor must fabricate and install temporary solid handrails until the permanent structure is erected.

All temporary connections and the like are carried out in conformance with all regulations to ensure safe operation and passageway for all personnel.

Protection of Equipment

The Principal Contractor is responsible for covering up any equipment placed in danger of being damaged from his operation, for example cables or other combustible equipment, with a flame-proof material before oxy-cutting, grinding and welding.

The Principal Contractor must ensure that all equipment is properly protected against damage or deterioration during all phases of construction, in accordance with equipment suppliers' recommendations.

4.8.11 WORK IN OPERATING AREAS

When the Principal Contractor is working in close proximity to roads, railways, schools or other equipment and a safety hazard exists, the Principal Contractor must:

- Provide safety watchers as necessary or as directed by COGHSTA representative.
- Provide, erect and maintain all the required barriers, flags, wheel stops, buffer stops, flashing lights or other safety equipment to enable operations to proceed in a manner which satisfies COGHSTA Safety Regulations.
- Remove all such protective devices once the hazard has been removed or on a completion of the work.

The Principal Contractor must at all times keep defined access ways clear of objects or obstructions which may endanger the health, safety or welfare of personnel or cause damage to equipment or plant.

Where the work is carried out in hazardous zones or where there is a danger of producing combustion in adjacent flammable materials, the Principal Contractor must provide a dedicated fire watch for job site control, including management and implementation of preventative action.

4.8.12 OPERATIONS

Unauthorised personnel found in restricted areas of the site will be removed.

The Principal Contractor must provide watchers for activities adjacent to operating plant.

All tools and equipment are to be kept in good condition. Examine all tools for defects before use and report all unsafe tools, equipment or conditions to the relevant Supervisor immediately.

4.8.13 COMPRESSED AIR

Compressed air must **NOT** be used for any purpose other than that for which it is provided.

Do not use compressed air to remove dust from clothing.

NEVER direct a stream of compressed air at your body or that of any other person; it may enter the body and cause serious injury or death.

Locking wires or other suitable approved devices are to be used to prevent accidental uncoupling of compressed air hoses.

Do not disconnect air hoses until certain that the supply valve is closed and the pressure in the hose has been released.

Hoses to be orderly routed and elevated, if required, to prevent tripping hazards.

4.8.14 OXYGEN, ACETYLENE AND LPG CYLINDERS

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation and SANS**.

Principal Contractors must establish satisfactory storage areas (fenced, shaded, approved surface and all necessary signs posted) for oxygen, acetylene and LPG. Gas cylinders, oxygen, acetylene and LPG cylinders are stored (separate) and in an upright position.

When moving cylinders from place to place, keep them from being knocked over or falling. Before moving a cylinder without a suitable truck or trolley, close the cylinder valve and remove the regulator. Only use special approved cylinders as rollers, even if they are marked “empty”.

Make sure that cylinders do not come in contact with electrical circuits, e.g. welding leads. Never strike an arc on a cylinder.

Do not store cylinders in hot places. If possible, do not use cylinders in hot places. Do not allow cylinders near excessive heat exposure; avoid standing them in hot sunlight if possible. Keep cylinders far enough away from cutting work to prevent sparks or hot slag reaching them. If it is necessary to work in a hot environment, move them to a cool area as soon as the activity has been completed.

As with compressed air, use oxygen only for the purpose for which it is provided. Do not use oxygen in pneumatic tools or to inflate tyres as an explosion may occur.

Flashback arrestors to be fitted on torches and cylinders.

Empty cylinders are to be marked as such and removed daily to approve storage areas.

Cylinders must be allowed on site in an approved trolley, properly secured and with a 1.5kg dry powder fire extinguisher attached to the trolley.

Storage of Gas Cylinders

- Storage areas should be well clear of buildings.
- A protective covering to be provided.
- Adequate ventilation to be provided.
- Storage areas to be kept free from al combustible materials. No other materials to be stored in cylinder enclosures.
- Full cylinders to be kept apart from empty cylinders. It must not be necessary to open valves to check whether cylinders are empty or full. Mark empty cylinders clearly and store accordingly.
- Cylinders must always be stored in an upright position, individually chained secure to prevent falling over.
- Cylinders to be stored in rows with aisles in-between for easy removal in event of fire.
- For security and ventilation purposes a wire mesh fence should surround the storage area. Keep the enclosure locked.

- All danger signs are prominently displayed at storage area. For example:
  - No Smoking
  - No Naked Flames
- Adequate firefighting equipment to be available
- Flammable and oxidising gases must not be stored together; greases and oils must never be allowed to come in contact with oxygen.
- If electrical lighting is required, it should be of an approved type and comply with SANS 10108.

4.8.15 RECOGNIZED WALKWAYS

When walking through the site or to personal work areas use recognised thoroughfare. Don't take short cuts.

4.8.16 COMMISSIONING OF NEW INSTALLATION

The Principal Contractor must implement and comply with **OH&S Act – Electrical Installation, Driven Machinery, Electrical Machinery & General Machinery Regulations**.

Notice boards are to be erected clearly stating which items of plant are "LIVE". The information on these notice boards is for general guidance to persons working about the area and warns of increased hazards. As soon as any plant item is notified as being "LIVE", commissioning procedures must apply.

4.8.17 EXPLOSIVE POWERED TOOLS

The Principal Contractor must implement and comply with **Construction Regulation.**

Explosive powered tools may only be used when prior written permission is granted by COGHSTA Project Manager, Construction Manager or Safety Manager.

4.8.18 WELDING, CUTTING, GRINDING AND HEATING

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation.**

Principal Contractors must instruct employees in the safe use of welding equipment. Cutting and welding work is carried out in accordance with **General Safety Regulation.**

Non-combustible or flameproof shields to protect employees from direct rays and air-borne particles must shield arc welding, cutting and grinding operations.

Electrode holders or welding guns are to be maintained in good order, and when left unattended, the electrodes are to be removed and the holders placed or protected so that they cannot make contact with or conducting objects.

All arc-welding cables are to be properly maintained and completely insulated. No repairs or splices within 3 metres of the electrode holders, except where splices are insulated equal to the cable. Defective cable is to be repaired or replaced. The earth cable is to be connected to the work place.

Fuel gas hose and oxygen hose are to be of an approved type, be easily distinguishable and must not be interchangeable. Hoses are to be inspected at the beginning of each day and repaired or replaced if defective.

Hot Work

- Hot work permit to be obtained before job starts.
- Falling sparks and/or hot cuttings are to be contained.
- Fire blankets and fire extinguishers are to be on hand.

- Ensure not to carry out any hot work, cutting and/or grinding in the vicinity of flammable liquids.
- Protect rubber lined vessels/tanks, etc.
- Combustible floors are to be wetted down, covered with damp sand or fire proof sheets.
- All wall and floor openings covered.
- Containers/pipes purged of flammable vapours.
- Fire watch to be provided.
- Area to be inspected after hot work has been completed.
- Fire watch to be kept on duty for at least 30 minutes after operation.
- Warn all employees working under hot work process.
- Ensure adequate fire extinguishers, where appropriate, Mobile Water Supply with water spray/pressure available, at all times during hot work operation.

Harmful gases are abated when doing certain types of welding work, therefore the Principal Contractor must provide breathing apparatus when welding, cutting or heating the following:

- Zinc, lead, cadmium, mercury or beryllium bearing based or coated materials in enclosed spaces
- Stainless steel with inert-gas equipment
- In confined spaces
- Galvanised steel
- Where an unusual condition can cause an unsafe accumulation of contaminants

Proper protective equipment is to be provided.

No welding or cutting is to be undertaken where hot metal or sparks can fall onto walkways, work areas, cable ladders, electrical equipment, etc. Before welding or cutting is started, fire retardant blankets are to be placed to arrest such hot meal or sparks. Particular attention is to be taken when working above cables that are not adequately covered.

Use an approved type flint lighter for lighting torches. Do not use matches, rope wicks or other smouldering materials.

Hoses are to be depressurised before cutting torches are cleaned and nozzles are not to be cleaned/rubbed against gloves.

During welding operations, the earth lead is to be attached to the work area, refrain from earthing through equipment bearings or through clearance gaps of any sort.

Welders and other people executing hot work must not wear any jewelry or carry cigarette lighters.

All welding machines to be earthed receive power through an approved earth leakage system and are fitted with an approved voltage reducer. A certificate is to be kept on register, on site.

4.8.19 ELECTRICAL EQUIPMENT

The Principal Contractor must implement and comply with **Construction Regulation and OH&S Act – Electrical Installation Regulations.**

Electrical Installations and Machinery on Construction

The Principal Contractor must ensure that:

- All electrical installations being carried out on the site are in accordance with Electrical Installation Regulations. For permanent to temporary installation, as appropriate. In addition, electrical installations must comply with COGHSTA Electrical Standard Specification.
- Connections are not to be made to any power supply without the prior written approval of COGHSTA representative and where isolation is required, an isolation permit has been obtained and the isolation procedure associated with the permit has been followed correctly.
- All electrical installation is to be inspected by COGHSTA Electrical representative (or his nominee) to ensure that the installation complies with the statutory regulations applicable to the site and COGHSTA safety specifications.
- All electrical machines and appliances provided by the Principal Contractor for his own use on the site are to be in a serviceable condition.
- Power tools used on the site are to be protected by residual current devices approved by COGHSTA and are double insulated.
- All extension cords, portable tools and electrical plant supplied at a voltage above 32 volts are inspected, tested and tagged by a licensed electrician at regular monthly intervals. Details of inspections and tests are kept in logbooks available for inspection by COGHSTA representative or any other authorised office of COGHSTA.
- Where natural lighting is inadequate, artificial lighting is to be provided in all work areas, at access ways and for rescue equipment.
- Portable lights are to have adequate stability and are to be fitted with a mechanical guard to protect the lamp.
- Temporary festoon lighting is to be of the “double insulated” type and supported at least 2.5m above the floor, if possible.
- Hand lamps are to be of the “all insulated” type.
- All temporary light fittings are to be supplied from more than one final sub-circuit, with the supply from a residual current device, extra low voltage source or an isolating transformer.

Any installation deemed unsatisfactory by COGHSTA representative should be removed by the Principal Contractor at his expense.

The Principal Contractor must obtain approval from COGHSTA representative before any of his employees or Sub-contractors commence work within three (3) metres of conductor rails or high tension wires, or where there is a possibility of equipment coming close to and/or touching a power source. Suitable protective insulating barriers are to be provided. Scaffold is not to be erected closer than 5 metres from said power source.

Only authorised persons may enter electrical sub stations, motor rooms, switch rooms, control rooms or cable ducts. Should the Principal Contractor require entering such places to carry out work, he must first obtain permission from COGHSTA representative and obtain a valid permit to work.

Principal Contractor employees required to enter said electrical venues must enter their names in a register provided by COGHSTA, after permission was given to them by COGHSTA to enter these premises. Principal Contractor employees are to be accompanied by an authorised person from COGHSTA who will ensure that lock-out procedures have been followed and all necessary signage and lock-out tags have been placed correctly.

Before commencing work on the site, the Principal Contractor must provide the following information to COGHSTA representative:

- Number of electrical machines and appliances to be placed in service on the site.
- Nameplate data for each electrical machine and appliance.

- Approximate total time the machines and appliances will be in service to complete the works.
- The Principal Contractor will be responsible for the effective protection of his own electrical equipment from the weather and from possible mechanical damage.

The Principal Contractor is required to inspect electrical equipment as follows:

- Supply cabling distribution boards, fixed lighting and portable appliances on a monthly basis.
- Extension leads, welding machines, compressors, pumps and hand portable tools on a daily basis.

Such inspection(s) are to be performed by an appropriately qualified electrician and a report submitted to COGHSTA representative in accordance with the following:

Frequency of Testing

The Principal Contractor must test and tag all the electrical equipment and leads on a monthly basis, as follows:

Colour Code

Principal Contractors must ensure the tagging and colour coding of all tools and equipment.

Colour code a different colour for each month as follows:

January	-	Red	July	-	Blue
February	-	Blue	August	-	Green
March	-	Orange	September	-	Red
April	-	Green	October	-	Yellow
May	-	White	November	-	Orange
June	-	Yellow	December	-	White

Details of the Tag

The tag must be a plastic self-adhesive tag unable to be re-used, approved by COGHSTA Construction Manager, and capable of being marked with the following information:

- Test date
- Inspection number
- Testing agent
- Owner
- Plant number
- Type of equipment
- Record book

An up-to-date record book is maintained at all times and available for inspection by COGHSTA representative.

The record book must contain full details as identified in the tag, and must list, in addition, the following:

- Licence number and signature of the electrician carrying out the test.
- Comments on the results of the test and details of any repair work.

Note: All electrical appliances must be fed through an approved and tested earth leakage device.

4.8.20 WORKING AT HEIGHTS ON PLATFORMS AND SCAFFOLDING

The Principal Contractor must implement and comply with OH&S Act – General Safety Regulations and Construction Regulations.

Where employees are required to work in any elevated area of 1.8m or higher, proper fall protection measures must be followed. Fall protection includes:

- Fall prevention such as handrails, barricades or safety belts preventing the employee to reach the edge of the elevated position. These handrails/ barricades should be sturdy, well-constructed and solid – able to withstand 100kg of leaving weight against it.
- Fall arrest systems and devices such as SABS approved double layered full body safety harnesses, approved lifelines.
- Lifelines and anchor points to be approved by a Structural Engineer.

Note: To be implemented in conjunction with the requirements for elevated work.

4.8.21 WORK PLATFORMS

The Principal Contractor must ensure that all working platforms, be they permanent, temporary or portable, 1.5 metres or more in height, are fully decked, including toe boards, and fully hand railed. Where it is not practical to have handrails or there is a need to work outside handrails, the use of an approved safety harness, with lanyard attached to a secure anchorage is required.

4.8.22 SCAFFOLDING

The Principal Contractor must implement and comply with **OH&S Act – SANS 10085, General Safety Regulation and Construction Regulation.**

Scaffolding may only be erected, dismantled and altered under the supervision of the Principal Contractor's competent appointed person (approved training certificate to be submitted).

Guard rails and toe boards are provided on all outer edges and ends of all scaffolding where a person or an object can fall a distance of 1.5 metres or more.

Ladders are to be staggered every 3.0m inside scaffold frame with safe landing platform and a trap door fitted on the working platform.

A tagging scaffolding management system is used by the Principal Contractor to ensure that scaffolding erected on site complies with the provisions of Legal, SANS and COGHSTA rules.

Principal Contractor's competent appointed scaffold inspectors (training certificate to be submitted), must carry out inspections of their scaffolding whenever the scaffolding has been modified, damaged or altered in any

manner or form, and otherwise at least every 7 days during the period that the scaffolding is on site and after inclement weather. Inspections are to be captured on the register and the tag.

The scaffold erector responsible for the erection of the scaffold may not inspect his own scaffold, even though he might have the training to do so. One person will be responsible for the erection and another person will be responsible for the inspection.

COGHSTA representative must carry out random compliance audits. Such activities must in no way relieve the Principal Contractor of his responsibility for ensuring that his scaffolding is safe for use.

4.8.23 STRUCTURES

The Principal Contractor must implement and comply with **Construction Regulation.**

The Principal contractor must ensure that—

(a) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
(b) no structure or part of a structure is loaded in a manner which would render it unsafe; and
(c) all drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other contractors, COGHSTA and COGHSTA agent or employee.

(2) An owner of a structure must ensure that—

(a) inspections of that structure are carried out periodically by competent persons in order to render the structure safe for continued use;
(b) that the inspections contemplated in paragraph (a) are carried out at least once every six months for the first two years and thereafter yearly;
(c) the structure is maintained in such a manner that it remains safe for continued use;
(d) the records of inspections and maintenance are kept and made available on request to an inspector.

4.8.24 TEMPORARY WORKS

The Principal Contractor must implement and comply with **Construction Regulation.**

The Principal contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use. The Principal contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

A contractor must ensure that—

(a) all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
(b) all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
(c) detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, COGHSTA, COGHSTA agent or any employee;
(d) all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
(e) all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
(f) all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a

daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;

(g) no person may cast concrete, until authorization in writing has been given by the competent person contemplated in paragraph (a);

(h) if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;

(i) adequate precautionary measures are taken in order to—
  (i) secure any deck panels against displacement; and
  (ii) prevent any person from slipping on temporary works due to the application of release agents;

(j) as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;

(k) upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person contemplated in paragraph (a);

(l) The foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.

(m) provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;

(n) a temporary works drawing or any other relevant document includes construction sequences and methods statements;

(o) the temporary works designer has been issued with the latest revision of any relevant structural design drawing;

(p) a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and

(q) The temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any works other than its intended purpose.

4.8.25 DEMOLITION OF A STRUCTURE

The Principal contractor must comply with Construction Regulations 14 and appoint a competent person to supervise all demolition activities.

The Principal contractor must ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person.

During a demolition, the competent person must check the structural integrity of the structure at intervals determined in the method statement, in order to avoid any premature collapses.

The Principal contractor who performs demolition work must—

(a) with regard to a structure being demolished, take steps to ensure that—
  (i) no floor, roof or other part of the structure is overloaded with debris or material in a manner which would render it unsafe;
  (ii) all reasonably practicable precautions are taken to avoid the danger of the structure collapsing when any part of the framing of a framed or partly framed building is removed, or when reinforced concrete is cut; and
  (iii) precautions are taken in the form of adequate shoring or other means that may be necessary to prevent the accidental collapse of any part of the structure or adjoining structure;

(b) ensure that no person works under overhanging material or a structure which has not been adequately supported, shored or braced;

(c) ensure that any support, shoring or bracing contemplated in paragraph (b), is designed and constructed so that it is strong enough to support the overhanging material;

(d) where the stability of an adjoining building, structure or road is likely to be affected by demolition work on a structure, take steps to ensure the stability of such structure or road and the safety of persons;

(e) ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of demolition work that may affect any such service, take the steps that are necessary to render circumstances safe for all persons involved;

(f) cause every stairwell used and every floor where work is being performed in a building being demolished, to be adequately illuminated by either natural or artificial means;

(g) cause convenient and safe means of access to be provided to every part of the demolition site in which persons are required to work; and
(h) erect a catch platform or net above an entrance or passageway or above a place where persons work or pass under, or fence off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe where there is a danger or possibility of persons being struck by falling objects.

The Principal contractor must ensure that no material is dropped to any point, which falls outside the exterior walls of the structure, unless the area is effectively protected.

No person may dispose of waste and debris from a high place by a chute unless the chute—
(a) is adequately constructed and rigidly fastened;
(b) if inclined at an angle of more than 45 degrees to the horizontal, is enclosed on its four sides;
(c) if of the open type, is inclined at an angle of less than 45 degrees to the horizontal;
(d) where necessary, is fitted with a gate at the bottom end to control the flow of material; and
(e) discharges into a container or an enclosed area surrounded by barriers.

The Principal contractor must ensure that every chute used to dispose of rubble is designed in such a manner that rubble does not free-fall and that the chute is strong enough to withstand the force of the debris travelling along the chute.

The Principal contractor must ensure that no equipment is used on floors or working surfaces, unless such floors or surfaces are of sufficient strength to support the imposed loads.

Where a risk assessment indicates the presence of asbestos, a contractor must ensure that all asbestos related work is conducted in accordance with the Asbestos Abatement Regulations, 2020.

Where a risk assessment indicates the presence of lead, a contractor must ensure that all lead related work is conducted in accordance with the Lead Regulations, 2001, promulgated by Government Notice No. R.236 of 28 February 2002.

Where the demolition work involves the use of explosives, a method statement must be developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for demolition work and all persons involved in the demolition works must adhere to demolition procedures issued by the appointed person.

A contractor must ensure that all waste and debris are as soon as reasonably practicable removed and disposed of from the site in accordance with the applicable legislation.

4.8.26 LADDERS (PORTABLE)

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation**.

All ladders used on the site are constructed and used in compliance with the **OH&S Act and Regulations**.

- Ladders, which provide access to a working platform, must extend one metre above the platform where it provides access, and it's secured to prevent slipping.
- No timber or fibre glass ladders allowed on site.
- Ladders, which are in a damaged condition, must not be used and must be labeled accordingly and removed from the premises.
- All ladders are to be numbered, logged in a register and inspected monthly.
- A ladder in use is held by an assistant and/or properly tied down.

4.8.27 SUSPENDED LOADS

The Principal Contractor must implement and comply with **OH&S Act – Driven Machinery Regulation**.

Principal Contractors and their employees must not enter underneath suspended loads, including excavators, and must not stand between a load and a solid object where they might be crushed if the load should swing.

Guide ropes are to be used to prevent loads from swinging.

4.8.28 WORKING OVERHEAD

Articles falling from heights can cause serious injuries. Employees working overhead must ensure that materials and tools are properly secured to prevent articles falling.

"MEN WORKING ABOVE" signs are to be displayed in the appropriate places.

Where there is danger of falling material, the area underneath is to be barricaded off.

Material must not be thrown from aloft but must be lowered in a safe manner – use a securely fixed rope to lower it.No overhead work is allowed.

4.8.29 PNEUMATIC TOOLS AND COMPRESSED AIR

The Principal Contractor must implement and comply with **OH&S Act – Driven Machine Regulation.**

May only be used on site with prior written approval from COGHSTA.

It is illegal for a pneumatic tool to be operated by using a compressed gas cylinder. Pneumatic equipment must only draw supply from mobile air compressors or from compressed air lines installed within the premises after gaining permission from COGHSTA representative.

When using the interlocking type of connection of an airline, connectors are to be secured with wire clips through holes provided to prevent accidental disconnection.

Compressed air must not be used for general cleaning purposes or be used to blow down dirty clothes on people.

4.8.30 RIDING ON AND OPERATING EQUIPMENT

The Principal Contractor must ensure his employees and those of his Sub-contractors do not ride upon or attempt to operate cars or other moving equipment unless authorised and licensed to do so.

4.8.31 FIRE AND EMERGENCY EQUIPMENT (SITE)

The Principal Contractor must provide and maintain all fire and emergency equipment. The Principal Contractor must ensure all personnel familiarise themselves with locations of fire equipment in the vicinity of their work site. Work areas are clear at all times of any material, which could fuel a fire. A thorough inspection is to be made of the area at the end of any working period to ensure that no material is left at the work site or any situation left in such a manner that a fire or accident could result. (All machines are to be turned off at main switches, and cylinders are to be closed and hoses depressurised.)

No electrical welding, oxy-welding or cutting, or any other fire hazardous equipment is to be used inside or adjacent to electrical switch room, control room, cable duct, any electrical equipment or cables without the permission of COGHSTA representative.

The Principal Contractor must supply all fire extinguishers for his work as required on the site during the construction phase. Fire extinguishers are not to be used for any purpose other than their intended use.

The Principal Contractor must ensure that his personnel are trained in the use of fire extinguishers.

The objective for providing fire extinguishers will be to standardise the type and make to eliminate confusion during emergencies.

4.8.32 EXCAVATION, TRENCHES AND FLOOR OPENINGS

The Principal Contractor must implement and comply with **OH&S Act – Construction Regulation and General Safety Regulation**.

The Principal Contractor must ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing.

Barricading is provided around all holes or openings to prevent any person being injured as a result of a fall.

Where it is impracticable to provide fixed guard railing, effective removable barriers are provided at all unguarded openings in guard railing or floors, and is maintained in position at all times until the hazard no longer applies.

When excavations are necessary across roadways, approval is sought from COGHSTA representative. When necessary “detour” notices and detour routes will be provided.

Warning signs and flashing warning lights at night are to be provided in suitable positions to warn any persons approaching the area of the location and extent of any excavation.

Personnel must immediately report any unusual conditions that may be found, such as underground power lines, pipelines, sewers or inconsistent materials to COGHSTA representative and, if risk to personnel safety is involved all work is to be stopped until approval to continue is granted by COGHSTA representative.

Safe access and egress is to be provided and sides battered or shored to the satisfaction of COGHSTA representative.

All excavations must be on register and inspected daily before work commences and after inclement weather by the Principal Contractor appointed competent person and declared safe and his findings noted in the said register.

Note: No loose material is allowed within 3m of the excavation edges.

4.8.33 NOISE

The Principal Contractor must implement and comply with **OH&S Act – Environmental Regulation.**

COGHSTA needs to meet statutory requirements on limitation of noise emitted by machines and equipment. When Principal Contractor’s personnel are required to operate such equipment, noise levels at the operator position must not exceed an equivalent level of 85-dB (A) during normal working conditions. Employees working in the vicinity must not be subjected to an equivalent continuous level of 85-dB (A) during normal operating conditions. Comply with time periods and PPE requirement where applicable.

Symbolic safety signs warning employees of the hazard of noise in the area shall be erected at all entrances to the area and be in a position where it is clearly visible.

4.8.34 VENTILATION

The Principal Contractor must implement and comply with **OH&S Act – Environmental Regulation.**

For any job, which generates excessive dust or fumes (for example welding), an effective exhaust system must be implemented. Effective dust control measures must be in place on a daily basis.

4.8.35 LIGHTING

The Principal Contractor must implement and comply with **OH&S Act – Environmental Regulations and Schedule E of the Regulation**.

Where natural lighting is inadequate, artificial lighting is to be provided in all work areas, access ways and for rescue equipment.

Portable lights must have adequate stability and be fitted with a mechanical guard to protect the lamp.

Temporary festoon lighting is to be of the “all insulated” type and be supported at least 2.5m above the floor if possible.

Hand lamps are to be of the “all insulated” type.

Illumination checks are to be performed at night time work to check conformation to minimum illumination requirements.

Emergency lighting for safe evacuation must be installed according to requirements and shall be activated during power failures.

4.8.36 STACKING MATERIAL

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation and Construction Regulations.**

Stacking is to be neat and safe.

Before stacking any material, the Principal Contractor, Sub-contractors or their employees must consult COGHSTA representative for allocation of a stacking area.

4.8.37 MANUAL HANDLING OF MATERIALS

Principal Contractors must ensure that no employee is required or permitted to lift or move by hand any heavy object that is likely to cause a risk of injury.

Adequate PPE to be issued and used when required.

4.8.38 HEAT STRESS

The Principal Contractor must implement and comply with **OH&S Act – Environmental Regulation**.

To prevent heat stress illness, the Principle Principal Contractor must plan suitable rest breaks for all employees and Sub-contractors exposed to excessive ambient or radiant heat.

4.8.39 CONSTRUCTION VEHICLES AND MOBILE PLANT

The Principal Contractor must implement and comply with **Construction Regulation**.

Traffic Control

- A Points-man / Controller is placed at all road intersections, with a Stop / Go sign to control traffic.
- Ripple Strips are to be placed at all road intersections and railway crossings.
- During night driving flashing lights are to be placed at crossings and intersections.
- Adherence to all traffic signs is of vital importance.

- All Haul Trucks, LDV's and excavation equipment are to be operated with headlights on at all times.
- Following Distances – 3 truck lengths to be kept between the trucks at all times.
- Speed limit on site is 30 km per hour.
- Reversing of vehicles must only take place under the guidance of a spotter.
- Heavy vehicles / equipment must always have the right of way.
- Signaling system is to be in place between driver of haul truck and loader operator.
- No overtaking must take place on site or roads by haul trucks.
- In case of a vehicle breakdown on a road or haul road, the vehicle is removed as soon as possible. Warning signs are to be used – Red Triangular during daytime and flashing lights during nighttime.
- Traffic controller is to be used in the front and back of the vehicle for all loading and off-loading activities.

L.D.V.'S

All L.D.V.'s to be fitted with:

- Flashing and rotating orange lights.
- Two-man rule to be enforced at all times (only driver and one passenger in front of L.D.V).

Vehicles/Equipment

All vehicles must be roadworthy at all times.

An approved pre-use checklist is to be completed for all construction vehicles on a daily basis. Action to be taken immediately to repair all substandard / faulty items identified.

Do not use equipment in case of the following sub standards:

- Brakes
- Lights
- Air/Hydraulic System
- Oil leaks

Brake testing is to be done daily before shift (brake testing method to be submitted).

No service or major repair to be done on site.

All construction vehicles are to be equipped with:

- Fire Extinguisher
- Safety Belt
- Reverse Hooter (Except L.D.V.'s)
- Strobe Light
- Reflectors/Reflecting Tape

Operators/Drivers

- A relief driver is to be available for every 4 dump trucks and operators/drivers are to be rotated frequently.
- A Supervisor, or appointed person, is to conduct random checks on loading and off-loading points to ensure that drivers get out of the vehicle. Drivers need to walk around and use restroom facilities when necessary.

- Adequate drink water is to be available.
- Random alcohol/drug test is to be done and the results are to be submitted to COGHSTA.
- All drivers/operators are to be appointed in writing.
- Drivers/operators not adhering to rules and regulations are to be disciplined and pending the outcome of the disciplinary procedure, the driver/operator is to be removed from his duties.
  - No driver/operator is appointed without proof of training, drivers licence or letter of competency.
  - No training of drivers/operators on site.
  - No passengers on dump truck, loaders or excavators.
  - No eating or drinking allowed while operating equipment.
  - No vehicle to be left unattended with engine running or key in the ignition.
  - No cellular phones may be used by drivers during operations.

4.8.40 PAINTING

- Learn correct procedures for working at heights.
- Select the correct ladder for the job.
- Avoid awkward body positions or take frequent breaks.
- Learn safe lifting techniques.
- Know how to prevent injury from electrical hazards. Maintain safe distances from energized electrical equipment or utility lines.
- Keep tools and equipment, and their safety features, in good working order.
- Wear appropriate personal protective equipment and footwear.
- Keep work areas clear of clutter and equipment.
- Learn safety procedures for working in confined spaces.
- Maintain good ventilation during painting.
- Know how to prevent exposure to bird and rodent droppings.

4.8.41 HAZARDOUS MATERIAL

Flammable liquids

The Principal Contractor must implement and comply with **Construction Regulation** regarding use and temporary storage of flammable liquids on construction sites.

Hazardous Substances

The Principal Contractor must implement and comply with **OH&S Act – Hazard Chemical Substances Regulations**.

Hazardous substances are any substance of materials specified in statutory regulations as being hazardous.

Prior to any hazardous substances being brought onto the site or produced on the site, the Principal Contractor must supply COGHSTA representative with the following:

- Material Safety Data sheets (MSDS) are in accordance with the requirements of the **OH&S Act – Regulations for Hazardous Chemical substances.**
- Proposed arrangements for safe storage.
- Purpose for bringing the hazardous substance onto the site.
- Proposed methods for handling/usage.
- Proposed method of disposal.

- Proposed method of transportation.
- Risk assessment with specific reference to compatibility with other chemicals.

The information is to be provided at least two (2) working days prior to the expected commencement on site.

COGHSTA representative must only approve the use of any hazardous substance after receiving a copy of the Materials Safety Data sheet for the substance from the Principal Contractor. Such substances are not to be brought onto the site until COGHSTA representative approval is received.

The Principal Contractor must ensure that all necessary usage and storage precautions are taken and that safety equipment, including antidotes, if necessary, is available on the site.

Note: Cleaners, solvents and hazardous materials are not to be stored with flammable liquids.

4.9 INCIDENT MANAGEMENT

4.9.1 INCIDENT REPORTING SYSTEM

The Principal Contractor must implement and comply with **OH&S Act – General Administrative Regulations**.

The Principal Contractor must have an accident and incident reporting system that is compatible with COGHSTA standards and all applicable statutory requirements. Any incident or "near miss" involving COGHSTA, COGHSTA representative, the Principal Contractor, its Sub Contractors or any third party's personnel, property, plant or equipment is verbally reported immediately to COGHSTA or COGHSTA representative, whether or not injury to personnel or damage to property or equipment resulted. A brief written report stating the known facts and conditions (including a preliminary assessment of the most likely consequences and the potential of the incident in the circumstances) is provided to COGHSTA or COGHSTA representative by the end of the shift.

The Principal Contractor is reminded that this incident reporting system does not exempt the Principal Contractor from providing accident reports by Statutory Authorities, in particular, the Principal Contractor's responsibility for reporting accidents in accordance with the requirements of the **OH&S Act & Compensation of Injuries and Diseases Act.**

Principal Contractors must complete and keep record of Annexure 2 as required by legislation.

4.9.2 SERIOUS INCIDENTS

For any serious incident involving a fatality, or permanent disability, the incident scene is left untouched until witnessed by the representative of the Police. This requirement does not preclude immediate first aid administration and the scene made safe.

4.9.3 INCIDENT REPORT AND CLOSE OUT

The Principal Contractor must investigate the causes of all work accidents and significant incidents and must provide COGHSTA or COGHSTA representative with the results of the investigation and recommendations on how to prevent a recurrence. A formal root cause investigation process for all high potential incidents is to be followed.

The written report must include:

- Date, time and place of non-conformance.
- Detailed description of non-conformance.
- Type of injury (if any).

- Medical treatment provided (if any).
- Persons involved.
- Corrective action to prevent recurrence.

COGHSTA or its representative must have the right to designate a representative to participate in the investigation at COGHSTA or its representative's sole discretion.

Where the results of any investigation are not completed and issued to COGHSTA or it's representative within 24-hours from the time of occurrence, the Principal Contractor must supply to COGHSTA or it's representative a written update every 24-hours on the progress and results of the investigation until such time as the incident report has been fully completed and issued to COGHSTA.

Where required by statutory requirements the Principal Contractor is responsible for incident reporting to the appropriate authority.

4.9.4 CORRECTIVE ACTION

The Principal Contractor must:

- Ensure all hazards, incidents and accidents, including near misses, are investigated fully and documented.
- Take corrective action to eliminate the cause of the incident or accident to prevent recurrence.
- Review inspection and audit reports to identify areas of improvement.

For the purpose of this specification, a Health & Safety incident is taken as an incident involving harm or potential harm to any employees of the Principal Contractor, the community, Sub-contractors and/or the work environment, or where the physical well-being of a person, the community or the work environment has been placed at risk, e.g. a near miss.

4.9.5 INJURY MANAGEMENT

The aim of injury management is to ensure appropriate and adequate medical treatment is provided to injured employees to enable a quick and efficient return to the workplace.

A local doctor should be nominated for the project to which the project staff will refer all injured employees requiring medical assistance in the first instance. If the Principal Contractor does not wish to utilise the services of the local doctor, the Principal Contractor must make alternative arrangements and notify COGHSTA in writing of the doctor to be used. The treatment of injured personnel will not be compromised and the immediate needs will be referred as required by the paramedics.

The doctor is briefed on the commitment by the Principal Contractor to injury management, alternative duties, and early return to work programmes and rehabilitation.

Effective injury management must commence immediately after the accident has occurred and is include:

- Counselling of the patient.
- Follow up, including personal off site visits by the Principal Contractor (where required).
- Provision of off-site personal, family and social assistance where required.
- Formal assessments of employee capabilities prior to return to work.
- Provision of alternate meaningful duties, where appropriate.

4.10 SITE MANAGEMENT

To be read in conjunction with other Sections of the Contract.

4.10.1 NOTICES

The Principal Contractor must provide to COGHSTA or its representative copies of any notices, correspondence or directions of whatsoever nature issued by any relevant government authority concerning Health & Safety within 8-hours of the dispatch and/or receipt of such notice, correspondence or direction, and must immediately comply with same.

4.10.2 INCORPORATION OF DOCUMENTS INTO CONTRACT

The Principal Contractor must comply with all site rules/site instructions issued to it by COGHSTA, which are by this reference incorporated into and made part of his Contract.

4.10.3 INTERPRETATION OF SAFE WORKING INSTRUCTIONS

The Principal Contractor must implement and comply with **OH&S Act – Section 8 (2) (j).**

If any site personnel are in doubt as to the meaning of any safe working instructions, they must consult their supervisor who issued them or the site office of COGHSTA representative.

4.10.4 EMERGENCY RESPONSE PLAN

The Principal Contractor must provide COGHSTA with both electronic and hard copies of the Principal Contractor's Emergency Response plan that sets out its procedures for fire, spill response, rescue from heights and other relevant emergency response procedures.

Emergency Drills

The Principal Contractor must conduct emergency response drills (including, but not limited to, fire, rescue and spill drills) to test the effectiveness of its emergency procedures and equipment, and the knowledge and proficiency of all response personnel. The timing of such drills is agreed and is the responsibility of the Principal Contractor after consultation with COGHSTA or COGHSTA representative. The Principal Contractor must report the test results to COGHSTA, or COGHSTA representative if requested and as required by any regulatory agency.

Fire Fighting

The Principal Contractor must prominently display, in all relevant languages for all areas of operation under its control, the procedures to be carried out in the event of fire.

The Principal Contractor must train all employees in the procedures to be followed in the event of a fire and/or a fire alarm.

Principal Contractors must familiarize themselves with locations of fire equipment in the vicinity of their work site. Work areas are clear, at all times, of any smouldering material which could fuel a fire. A thorough inspection is made of the area at the end of any working period to ensure that no smouldering material is left at the work site or any situation left in such a manner that a fire or accident could result.

The Principal Contractor must supply all fire extinguishers for its work as required by the statutory regulations governing the site. Fire extinguishers are not to be used for any purpose other than their intended use.

Fire precautions on construction sites

In addition to the guidelines above, the Principal Contractor must implement and comply with **Construction Regulation.**

Good Housekeeping plays a major role in Fire Prevention.

The Principal Contractor must ensure that:

- All flammable/combustible material is removed on a daily basis.
- The minimum amount of flammable liquid (petrol, thinners and paint) is brought on to site.
- All required safety signs are posted if any work is carried out with flammable/combustible materials i.e. NO SMOKING, NO NAKED FLAMES and NO UNAUTHORISED ENTRY.
- Supervisors do constant and regular inspections to ensure adherence to procedures.

Fire Fighting and Training

- It is the responsibility of the Principal Contractor to ensure that supervisory staff and all persons involved in grinding, cutting or welding are familiar with firefighting procedures and the use of firefighting equipment.

Maintenance

All Fire Extinguishers must be:

- Conspicuously numbered.
- Entered in a register.
- Visibly inspected monthly by a competent person.
- Inspected at least every six (6) months by an accredited supplier.
- Results entered in the register and signed.

Damaged Equipment

Fire extinguishers with damaged or broken seals are to be returned to an accredited supplier for re-charge/repair. Details are entered in the register.

High Fire Risk Areas

Cognisance that certain areas might be designated as High Risk Areas on account of the dry grass, etc. Present as such, additional precautions have been instituted to ensure that strict control is exercised over all grinding, cutting and welding operations being carried out in these areas.

4.10.5 SAFETY EQUIPMENT

The Principal Contractor must ensure that all its safety equipment is regularly maintained and tested, that it is always in a serviceable condition, and that the Principal Contractor's personnel and its Sub-contractors personnel are instructed, trained, competent and where required, certified in the use of such safety equipment. The safety equipment must comply with all applicable laws, rules and regulations.

4.10.6 WEATHER PRECAUTIONS

The Principal Contractor's Emergency Response Manual must include procedures for adverse weather conditions (high winds, flooding, storm surge, lightning, etc.). In the event of impending adverse weather or other conditions the Principal Contractor, in consultation with COGHSTA and COGHSTA representative, must decide

whether to institute such precautionary measures in connection with the carrying out of the work, for example emergency temporary bunding, tie down of partly installed structures, etc.

4.10.7 VEHICLES

Access to Site

COGHSTA reserves the right to search any vehicle on the premises or when entering or leaving the premises, whether privately owned or otherwise.

The Principal Contractor is solely responsible for the safety and security of any of his vehicles (including private vehicles) on the premises.

Vehicle Drivers

The Principal Contractor vehicle driver must:

- Comply with all safety, direction and speed signs and drive in accordance with the provisions of COGHSTA site traffic rules.
- Ensure that vehicle loads are properly secured and loaded onto vehicles.
- Not divert from designated routes or travel on unsealed roads/areas without the prior written approval of COGHSTA representative.
- Obey all instructions given by COGHSTA Security/Emergency Services Officers.
- Ensure that vehicles are not overloaded.
- Traffic fines are the responsibility of the driver. COGHSTA will not be liable for paying fines.

Licensing of Vehicle Drivers

Unlicensed people must not be permitted to control vehicles on the premises.

The Principal Contractor must not permit his employees or employees of his Sub-contractors to operate equipment of a mobile plant without appropriate appointment.

Registration of Vehicles

All vehicles used by the Principal Contractor on the premises are roadworthy and registered by the appropriate Traffic Authority.

All vehicles used by the Principal Contractor on the premises are maintained to standards of the **Road Traffic Act 29/1989.**

The Principal Contractor must provide evidence to COGHSTA representative that all fork lifts, front-end loaders, back hoes, elevated platforms, road vehicles or mechanical equipment of any kind, which are used in complying with Principal Contractors obligation under this Contract, comply with the requirements of the **Occupational Health & Safety Act 85/1993** and regulations and of the **Road Traffic Act 29/1989** prior to that equipment being brought onto the premises.

In the event the equipment is not owned by the Principal Contractor, the Principal Contractor is still responsible for ensuring all conditions are complied with by all of his Sub-contractors or hire companies.

On-Site Vehicles

Due to heavy traffic operating in and through the construction site, and in the interest of general safety, only the minimum necessary numbers of Principal Contractor's vehicles are permitted on site.

When not travelling through the site the Principal Contractor's haulage vehicles or mobile plant are parked within his site lay down area. All cars parked on site are parked at the owners/Principal Contractors own risk!

Accidents

In the event of an accident on site in which the Principal Contractor's employee or Sub-contractors is involved, the driver must remain at the scene until the accident is attended by COGHSTA representative, or the Principal Contractor has received approval from COGHSTA representative, to leave the scene unless medical attention is required.

Rules

Traffic rules and signs such as stop and speed signs are obeyed at all times.

As a result of the large amount of heavy equipment and other vehicles in operation on site, drivers/operators must adhere strictly to all rules and regulations. All vehicles/equipment must also confirm to all rules and regulations.

No passengers are allowed to be on the back of any vehicle in motion or sit on the sides of the vehicle or have any part of his body hanging over the side of the vehicle whilst in motion.

No passengers are allowed in or on the back of a vehicle with any unsecured load.

Under no circumstances must any person try to secure any load manually whilst the vehicle is in motion. Loads on the vehicle are properly secured before the vehicle is allowed to move.

No passengers are allowed to sit on top of the load if the load is higher that the sides.

The 2-man rule is always applied. Only 2 persons (driver and one passenger) are allowed in front of an LDV.

No passengers are allowed on mobi-lifts, elevated work platforms, tractors, fork trucks or dumpers, front end loader, excavator, TLB or on trailers behind vehicles.

No vehicles are left with the engine running or the keys in the ignition if the driver leaves the vehicle unattended.

In the event of an accident in which the Principal Contractor's employee is involved, the employee must remain at the scene until COGHSTA or COGHSTA representative or the police arrive on the scene or until COGHSTA or COGHSTA representative or the police authorises the employee to leave the scene, unless the employee needs medical attention.

Transportation and Securing of Loads

Securing of Loads on Vehicles

It is unacceptable that a person is injured or property damaged as a result of loads being transported on site without appropriate securing.

Principles

- Any load-carrying vehicle is loaded, secured and driven in such a way so as to prevent injury to any person, or damage to any property.
- The vehicle should be suitable for the type and size of the load.
- The load is correctly positioned on the vehicle.
- The load-securing equipment and vehicle restraint structures are strong enough for their intended purpose and are functional.
- Loads are restrained to prevent unacceptable movement.
- The driver must take into account the changes in the vehicle's stability, steering and braking characteristics influenced by the load.

What Truck Drivers Must Do

- Secure the loads according to the principles.
- If unsure, seek advice before proceeding.

What Dispatch Points Must Do

- Check that the load has been restrained correctly before the truck is allowed to leave.

Note: Nobody may ride on the back of any loaded vehicle.

4.10.8 COMPLETION INSPECTION

On completion of any work on site the Principal Contractor must notify COGHSTA or COGHSTA representative and conduct a final inspection to ensure that all items and areas of the plant are left in a safe, clean and operational condition.

4.10.9 HOUSEKEEPING

The Principal Contractor must implement and comply with **Construction Regulation.**

The Principal Contractor must maintain all work areas in a tidy state, free of debris and rubbish. Unless directed otherwise, the Principal Contractor must dispose of all debris, rubbish, spoil and hazardous waste off site, outside COGHSTA property in a designated and authorized area or facility. The Principal Contractor should make itself aware of COGHSTA Waste Management Plan and collection disposal arrangements and align its waste management programme accordingly.

In case where an inadequate standard of housekeeping has developed and compromised safety and cleanliness, COGHSTA representative has the right to instruct the Principal Contractor to cease work until the area has been tidied up and made safe. Neither additional costs nor extension of time to the Principal Contractor is allowed as a result of such a stoppage. Failure to comply must result in site cleaning by another Contractor at the cost of the non-complying Principal Contractor.

The Principal Contractor must carry out regular safety/housekeeping inspections at least weekly to ensure maintenance of satisfactory standards. The Principal Contractor must document the results of each inspection and must maintain records for viewing by COGHSTA representative.

At the time that the Principal Contractor establishes site facilities and permanently mans the site, or at an alternative time agreed between COGHSTA and the Principal Contractor, the Principal Contractor must assign dedicated housekeeping crews.

These crews must assist in maintaining a clean and safe working environment by patrolling the Principal Contractor's work area (including COGHSTA site offices, lay down areas and construction site) and performing such duties as ensuring that scrap material, general refuse, rubble and other forms of unwanted materials are removed for the site within four (4) hours of generation.

Housekeeping crews must also actively assist in creating and maintaining a safe work environment by being aware of unsafe conditions, bringing these conditions to the attention of appropriate personnel and by direct intervention through tasks such as ensuring leads and hoses are placed in a manner which avoids the creation of trip hazards or potentially unsafe conditions. The contractor must have bins on site for recycling.

Note: No shift may commence without and/or before proper housekeeping is in place.

4.10.10 MAINTENANCE

All equipment and structures, both fixed and temporary, are to receive regular maintenance at intervals no longer than recommended by the manufacturer under a planned maintenance system to ensure the safety of personnel who are responsible for operating the equipment.

The Principal Contractor must maintain copies of all current tests and maintenance certificates relating to lifting equipment, lifting gear and slings, and must make them available to COGHSTA or COGHSTA representative upon request. No lifting equipment is used unless a current Certificate of Inspection is available and the SWL is stamped on the equipment.

4.10.11 DEFECT REPORTING AND CORRECTION

Where defects are identified during any routine inspection, pre-start check or during operation or use of any tool, equipment, motor vehicle, structure, etc., it is immediately reported for repair and the tool, equipment, etc. is appropriately tagged to identify the defect and to limit further use until repairs have been completed and re-inspection carried out. Such defect report is in writing.

4.10.12 PRINCIPAL CONTRACTOR HEALTH & SAFETY DOCUMENTATION

The Principal Contractor is required to supply COGHSTA with Health & Safety documentation as indicated in this specification and as directed by COGHSTA throughout the Contract.

4.10.13 ELECTRICITY

The Principal Contractor must implement and comply with **OH&S Act Electrical Installation Regulations** and **OH&S Act Construction Regulation**.

All electrical installation is carried out by an appointed and qualified electrical instillation electrician. The Principal Contractor must keep record of his approval of the installation. The electrical installation shall be approved by a master electrician.

Temporary electrical installations shall be inspected on a weekly basis by a competent person and registers of such inspections shall be kept.

The contractor must provide a certificate of compliance for all electrical installations.

4.10.14 WEARING OF SHORT TROUSERS/PANTS ON SITE (PROHIBITED)

Long trousers/pants are worn in the construction areas.

4.10.15 INTOXICATING LIQUOR OR DRUGS

The Principal Contractor must implement and comply with **OH&S Act – General Safety Regulation**.

Any person found on the site or attempting to enter site, in possession of or consuming intoxicating liquor or drugs, or considered unfit for work from the apparent influence of intoxicating liquor or drugs or prescription drugs, will be removed from the site.

4.10.16 TRESPASS

The Principal Contractor and his employees must not trespass on any land outside the limits of the site, as determined by COGHSTA representative, and must ensure that all fences are maintained during the Contract. If instructed by COGHSTA representative, the Principal Contractor must remove from the site any employee who offends against the provision of this clause.

The Principal Contractor and his employees are required to work only in the specified construction areas and access to these areas is only by routes specified by COGHSTA representative.

4.10.17 VISITORS TO SITE

Visitors to the site are required to comply with a site-specific safety induction prior to being allowed access to the site. Visitors will be required to conform to the site PPE requirements and should arrive at site with the appropriate PPE.

The Principal Contractor must refer all applications for site inspections to COGHSTA representative. The Principal Contractor must not arrange inspections by visitors to the site without the prior approval of COGHSTA representative.

4.10.18 EMERGENCY EVACUATION

The Principal Contractor must implement and comply with **OH&S Act – Environmental Regulation**.

The Principal Contractor must establish and implement an emergency procedure in line with the Site Specific Emergency Plan and ensure that in the event of fire, explosion, flooding, etc., all staff leave their place of work at the sound of the fire gong or siren and proceed to a safe area demarcated for the purpose, away from offices and stores buildings. The Principal Contractor must provide a siren markedly different from that of the operating plant area.

The area selected is demarcated and the relevant “assembly point” sign displayed. An evacuation route diagram is visibly displayed in all buildings.

An Emergency Evacuation Procedure is drawn up and all staff members and Principal Contractors are given awareness training and participate in regular evacuation drills.

The procedure must be submitted to COGHSTA Project Manager.

4.10.19 SAFETY OFFICER HEALTH & SAFETY ROLES AND RESPONSIBILITIES

Principal Contractors Site Safety Officer

- Implement and maintain the Safety Management Plan on site. Communicate plan to Sub-contractors and ensure compliance with the Safety Management Plan.

- Advise the Site Management team on safety issues and suggested solutions.
- Report directly to the Principal Contractor's Construction Manager and act on his authority regarding safety issues.
- Promote a culture in which safety is the prime concern and must never be compromised.
- Promote the involvement of all employees and Principal Contractors in improving safety.
- Focus on and establish a culture of the elimination of unsafe acts, and the rectification of unsafe conditions quickly by management and supervision.
- Ensure self and others safety awareness at all times.
- Facilitate and participate in all Principal Contractors and Sub-contractors accident/incident investigations.
- Ensure that all incidents are thoroughly investigated to avoid re-occurrence.
- Ensure Safety Management Information (SMI) boards are erected in each working area, and the following minimum information is displayed – Method Statement, Risk Assessment, DSTI, Supervisor, First Aider and Safety representative.
- Coordinate all safety induction training requirements and conduct COGHSTA specific induction for COGHSTA and Principal Contractor supervision.
- Coordinate site accesses and security.
- Coordinate and implement comprehensive daily incident reporting by management, supervision, foremen and safety officers.
- Compile and present a weekly safety report to include: incident trend analyses and preventative measures, Principal Contractors and Sub-contractors planned tasked observations for week ahead, DSTI quality and effectiveness, management walkabouts including participation and findings, high risk activities for the week ahead, risk assessment plan for week ahead (based on the construction plan), statistics from previous week regarding man-hours, complement, RA's completed, induction and medicals (entry and exit) and estimates for week ahead regarding, complement, RA's, induction and medicals (entry and exit).
- Conduct a bi-weekly internal Principal Contractor and Sub-contractors audit to ensure implementation and continuous compliance with the Safety Management Plan and applicable legislation. Record finding and issue action sheets for deviations. Deviations to include an action close out plan and report.
- Accompany injured people to doctor/hospital and ensure prompt treatment and return to work. Report all incitements in a timely manner. In the case of a medical treatment/lost time injury case/fatality, immediately (telephonic) to COGHSTA representative and follow it up with an initial Incident Notification and Significant Safety Occurrence (SSO) report before the end of shift and a complete investigation within 24-hours.
- Coordinate and ensure the pre-check and recording thereof for all tools, plant and equipment.
- Final check and sign-off of RAs before submitting to COGHSTA Project Manager for approval.
- Implement and maintain the Construction Regulations.

4.10.20 RISK ASSESSMENTS

- To be completed **week**ly before the execution of a job, and submitted to COGHSTA Project Manager for approval to avoid delays.
- Each Principal Contractor must submit a RA plan that will also include a monitoring and review plan.
- Attach **Safe Work Procedures** and **Method Statements** to Risk Assessments.
- Each Supervisor is to communicate job specific risk assessments to every person involved on the job. Workmen must sign an acknowledgment of the communication of and understanding of the risks related to the job and preventative measures and controls.
- **General Risk Assessments will not be accepted.**
- RA team to consist of the Principal Contractor's Construction Manager, Specific Task Supervisor and specialists executing the job, Safety Officer and COGHSTA Supervisor and/or Project Manager.

4.10.21 DAILY SAFE TASK INSTRUCTION (DSTI'S)

- Each Principal Contractor's Supervisor and Foreman must, on a daily basis before work commences, inspect his work area and complete the checklist part of the DSTI.
- Each Principal Contractor's Supervisor and Foreman must , complete the DSTI regarding tasks for the shift, specific hazards and specific precautions and also refer to and discuss the precautions and controls of the relevant RAs.
- Discuss the DSTI with his team.
- The Supervisor and his team must then sign the DSTI acknowledging communication thereof.
- If the scope of work or job changes, the DSTI is revised and communicated before commencing with the changed job.

4.10.22 PLANNED TASK OBSERVATIONS (PTO)

- Each Principal Contractor's Supervisor and Foreman will complete and submit at least one PTO weekly.
- When sub-standards are identified the RA is revised and communicated again.
- Discuss and rectify non-standard actions with employees.

4.10.23 SITE SPECIFIC HEALTH AND SAFETY RULES AND REQUIREMENTS

The Principal Contractor must provide, ensure implementation and comply with the following Site Specific Health & Safety rules and requirements:

- Safe **Access and Egress** to and from work areas.
- Good **Housekeeping** and Stacking Practices – Continuous cleaning and clearing of work platforms after every shift. No work to commence before complying.
- Safe and orderly routing of **welding cables, electrical extensions and air hoses.** Elevated out of walk ways on temporary hooks/racks.
- Prohibiting certain work in **wet conditions** (i.e. elevated work etc.)
- People may not be **transported** on the back of a bakkie and/or truck and never on top of material.
- **Elevated work** - Compulsory use of **Lifelines, Safety Harness & Fall Arrestors** including a height rescue system and training of rescuers.
- **Scaffolding** to comply with legal, **SANS**.
  - Ladders on inside of frames, staggered every two meters with a safe landing platform.
  - Trap door fitted on working platform.
- **Work benches** to be provided for on-site work.
- **Solid Barricading** – Solid frame covered with orange netting for excavations, overhead work, walkways and all openings.
- Using **lanyards** to attach tools and equipment at heights.
- Wearing **gloves** applicable to task and approved eye protection for all activities.
- Use of **spacers/wedges** when fitting equipment.
- **Shields and fire blankets** to be used for grinding, welding and gas cutting operations to contain sparks.
- **Fire extinguishers** to be with people when doing hot work, on self-propelled mobile machines and at all fuel driven machines.
- **Firewatchers** to be posted when commencing hot work in hazard prone areas.
- **Excavation -** Provide for v-shaping, shoring, battering back, soil and loose rocks to be 3 meters from edge and approved barricading.
- **Dedicated flagmen** with illuminating vests to be in control of movement of heavy mobile and earth moving equipment.
- Safety Officer to have a **computer and cell phone.**

- The **cradle to grave** principle is implemented and adhered to regarding spillage of hazardous and flammable substances.
- **Voltage reducers** fitted to all welding machines.
- **Concrete buckets** to be fitted with safety chains and opening wheels.
- **Earth leakage** units to be fitted to all portable generator sets and welding machines with electrical outlets.
- **Earth moving vehicles** to be fitted with prescribed rotating lights and operated with headlights on. Site vehicles to be fitted with whip aerials and rotating lights. Reverse hooters/back up alarms to be functional at all times.
- **Weatherproof caravan type connections** fitted to all electrical equipment and extensions when used externally in wet conditions.
- **Flashback arrestors** at cylinders and torches and proper clamps (gas cutting equipment).
- Correct and safe **manual lifting** operations.
- **Supervision ratio** of foreman to works – Not > 1:15

Portable Toilets:

- At a ratio of 1:10.
- Separate toilets for men and woman.
- To be cleaned daily and maintained weekly as a minimum requirement.
- Running water to be available at toilets.

4.10.24 FUNDAMENTAL HEALTH AND SAFETY REQUIREMENTS

Before any work commences, proof of and the following non-negotiable deliverables are required:

- Legal liability training for all Supervisors and Construction Managers.
- Incident investigation training by Construction Manager and/or Safety Officer.
- Letter of good standing with the Workman's Compensation Commissioner.
- Competency training certificates for people to execute the job.
- Method statements for work to be conducted.
- Risk assessments for every job.
- Signed legal appointments as required by legislation.
- Principal Contractors Safety Officer to be approved by COGHSTA Representative.
- All equipment to be identified on a current register and backed up by relevant test certificates.
- A medical fitness certificate for each employee.
- Health & Safety Management Plan

4.1 TERMINATION AND SUSPENSION OF BREACH OF HEALTH AND SAFETY CONDITIONS

COGHSTA and the Principal Contractor agree that the provisions of this Clause are of the utmost importance and any relevant violation of them is considered to be a material and substantial breach of this contract.

The Principal Contractor must not cause, permit, or tolerate a hazardous, unsafe, unhealthy or environmentally unsound condition or activity over which it has control at the site. If the Principal Contractor becomes aware of any hazardous, unsafe, unhealthy or environmentally unsound condition, including a violation of any of the Health & Safety requirements, it must immediately notify COGHSTA or COGHSTA representative and take whatever steps are necessary and as is agreed between COGHSTA and the Principal Contractor to remove from site, eliminate, terminate, mitigate and rectify the condition. If remedial action is not implemented within the agreed time, COGHSTA or COGHSTA representative has the right to stop work forthwith.

If the Principal Contractor fails to take the necessary steps to cure the breach or violation promptly or to otherwise comply with this Clause, COGHSTA may exercise its rights of termination according to the default provisions of this Contract.

Should COGHSTA or COGHSTA representative observe an unsafe act or become aware of a planned unsafe act, COGHSTA representative may direct the Principal Contractor to cease or not to proceed with the unsafe work. The Principal Contractor must, at their own cost and risk, modify its Method of Work in order to work safely.

4.2 SAFETY CONFLICT

Where any conflict exists between the requirements of this Annexure, the site rules or statutory requirements/regulations the higher standard must apply unless such conflict is brought to the attention of COGHSTA or COGHSTA representative and a direction is provided. The Principal Contractor is deemed to have allowed for the higher standard.

The Principal Contractor is legally responsible for ensuring that he conforms to all applicable aspects of the **Occupational Health & Safety Act 85/1993** and **Regulations** and other relevant Acts and Regulations where applicable. If in dispute with COGHSTA specification and or legislation, the most stringent requirement must apply for all COGHSTA controlled project/site.

HEALTH AND SAFETY BILL OF QUANTITIES

Note to Quantity Surveyor

Failure, by the Tenderer, to price the items indicated below individually or per item will result in the Tender being deemed non-responsive. The legal requirements contemplated in the Construction Regulations (CR) 5(1)(g):

"A Client must ensure that potential principal contractors submitting tenders, have made adequate provision for the cost of health and safety measures"
and CR 5(1)(h)
"A *client must ensure that principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely"*

Shall apply and will be used to motivate the disqualification of the Tender. The contractor's attention is further drawn to Section 41 of the **Occupational Health and Safety Act No. 85 Of 2014: This Act not affected by agreements**

Subject to the provisions of sections 10 (4) and 37 (2), a provision of this Act or a condition specified in any notice or direction issued there under or subject to which exemption was granted to any person under section 40, shall not be affected by any condition of any agreement, whether such agreement was entered into before or after the commencement of this Act or before or after the imposition of any such condition, as the case may be.

Note to Principal Contractor

Prior to pricing the principal contractor **must familiarize him/herself** with the **Occupational Health and Safety Act No. 85 of 2014, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health &Safety specifications.**

Note to Principal Contractor and Quantity Surveyor

After pricing of the health and safety bill of quantities, the **Contractor** must sign the **Certificate of Acquaintance** as evidence that he is au fait regarding the contents, obligations and demands of the **Occupational Health and Safety Act No. 85 of 2014**, **Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health &Safety specifications.** Failure, by the Tenderer, to sign the Certificate of Acquaintance may result in the Tender being deemed non-responsive.

	Description	Unit	Qty	Rate	Total
	General				
1.	Allow for the necessary Workman's Compensation Fund or FEM contributions for the duration of the project with and including renewals	item			
2.	Allow for the preparation and approval of project-specific H&S Plan & File [CR 7(1)(a)]	item			
3.	Allow for the implementation and maintenance of project-specific H&S Plan & File. [CR 7]	Months			
4.	Allow for the preparation and approval of project-specific COVID 19 H&S Plan & File	item			
5.	Allow for the implementation and maintenance of project-specific COVID H&S Plan & File.	item			
6.	Allow for the appointment of a Full-Time Competent Construction Health & Safety Officer (SACPCMP Registered) to assist in the control of all health and safety related aspects on site as per [CR 8(5)]	Months			
7.	Provide for appointment of responsible and competent person/s to manage and supervise the works and administer and enforce health and safety on site as per [CR 8(1),(2), &(7)	Months			
8.	Allow for the appointment of a Full-Time COVID Compliance officer	Months			
9.	Allow for provision of telecommunication facilities for the appointed Construction Health & Safety Officer	Months			
10.	Allow for provision of Basic Emergency Preparedness and Response equipment & at least Level 2 First Aider/s	Months			
11.	Allow for Sanitizers/Disinfectants for duration of project for prevention of COVID 19	Months			
12.	Allow for the purchase of digital thermometers for COVID 19	item			
	Provide, supply and maintenance for <u>each</u> worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:				
13.	Hard Hats (High Density polyethylene, & 6-point lining)	No.			
14.	Overall/work suit (100% Cotton)	No.			
15.	Rain suits	No.			
16.	Safety boots/shoes (Steel-Toe)	No.			

	Description	Unit	Qty	Rate	Total
17.	Safety Gumboots (Steel-Toe)	No.			
18.	Safety gloves	No.			
19.	Ear Plugs/Muffs	No.			
20.	Dust Mask (at least FF2 type)	No.			
21.	COVID Fabric masks at least 2/person	No			
22.	Respiratory Protective Equipment	No.			
23.	Safety goggles/ Eye Protective Equipment	No.			
24.	High visibility reflective vests and/or bibs	No.			
25.	Personal Fall arrest and rescue equipment with and including life lines and associated equipment	No.			
26.	Temporary handrails, toe boards other than for access scaffolding	Meters			
27.	Temporary warning signs and symbols	No.			
28.	SANS approved safety netting (orange color with minimum of 1,2 meters high)	Meters			
29.	Provision for the supply and maintenance of Road Traffic Signs as in terms of the South African Road Traffic Signs Manual complete	Item			
30.	Allow for Pre-employment medical examinations	item	1		
31.	Allow for exit medical examinations	item	1		
	HEALTH AND SAFETY EDUCATION				
32.	Allow for HIV/AIDS awareness and Implementation programmes, including STI and TB	Months			
33.	Allow for all compulsory health and safety awareness programme (e.g. Inductions, toolbox Talks, Safety Promotions, Risk Assessment, First Aid, Fire Fighting, H&S related training, etc.)	Item			
34.	Allow for COVID awareness and Implementation programmes				
	ENVIRONMENTAL				
35.	Provide for adequate handling and storage of materials so as to minimize contamination of ground, air or water.	Item	1		
36.	Provide for the adequate and safe collection and disposal of waste material from site by an approved method.	Item	1		
37.	Provide Ablution Facilities and Eating Area for workers.	Item	1		
38.	Provide for Fresh drinking water	Item			

	Description	Unit	Qty	Rate	Total
39.	Provide for rehabilitation on completion of site areas and temporary access routes not covered by construction or landscaping specifications.	Item	1		
40.	Provide for adequate dust control measure, including regular watering of access route	Item			
41.	Provide for stockpiling of topsoil for re-use	Item	1		
42.	Provide for an Environmental Officer or Responsible person to prepare and update Method Statements, conduct regular inspections, maintain records, and report to the Principal Agent.	Item			
	COMPULSORY BREAKDOWN FOR THE ADJUSTMENT OF PRELIMINARIES				
43.	Value Related	Item			
44.	Fixed Value Related	Item			
45.	Time Related	Item			
46.	**TOTAL CARRIED TO ITEM C15 OF PRELIMINARIES**				

CERTIFICATE OF ACQUITANCE WITH TENDER DOCUMENTS

Name of Company_____

I/We_____

Hereby certify that I/we acquainted ourselves with the Health and Safety Act 85 of 2014 as well as the Construction Regulations, 2014 and all conditions contained herein as laid down by the Client for the carrying out of construction work for which I/We submit our response.

I/We further agree that the State shall recognise no claim from me/us for relief based on allegations that I/We overlooked any tender requirements or failed to take into account the purpose of completing the documentation as required.

*Signed at*_____*on this the*_____ *ay of*_____*20*__

_

_____ _____

Witness *Name In Block Letters*

_____

For and on behalf of Principal Contractor

_____ _____

Principal Contractor: Signature *Name of Principal Contractor*

1. Objective

The objective of this baseline risk assessment was to identify and categorise the low to high hazards associated with performing tasks during different work categories.

The evaluation of results will assist management to eliminate, minimise or control risks to workers associated with the tasks performed or exposure to the working environment.

This risk assessment was also conducted to assist management in identifying training needs in order to concentrate efforts where it is mostly needed.

1.1 According to the **Occupational Health and Safety Act 85 of 1993**, all companies must assess where they stand in terms of risk, identifying the major risks which they are exposed to thereby establishing their priorities and a system for future risk control. A baseline risk assessment must be comprehensive and may well lead to further, separate and more in-depth risk assessment studies.

1.2 The baseline risk assessment should be reviewed periodically, about every year, after every accident/incident, change of work force or change of plant/equipment to ensure that it is still relevant and accurate. Any other studies will need to be incorporated to achieve a 'complete picture".

2. Scope of work

The extent of the works is as follows:

The scope is the development of a baseline risk assessment that addresses all risks pertaining to occupational health and safety as affected by the construction work.

The scope of work for the Remedial work to 491 RDP Houses includes:

- Excavation
- Trenching
- Brickwork
- Roof work
- Concrete work
- Mobile plant operation
- Demolition
- Scaffold

Also refer to the scope of work as per Bill of Quantities in tender document

3. Risk Analysis Method

The risk analysis considered all the tasks as described in the safe work procedures developed for this specific operation.

The risk analysis included

a. Description of the task/system under analysis.

b. Evaluation of each risk by determining the probability of recurrence and severity of each event.

3.1 Evaluation of current and planned controls, barriers and safeguards.

3.2 A selected team of personnel were involved to conduct this on the job task analysis to determine baseline risk assessment

4. Determination of Levels of Risk

a. Risks associated with each step in the operational process were considered.

b. The following factors were considered and rated in accordance with the effect it would have on the items described below, should the event occur:

- Threat to the health and safety of a worker
- Severity of the event
- Likelihood of the event happening
- Event consequence

A risk level was attributed to each event in the following manner:

Low risk	=	1-6
Medium risk	=	7-15
High Risk	=	16-24

5. Risk Ranking & Calculation of risk

5.1 **Risk Ranking:**

Consequence:

Fatality or permanent disability	- 5
Major Injury	- 4
Average lost time injury	- 3
Minor Injury	- 2
Medical treatment only or less	- 1

Probability:

Common Occurrence	- 5
Has Happen	- 4
Could Occur	- 3
Not Likely to Occur	- 2
Very Unlikely	- 1

5.2 **Calculation of Risk:**

Consequence: Probability = Risk Ranking (see table in risk assessment)

6. Evaluation of Results

Activities listed in the high risk categories must be seen as tasks requiring immediate attention. Training will, in most instances, solve the problem satisfactorily.

An implementation plan may then be devised to address the outstanding issues. This action plan must take cognisance of the hazards that should be eliminated concurrently.

7. Abbreviations

PTO	**-**	Planned Task Observation
SWP	**-**	Safe Work Procedure
SOP	**-**	Safe Operating Procedure
DSTI	**-**	Daily Safety Task Instruction
MSDS	**-**	Material Safety Data Sheets
HCS	**-**	Hazardous Chemical Substance

8. Assessment Team

The following people were involved in establishing the relevant task groups and analysis.

- N Miles - Risk Assessment Team Leader

9. Task Specific-Risk Assessment

Should the baseline assessment indicate tasks in High risk, a specific task risk assessment must be conducted. This assessment will then target the specific tasks and the hazards attached to it.

_____

Risk Assessment Team Leader

RISK ASSESSMENT TITLE / TASK	**BASELINE RISK ASSESSMENT**		
PROJECT NAME	Remedial work to 491 RDP Houses	**START DATE**	**To be determined**
RISK ASSESSMENT REFERENCE NO	**BLRA/LP/COGHSTA/2019/00**	**END DATE**	**To be determined**
REVISION STATUS	**00**	**REVISION DATE**	**3 months from commencement**
BRIEF DESCRIPTION OF WORK/ACTIVITY	Remedial work to 491 RDP Houses **CONTRACT 2334-50-02/02**		

REQUIRED AND EXISTING CONTROL MEASURES	**Available**		**Adequate**		**REMARKS**
	Yes	**No**	**Yes**	**No**	
Scope of Work (logical steps on how task will be performed)	✓		✓		
Procedures: (WI / SOP / Vendor Spec)	✓		✓		
Training, Induction, Competency Certificates, Specific Training / Other Instructions	✓		✓		Induction Training to be given before any work may commence
Special permits required (specify)		✓		✓	Construction Work Permit
Equipment / Tool Registers / Others (specify)	✓		✓		
Other		✓	✓		

PROBABILITY LEGEND		**CONSEQUENCE / INJURY / LOSS**		**RANKING**					
					5	**4**	**3**	**2**	**1**
5	Has happened	**5**	Fatality or permanent disability or > R 5,000,000	**5**	25	20	15	10	5
4	Quite possible to happen (Happen during last year)	**4**	Major Injury or > R 1,000,000 < R 5,000,000	**4**	20	16	12	8	4
3	Could Happen (No record of recent occurrence)	**3**	Average Lost time Injury or > R 500,000 < R 1,000,000	**3**	15	12	9	6	3
2	Not likely to happen	**2**	Minor Injury or < R 500,000	**2**	10	8	6	4	2
1	Very Unlikely	**1**	Medical Treatment only or Less or No Financial loss						

HIGH RISK = 17-24	MEDIUM RISK = 7-15	LOW RISK = 1-6	**PROB:** Probability	**CON:** Consequence	1	5	4	3	2	1

BASIC PPE REQUIRED FOR TASK	☑ **HARD HAT**	☑ **OVERALL**	☑ **EAR PROTECTION**	☑ **DUST MUSK**
	☑ **SAFETY GLASSES**	☑ **SAFETY FOOTWEAR**	☑ **GLOVES**	☑ **SAFETY VEST**
ADDITIONAL REFERENCES TO TASK	☑ **METHOD STATEMENT**	☑ **MSDS**	☑ **PLANNED TASK OBSERVATION**	☑ **SAFE WORK PROCEDURE**
	☑ **WORK INSTRUCTION**	-	-	-

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
1	Site Identification & Establishment	Project Mobilization of Personnel	Incompetent personnel appointed	Project interruption	3	4	12	• Ensure all responsible person on site submit CV's. • Legal appointment letters to be signed prior to commencement of work. • Competencies to be verified. Occupational medicals to be in place prior to commencement of work
				Legal liability claims	3	5	15	
				Financial loss	3	3	9	
			Workers not informed of hazards and risks associated with tasks	Serious injuries or Fatalities	4	5	20	• Site specific Induction training to be conducted on all personnel prior to commencing work.
			Workers exposed to unknown / unidentified hazards	Serious injuries or Fatalities due to unknown hazards	4	5	20	• Appointed Risk Assessor to be in possession of a HIRA certificate (Hazard Identification and Risk Assessment). • Task specific risk assessments to be carried out. • Employees to be trained in the content of the risk assessments. • Attendance registers to be in place
		Project Mobilization of Plant and Equipment	Poor / unsafe offloading practices	Load falling on employees	3	5	15	• Method statement / safe operating procedure to be in place for offloading plant and equipment. • To be communicated to employees. • Employees to stand clear of offloading operations

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Operators under the influence of Alcohol or other substances while transporting machinery and equipment to site establishment area	Accident causing property damage	3	2	6	• Company substance abuse / alcohol policy to be available and implemented by communicating the policy to all employees.
				Serious Injuries or Fatalities	3	5	15	
			Pedestrians / public passing by	Pedestrians / public hit by plant and machinery	3	5	15	• Camp area to be fenced off to prevent unauthorised entry. • Unauthorised and general warning signs to be displayed.
			Theft of material, equipment and machinery	Project interruption	3	3	9	• Project program to be compiled to prevent machinery and equipment to be left unattended. • Security to be implemented.
		Setting up Camp & Storage Facilities	Abnormal load	Accident	2	5	10	• Special arrangements to be made for abnormal loads. • Abnormal load signage to be displayed on trucks if applicable. • Valid driver's licence of driver.
			Containers placed on uneven surfaces	Property damage	2	3	6	• Containers / offices to be placed on level surface.
			Using defective / incorrect equipment to offload containers	Load falling on employees	3	5	15	• Lifting equipment to be load tested. • Load test certificates to be available. • Lifting equipment to be placed on register and inspected on a monthly basis. • Employees to stand clear of lifting operations and no employees allowed underneath suspended loads.

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Sub-standard housekeeping	Incidents / accidents	3	2	6	• High standards of housekeeping to be maintained. • Stacking and storage supervisor to be appointed in writing. • Monthly inspections to be conducted on stacking and storing on site
		Installation of Temporary Services	Incompetent person conducting installation	Property damage	3	2	6	• Competent / registered electrician to conduct temporary electrical installations. • Electrical COC to be issued and kept on H&S file
				Electrocution	3	5	15	
			Incorrect location / layout plan	Financial loss	3	3	9	• Temporary electrical installations to be done on exact location provided by after consultation with client
2	Excavations	Excavate by hand	Underground Services	Financial Loss	3	3	9	• Identify underground services • Location of underground services to be communicated to all relevant personnel • Excavation work to take place only as per approved permit / instruction
				Project Interruption	3	3	9	
		Excavate by Machinery	Employees standing too close to machinery	Bumping / hitting employee with bucket of machine causing serious injury	3	4	12	• Employees to stand clear of machinery in operation
			Incompetent / unfit operator	Accident causing fatality	3	5	15	• Operators to undergo occupational medical surveillance. • Occupational Medical Certificate to be available on H&S file • Operator competency to be available
			Underground Services	Financial Loss	3	4	12	• Identify underground services • Location of underground services to be communicated to all relevant

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
				Project Interruption	3	4	12	personnel • Excavation work to take place only as per approved permit / instruction
			Operating next to excavation edge / placing excavated material next to excavation	Collapse of trench / excavation (sides caving in)	4	5	20	• Ground stability to be tested in case of deep excavations • Excavated material to be placed away from excavation edge • Operator to be competent
		Backfilling	Employees standing too close to machinery	Bumping / hitting employee with bucket of machine causing serious injury	3	4	12	• Employees to stand clear of machinery in operation
3	Concrete Works	Steel Fixing	Tripping hazards	Bodily injuries / sprains and strains	3	3	9	• High standards of stacking and storage to be maintained on site • Task specific training to employees involved with steel fixing • Monthly register checklist on hand tools to be conducted. Deviations to be reported
			Using unsafe hand tools	Injuries	3	2	6	
		Ready-Mix	Unauthorised personnel pouring concrete	Injuries	3	3	9	• Only authorised personnel to pour concrete
			Concrete truck running over personnel, equipment or material	Fatalities	3	5	15	• Occupational medical certificate of operator to be available • First aid to be on site at all times • Workers to always wear correct PPE • Workers working with vibration equipment must ensure they have firm footing • Concrete truck driver to ensure that the handbrake is secured to prevent truck from running out of control. • Task Specific Training
				Property damage	3	3	9	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
				Project interruption	3	4	12	
		On Site Mixing	Exposed moving parts	Loss of limb	4	4	16	• All moving parts of concrete mixer to be guarded • Correct PPE to be worn by employees operating concrete mixer
			Excessive concrete dust	Occupational Illness or Disease	4	4	16	
		Using Concrete Pump	Concrete pump hitting workers	Injuries	3	3	9	• Workers to always stand clear from pump movements
4	Building Work (Reparation on RDP houses)	Brick Work & Plastering	Working with cement	Dermatitis	3	2	6	• Safety gloves to be worn by employees working with cement
			Handling bricks	Hand injuries	3	2	6	• Safety gloves to be worn by employees handling bricks
			Working at height	Employees falling from heights causing serious injuries of fatality	3	5	15	• Employees conducting brickwork at heights to follow the correct procedures. • Scaffolding to be erected in accordance with SANS 10085 • Safety harnesses to be worn when working at heights
			Falling objects (bricks, tools, etc.)	Head injuries	3	4	12	• Overhead work to be barricaded • Signage to be displayed • Head protection to be worn by employees where falling objects poses a hazard
		Electrical Work	Exposed to live electricity while installing plugs, light fittings, etc.	Electrocution	4	5	20	• Electrical source to be isolated when installing and connecting electrical plugs, etc. • To be done by a competent electrician

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Plumbing Works	Working at heights while installing gutters and downpipes	Employees falling from heights causing serious injuries of fatality	3	5	15	• Employees conducting plumbing work at heights to follow the correct procedures. • Scaffolding to be erected in accordance with SANS 10085 • Safety harnesses to be worn when working at heights
			Falling objects	Head injuries	3	4	12	• Overhead work to be barricaded • Signage to be displayed • Head protection to be worn by employees where falling objects poses a hazard
			Manual handling of material	Injuries	2	2	4	• Task specific training to be provided to employees. • Ergonomical risks to be taken into account
			Using unsafe hand tools	Injuries	3	2	6	• Hand tools and equipment to be inspected on a monthly basis and deviations to be recorded and reported
			Substandard housekeeping	Injuries	3	3	9	• High standards of housekeeping to be maintained on site • Stacking and storage inspections to be conducted on a regular (monthly) basis
			Exposure to open flames	Fires / burns	3	4	12	• Task specific training to be provided • Competent plumber to supervise work • Firefighting equipment to be readily available with trained personnel
		Roof Works	Tripping over obstacles and objects	Injuries	3	3	9	• High standards of housekeeping to be maintained • Stacking and storing inspections to be conducted on a monthly basis
			Manual handling of material	Injuries	2	2	4	• Task specific training to be provided to employees. • Ergonomical risks to be taken into account

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Manual lifting of material while working at heights	Employees falling from heights causing serious injuries of fatality	3	5	15	• Employees conducting roof work to follow the correct procedures. • Scaffolding to be erected in accordance with SANS 10085 • Safety harnesses to be worn when working at heights
			Employees conducting work under overhead work	Falling objects causing head injuries	3	4	12	• Overhead work to be barricaded • Signage to be displayed • Head protection to be worn by employees where falling objects poses a hazard
			Working at heights	Employees falling from heights causing serious injuries of fatality	3	5	15	• Employees conducting roof work to follow the correct procedures. • Scaffolding to be erected in accordance with SANS 10085 • Safety harnesses to be worn when working at heights
		Interior & Finishing Work	Manual handling of glass	Injuries	2	2	4	• Task specific training to be provided to employees. • Ergonomical risks to be taken into account
			Using unsafe hand tools	Injuries	3	2	6	• Hand tools and equipment to be inspected on a monthly basis and deviations to be recorded and reported
		Glass Work	Manual handling of glass	Injuries (cuts / lacerations)	2	2	4	• Task specific training to be provided to employees. • Ergonomical risks to be taken into account
			Using unsafe hand tools	Injuries	3	2	6	• Hand tools and equipment to be inspected on a monthly basis and deviations to be recorded and reported
5	Electrical Works	Installation of Electrical Cables	Exposure to live electricity	Electrocution	4	5	20	• Electrical source to be isolated when conducting installation work • Competent and registered electrician to conduct the electrical installation work • Occupational medical to be available
			Incompetent person conducting electrical installations	Project interruption	4	5	20	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Connecting of electricity to existing systems	Exposure to live electricity	Electrocution	4	5	20	• Electrical source to be isolated when conducting installation work • Competent and registered electrician to conduct the electrical installation work • Occupational medical to be available
			Incompetent person conducting electrical connection	Project interruption	4	5	20	
		Commissioning of Electrical System	Using electrical equipment in wet areas or outside in wet conditions	Electrocution	4	5	20	• Electrical equipment may not be used in wet areas or wet conditions • Task specific training
			Overloaded power-points	Fire risk	3	4	12	• Competent and registered electrician to conduct the electrical installation work • Fire equipment to be readily available
			Trailing cables from static equipment and whilst using portable electrical equipment	Short circuit	3	3	9	• Antistatic PPE
				Fire Risk	3	4	12	• Competent and registered electrician to conduct the electrical installation work • Fire equipment to be readily available
			Faulty cables	Electrocution	4	5	20	• Electrical source to be isolated • Competent and registered electrician to conduct the electrical installation work • Occupational medical to be available

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
				Short circuit	3	3	9	• Antistatic PPE
				Fire Risk	3	4	12	• Competent and registered electrician to conduct the electrical installation work • Fire equipment to be readily available
6	Water Reticulation Works	Installation of Pipes	Confined space	Health risk	3	4	12	• Confined space entry permit to be issued to individuals prior to working in confined spaces • Occupational medicals to be of personnel to be available
			Misuse of equipment	Injuries	3	3	9	• Task specific training • Correct equipment to be used for specific tasks • Proper supervision
			Faulty equipment	Injuries	3	3	9	• Equipment to be inspected on a monthly basis and deviations to be recorded and reported
		Commissioning of Water Reticulation System	Sub-standard housekeeping	Employees tripping over obstacles causing injuries	3	2	6	• High standards of housekeeping to be maintained
			Leakage could result in pipes bursting	Injuries	3	3	9	• Competent person to conduct / supervise plumbing work
			High pressure 10 – 20 bar	Project interruption	3	4	12	• Competent person to conduct / supervise plumbing work
7	Work at Heights	Edge Work	Falling off edges	Major injuries (fractures), etc.	3	3	9	• Edge protection to be in place. • Employees working near edges to wear safety lanyards to prevent them from falling over edge
				Fatality	3	5	15	
		Openings	Falling into openings	Major injuries (fractures), etc.	3	3	9	• All openings to be covered. • Employees working near openings to wear safety lanyards to prevent them from falling into openings
				Fatality	3	5	15	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
8	Temporary works	Manual handling of scaffold material	Incorrect handling of scaffold material. Improper manual lifting techniques	Injuries	2	2	4	• Task specific training to be provided to employees. • Ergonomical risks to be taken into account
		Scaffold Erection	Incorrect erection of scaffolding	Scaffold collapsing	3	5	15	• Scaffold to be erected in accordance with SANS 10085.
		Scaffold work	Employees working on incomplete scaffold	Serious injuries or fatalities	3	5	15	
9	Lifting & Lowering Operation	Mobile Cranes / Truck-mounted crane	Incorrect slinging	Employees struck by swinging load	4	4	16	• Crane / Truck-mounted crane operator to be competent in the operation of the specific machine. Employees to stand clear of lifting operations
			Defective Crane	Load falling on employees	4	5	20	• Crane to be load tested. Pre-start inspection to be conducted on a daily basis prior to shift. Employees to stand clear of lifting operations and no employees allowed underneath lifted loads.
			Incompetent operator / not medically fit to operate	Incident / Accident	3	4	12	• Operators (and all other employees) to be sent for Occupational medical surveillance. Medical certificates and Annexure 3 to be placed on the H&S file.
			Exceeding maximum load capacity	Crane toppling over	3	5	15	• Crane to be load tested. Maximum Load Capacity to be displayed on Crane. Outriggers of crane to be placed in order to keep crane steady. Crane spec to be available for reference purposes.

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
		Chains / Slings	Defective equipment used causing falling objects	Load falling on employees	4	5	20	• Lifting equipment to be load tested. Load test certificates to be available. Lifting equipment to be placed on register and inspected on a monthly basis. Employees to stand clear of lifting operations and no employees allowed underneath lifted loads.
			Objects not correctly hooked	Serious injuries, Fatality due to falling loads / objects	4	5	20	• Competent rigger to be appointed.
10	Hot works	Gas Welding & Cutting	Incorrect storage of gas cylinders	Sudden release of pressurised gas	3	4	12	• Gas cylinders to be stored in accordance with requirements. TO be stored in a designated area. Gas cylinders to be chained.
			Hot surfaces	Burns	3	3	9	• Task specific training to be conducted on employees conducting hot works. • Competent First aider and box to be readily available on site. • Employees to wear the relevant PPE, e.g. welding helmet, apron, welding gloves etc.
			Fire hazard	Explosion	3	5	15	• Designated smoking area to be established. No smoking near hot work activities. • Gas cylinders to be secured at all times.
			No flashback arrestors	Explosion	4	5	20	• Gas welding equipment to be in accordance with requirements. • Flashback arrestors to be fitted to gas welding and cutting equipment
		Electrical Welding & Cutting	Incompetent person operating welding machine	Incident / Accident	3	3	9	• Task specific training to be conducted. • Competency to be available and person to be appointed in writing

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
			Not wearing a welding helmet	Sparks in face / Arc eyes	3	3	9	• Welding helmet to be issued to persons conducting welding. • Employees conducting welding, to wear the relevant PPE, e.g. welding helmet, apron, welding gloves etc.
			Exposed electrical wiring	Electrocution	3	5	15	• Monthly inspections to be conducted on electrical arc welding machine and deviations to be recorded and reported.
11	Hazardous Chemical Substances	Handling	Incorrect handling	Skin irritation	2	3	6	• MSDS's to be available • MSDS's to be communicated to all employees handling HCS • Task specific training
			Exposed to HCS	Occupational Illness or Disease	3	4	12	
			Not trained to work with HCS	Occupational Illness or Disease	3	4	12	
		Storage	Incorrect storage of HCS	Production time loss	3	3	9	• Task specific training • HCS inspections • PPE • HCS compatibility chat to be available and implemented • HCS to be stored in accordance with compatibility chart
			Fire hazard	Explosion	3	5	15	
12	Stacking & Storage	Stacking and storage of material and equipment	Sub-standard stacking and storing practices	Collapsing of stacked / stored material causing serious injuries	3	3	9	• Stacking and storage supervisor to be appointed in writing. • Monthly inspections to be conducted on stacking and storing on site
13	Site Demobilization	Disconnect Services	Incompetent person disconnecting temporary electrical distribution boards	Property damage	3	2	6	• Competent / registered electrician to conduct the disconnection of temporary electrical installations.
				Electrocution	3	5	15	
		Loading of material, equipment and offices	Employees standing underneath lifting operations	Load falling on employees	4	5	20	• Lifting equipment to be load tested. • Load test certificates to be available. • Lifting equipment to be placed on register and inspected on a monthly basis. • Employees to stand clear of lifting
		Loading of Machinery on Trucks	Improper loading of plant and machinery	Plant / machinery falling off trucks causing property damage	4	5	20	

Step No	Activity	Task	Potential Hazards	Risks	Current Risk			Suggested Control Measures
	List activity steps	List task steps	Potential dangers that could cause harm. List the potential hazards	Potential Risks due to Hazard	PROB	CON	Ranking	Controls already in place to mitigate the hazard before work may commence
				Load falling on employees	4	5	20	operations and no employees allowed underneath suspended loads. • Operators to be competent.
		Transporting of equipment, machinery and tools	Vehicle not roadworthy	Accident	3	5	15	• All construction vehicles to be roadworthy • Verification on roadworthiness to be done before entering site

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Section C3.5

Management
Annexure D: Environmental Management Plan

ENVIRONMENTAL MANGEMENT PLAN (EMP) FOR CONSTRUCTION PURPOSES –

REMEDIAL WORK TO 491 RDP HOUSES IN LERATO PARK

CONTRACT 2334-50-02/03

PREPARED FOR

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS

PREPARED BY

NSVT CONSULTANTS
1 FOURTH STREET
OFFICE 1A
ARBORETUM
BLOEMFONTEIN
9301
LORATO TIGEDI *PR. SCI. NAT.*

13 August 2021

1. INTRODUCTION

Department of Co-operative Governance, Human Settlement and Traditional Affairs ("COGHTA") recognises environmental management as a key component for the remedial work to 491 RDP houses in Lerato park, Kimberley, hence deemed it necessary to compile an Environmental Management Plan ("EMP"), The purpose of this report is to provide the project COGHSTA (or its appointed Contractor) with sufficient information to make an informed decision regarding the management of environmental impacts, pollution and waste management.

1.1. EMP OBJECTIVES

The objectives of the EMP process are to:

- Give input to COGHSTA with specific reference to environmental and operational management.
- Identify mitigation and management options that can be implemented in order to reduce or minimise the predicted environmental impacts.

1.2. SCOPE

The EMP sets out the methods by which proper environmental controls are to be implemented by COGHSTA and all its sub-contractors. The duration over which the controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the General Conditions of Contract, and the project specifications, as the defects notification period (maintenance period).

The provisions of this EMP are binding to COGHSTA and its sub-contractors during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract for the specific project. In the event that any conflict occurs between the terms of the EMP and the project specifications, the terms herein shall be subordinate.

The EMP is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any substantial changes shall be submitted to COGHSTA in writing for approval.

The EMP identifies the following:

- Construction activities that will impact on the environment.
- Relevant parties and their responsibilities
- Specifications with which the COGHSTA shall comply in order to protect the environment from the identified impacts.
- Actions that shall be taken in the event of non-compliance.

2. DEFINITIONS

Environmental Management Programme (EMP): An EMP is an environmental action plan or tool used to ensure that undue or reasonably avoidable adverse impacts of a development are prevented, and that positive impacts are enhanced. It thus addresses the how, when, who, where and what of integrating environmental mitigation and monitoring measures through the project development activities.

Alien Vegetation: alien vegetation is defined as undesirable plant growth which shall include, but not be limited to all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA), 1983 regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

Construction Activity: a construction activity is any action taken by COGHSTA, his sub-contractors, suppliers or personnel during the construction process.

Environment: environment means the surroundings within which humans exist and that could be made up of the following:

- the land, water and atmosphere of the earth;
- micro-organisms, plant and animal life;
- any part or combination of (i) and (ii) and the interrelationships among and between them; and
- the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Aspect: an environmental aspect is any component of a proponent and its sub-contractor's construction activity that is likely to interact with the environment.

Environmental Impact: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Environmental authorization/Record of Decision: an environmental authorisation or record of decision is a written statement from the National Department of Environmental Affairs, (DEA) or its Provincial subsidiary, Department of Mineral Resources (DMR) that records its approval of a planned undertaking to improve, upgrade or rehabilitate the environment and the conditions of approval which may include mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

3. LEGAL REQUIREMENTS

3.1. GENERAL

Construction will be according to the best industry practices, as identified in the project documents. This EMP, which forms an integral part of the contract documents, informs the COGHSTA and its Sub-Contractors as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. COGHSTA and its Sub-Contractors will note that obligations imposed by the EMP are legally binding in terms of environmental statutory legislation and in terms of the additional conditions to the general conditions of contract that pertain to this project. In the event that any rights and obligations contained in this document contradict those specified in the standard or project specifications then the latter shall prevail.

3.2 Statutory and other applicable legislation

COGHSTA and its Sub-Contractor will make themselves conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

Major environmental legislation includes but is not limited to the following:

The Constitution, 1996 which, states that everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected through reasonable legislative and other measures to prevent pollution and ecological degradation; promote conservation and ensure ecologically sustainable development and use of natural resources.

The National Environmental Management Act (NEMA), **1998** which supports the Bill of Rights, and highlights principles of sustainable development including preservation of ecosystems and biological diversity and avoidance, minimization and remediation of pollution and environmental degradation. It also sets the stage for the EIA Regulations.

NEMA: Biodiversity Act, 2004 makes provisions to accomplish the objectives of the United Nations' Convention on Biological Diversity.

NEM: Air Quality Act, 2004 provides reasonable measures for the prevention of pollution and ecological degradation; and provides for specific air quality measures; for national norms and standards regulating air quality monitoring, management and control by all spheres of government.

NEM: Waste Management Act, 2008 regulates waste management practices through provision of national norms and standards; specific waste measures; licensing and control of waste activities; remediation of contaminated land; as well as providing for compliance and law enforcement.

The Conservation of Agricultural Resources Act (CARA), 1983 provides for the protection of agricultural land and for the implementation of control measures for alien plant species.

National Water Act, 1998 makes provision for the protection of surface water and groundwater and their sustainable management for the prevention and remediation of the effects of pollution, as well as for the management of emergency situations.

National Forests Act, 1998 makes provision for promoting the sustainable management and development of forests, and for the protection of certain forests and trees for environmental, economic, educational, recreational, cultural, health and spiritual purposes.

National Heritage Resources Act, 1999 provides for an integrated and interactive system for identification, assessment and management of South Africa's heritage resources, and empowers civil society to nurture and conserve their heritage resources.

The Protected Areas Act, 2003 provides for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity, natural landscapes and seascapes.

Conservation of Agricultural Resources Act, 1983 provides for control over the utilisation of the natural agricultural resources of South Africa in order to promote the conservation of soil, water sources and vegetation, as well as combating weeds and invader plants.

Mineral and Petroleum Resources Development Act, 2002 makes provision for equitable access to and sustainable development of minerals and petroleum resources.

4. ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS

Copies of this EMP shall be kept at the site office and will be distributed to all senior personnel. All senior personnel shall be required to familiarise themselves with the contents of this document. Applicable permits and/or any relevant authorisations should be obtained before construction commences.

4.1. ROLES AND ESPONSIBILITIES

The implementation of this EMP requires the involvement of several stakeholders, each fulfilling a different but vital role as outlined below, to ensure sound environmental management during the construction phase.

- **COGHSTA** or anyone acting on the COGHSTA's behalf is accountable for the potential impacts of the activities that are undertaken and is responsible for managing these impacts.
- Bigen Group ("Engineer") and acts as the on-site implementing agent and has the responsibility to ensure that COGHSTA's ("Proponent") responsibilities are executed in compliance with the EMP and relevant legislation.
  In terms of the EMP, these duties will include
    a. ensuring that the necessary environmental authorisations and permits have been obtained and are communicated to COGHSTA;
    b. assisting COGHSTA and its Sub-Contractors in finding environmentally responsible solutions to construction-related environmental problems;
    c. issuing instructions to COGHSTA and its Sub-Contractors where environmental considerations call for action to be taken;

d. instituting action against transgressions, including ordering the removal of person(s) and/or equipment not complying with the EMP specifications, and
e. issuing fines for transgressions of site rules and levying penalties for contravention of the EMP should this be deemed necessary.

- **Contractor and its Sub-Contractors** is responsible for project delivery in accordance with set specifications, including the EMP. For the purposes of implementing the conditions contained herein, contractor shall:
    a. submit to the Engineer ***for approval*** the appointment of a nominated representative as the Designated Environmental Officer for the contract.

- The **Designated Environmental Officer (DEO) or Site Environmental Control Officer (SECO)** is appointed by the contractor and its Sub-Contractor and is the responsible person for ensuring that the provisions of the EMP are complied with during the life of the contract and is based on site. The DEO's appointment shall be approved by Engineer. This approval or rejection shall be made ***within seven days of COGHSTA's request***. Alternatively, a call for more information on the nomination may be made.

  As a minimum the DEO shall have an accredited Higher Diploma qualification in environmental or natural sciences or equivalent. Alternatively, the DEO should have a minimum of 2 years' experience in a similar role in construction or regulatory environment.

  The Engineer/COGHSTA shall have the authority to instruct the Contractor to replace the DEO if, in the engineer's opinion, the appointed officer is not fulfilling his/her duties in terms of the requirements of the EMP

  or this specification. Such instruction will be in writing and shall clearly set out the reasons why a replacement is required.

- The **Environmental Control Officer (ECO)** is an independent (of Contractor and its Sub-Contractors) appointment and the objective is to monitor the implementation of the EMP through audits conducted at a specified frequency. The ECO must have the expertise (or access to) specialist input as may be required for the size and environmental sensitivity of a particular project and shall give recommendations and communicate effectively with the other role-players.

  Appointed ECO: NSVT Consultants

5. TRAINING

The designated environmental officer (DEO) shall have the minimum qualifications as prescribed above and must be conversant with all legislation pertaining to the environment applicable to the contract. He/she must be appropriately trained in environmental management and possess the skills necessary to impart environmental management skills to all personnel involved in the contract.

Contractor and its Sub-Contractors shall ensure that adequate environmental training takes place. All employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees. The environmental training should, as a minimum, include the following:

- The importance of conformance with all environmental policies;
- The environmental impacts, actual or potential, of their work activities;
- The environmental benefits of improved personal performance;
- Their roles and responsibilities in achieving conformance with the environmental policy and procedures, including emergency preparedness and response requirements;
- The potential consequences of departure from specified operating procedures; and
- The mitigation measures required to be implemented when carrying out their work activities.

6. APPROACH

There shall be an approved DEO on the site at all times, and before Contractor begins each construction activity the DEO shall give to ECO a written statement setting out the following:

- The type of construction activity.
- Locality where the activity will take place.
- Identification of the environmental aspects and impacts that might result from the activity.
- Methodology for impact prevention for each activity or aspect.
- Methodology for impact containment for each activity or aspect.
- Emergency/disaster incident and reaction procedures.
- Treatment and continued maintenance of impacted environment.

Contractor shall programme his work in such a way that each cause and effect of a construction activity is also identified, and the activity planned so as to prevent any impact from happening. If prevention is not practicable, or in the event of accidents or misapplications, Contractor shall provide plans and measures for the engineer's/employer's approval, which will limit the magnitude, duration and intensity of the impact. Contractor shall demonstrate that he is capable of carrying out any repair and reinstatement of the damaged environment. These requirements shall be concurrent with the time constraints to produce an approved construction programme.

Contractor may provide such information in advance of any or all construction activities provided that new submissions shall be given to the engineer whenever there is a change or variation to the original.

Engineer and ECO may provide comment on the methodology and procedures proposed by the DEO, but he shall not be responsible for Contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, Contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

7. ACTIVITIES/ASPECTS CAUSING IMPACTS

Typical environmental aspects and impacts associated with construction are addressed in the table below. This list is not by any means exhaustive and shall be used for guideline purposes only. Impacts and mitigation measures may differ from project to project and so may the mitigation measures, which are employed.

Table 1: Aspects and Impacts Associated with Construction

ASPECT	IMPACT
Waste generation/storage	Water pollution; nuisance; visual impact
Water use and stormwater discharge	Change in flow regime and/or reduction in downstream availability; soil erosion
Vehicle use and maintenance	Air pollution; noise
Chemical/fuel storage	Water/air/soil pollution; health impacts; accidents e.g. slips, fire
Site clearing; layer-works	Change in landform; impact on heritage resources; noise
Land acquisition	Loss of land &/or livelihood; change in land use;
Acquisition of building material	Change in landform and use

General good construction practice will play an important role in avoiding the occurrence of an impact.

8. ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES

This section is divided into three phases, namely Pre-construction, Construction and Rehabilitation. The Operation phase is not addressed in this EMP.

8.1. PRE-CONSTRUCTION ACTIVITIES

Additional planning should in most likelihood still be undertaken, and at this stage pro-active environmental management measures may be incorporated into the final implementation plans. Such additional planning should include checking that all permits are in place for all the activities to be undertaken during construction, and that the conditions attached to these are understood and planned for.

8.2. CONSTRUCTION ACTIVITIES

The majority of the impacts occurring during this phase will have immediate effect and should be managed accordingly. Mitigation and management measures will be outlined for the following:

a) Site Establishment

i) Site Plan
ii) Vegetation
iii) Rehabilitation
iv) Water for Human Consumption
v) Heating and Cooking Fuel

b) Sewage Treatment

c) Waste Management

i) Solid Waste
ii) Litter
iii) Hazardous waste

d) Control at the workshop

i) Safety
ii) Hazardous Material Storage
iii) Fuel and Gas Storage
iv) Oil and Lubricant Waste

e) Clearing the Site

f) Soil Management

i) Topsoil
ii) Subsoil

g) Drainage

h) Earthworks and Layer works

i) Quarries and borrow pits
ii) Excavation, hauling and placement
iii) Spoil sites
iv) Stockpiles
v) Blasting activities

i) Screening Activities

k) Spillages

l) Areas of Specific Importance

m) Archaeological Sites

i) Cultural Artefacts
ii) Graves and Middens

n) Noise Control

o) Dust Control

p) Alien Vegetation

q) Stream Deviation

r) Water Use

s) Energy Use

t) General Housekeeping

8.3. REHABILITATION PHASE

Rehabilitation of affected areas should be undertaken as early as possible when the relevant activities are done in order to reduce further environmental damage. The standard of rehabilitation should be to the satisfaction of the Engineer/COGHSTA and the relevant authorities. Re-vegetation should be undertaken using indigenous vegetation.

9. RECORD KEEPING

Engineer and the ECO will continuously monitor Contractor's adherence to the approved impact prevention procedures and the ECO shall submit regular written reports to the engineer, at least once a month for the duration of the project. The ECO shall issue to Contractor a notice of non-compliance whenever transgressions are observed. The DEO should document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance shall be documented and reported to the engineer/employer in the two-monthly report.

Copies of any authorisations or record of decision or EMPs shall be kept on site and made available for inspection by visiting officials from the employer or relevant environmental departments.

10. COMPLIANCE AND PENALTIES

Contractor shall act immediately when a notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. This record shall be submitted with the two monthly reports and an oral report given at the site meetings.

Any non-compliance with the agreed procedures of the EMP is a transgression of the various statutes and laws that define the manner by which the environment is managed therefore any avoidable non-compliance, dependent on severity, shall be considered sufficient grounds for contact to be made with relevant provincial or national authorities.

Engineer's decision with regard to what is considered a violation, its seriousness and the action to be taken against Contractor shall be final. Failure to redress the cause shall be reported to the relevant authority. The responsible provincial or national authorities shall ensure compliance and impose penalties relevant to the transgression as allowed for within its statutory powers.

11. AUDIT STRATEGY

The ECO shall audit the site once a month, and report to the Engineer, COGHSTA and relevant authorities on any environmental issues or incidents to be rectified. The results are to be included in the Environmental Compliance Report.

DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENT & TRADITIONAL AFFAIRS

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SITE INFORMATION

C4.1 Description of Site

GPS coordinates: Coordinates

Phase 01 - 28°40'24.80"S 24°42'55.50"E

As per locality plan, layout plan and volume 2

C4.2 Nature of ground and subsoil conditions

Should a copy of the Geotechnical Report be required, please request a copy form Marthinus Pretorius.

END OF SECTION

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Structural Drawings