ANNEXURE 1

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CHIEF DIRECTORATE:
INFRASTRUCTURE DEVELOPMENT

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PROJECT BRIEF

ADDINGTON HOSPITAL

Refurbishment and Upgrading of Cold water, Hot water, Wastewater and Fire reticulation at Addington Hospital Nursing College & Accommodation

Drafted by:	MR T Dlamini PrTechEng	Signed:	
	Assistant Project Leader: Eng. Techno.	Date:	20/10/2020
Reviewed by:	MR E T Chiro PrEng	Signed:	
	Project Leader: Chief Engineer	Date:	20/10/2020
Recommended by:	MR S T Mhlongo	Signed:	
	Director: Engineering and Infrastructure Services	Date:	20/10/2020
Approved by:	MR B G Gcaba	Signed:	
	Chief Director: Infrastructure Development Unit	Date:	

Document Control

Revision Number	Date	Initials
Rev 0	10/09/2020	T Dlamini

Contents

1. Project Details

1.1. The Facility

- Facility Name: Addington Hospital
- Facility Number: ADDI018
- Facility Type: District & Regional Hospital
- Facility Owner: Department of Health - KwaZulu-Natal Provincial Government
- ERF Number: ERF 10102

1.2. The Facilities and Location

Addington is a 571 bedded and 2 200 staffed District and Regional hospital, situated on South Beach, Durban.

1.3. Location

- Province: Kwa-Zulu Natal (KZN)
- District Municipality: EThekwini District Municipality
- Local Municipality: EThekwini Metro (Durban)
- Ward: 76
- Street address (or directions): Erskine Terrace, South Beach, Durban, 4000
- Postal address: PO Box 977, Durban, 4000
- GPS Co-ordinates: Longitude: 31.042 Latitude: -29.862

1.4. The Project / Programme details

- **Project Name**: Refurbishment and Upgrading of Cold water, Hot water, Sewer and Fire reticulation at Addington Hospital Nursing College & Accommodation

- **KZN-DOH Project Number:** ADDNH01

- **Project Code:** 31008832

- **Project Details / Scope:** Refurbishment and Upgrading of Cold water, Hot water, Sewer and Fire reticulation at Addington Hospital Nursing College & Accommodation in EThekwini Health District

- **Project Type:** Replacement/Refurbishment and Upgrade

- **Budget Programme Number:** Programme 8. Community Health facilities

- **Budget Programme Name: Health Facilities Management** R8,000,000

- **Sub-programme:** Sub-Programme 8.
- **Infrastructure Programme Name:** Refurbishment and Upgrading of Cold water, Hot water, Sewer and Fire reticulation at Addington Hospital Nursing College & Accommodation

- **Nature of Investment:** Upgrading
- **Nature of Investment Sub- status:** Upgrading and additions
- **IRM Infrastructure Category:** DoH - Upgrading
- **IRM Infrastructure Type:** Secondary

1.5. Project Team

1.5.1. KZN Department of Health

1.5.1.1. Infrastructure Development

• Assistant Project Leader	Mr T Dlamini PrTechEng
• Project Leader:	Mr ET Chiro PrEng
• Electrical Engineer:	Mr S Dhlamini
• Mechanical Engineer (wet services)	Mr K Thabethe
• Mechanical Engineer (fire)	Mr K Thabethe
• Civil/Structural Engineer:	Mr ET Chiro PrEng
• Occupational Health & Safety:	Ms S Ngcobo
• Monitoring & Evaluation:	Ms Z Twala
• Health Technology:	N/A

1.5.1.2. Department of Health – General

• District Engineer	Mr S Makhaza
• District Manager	Ms P Dladla
• Infection Prevention Control (IPC):	Mrs K Ganas

1.5.1.3. Oversight Team

- Provincial Champion: Mr B G Gcaba (Chief Director Infrastructure Development)
- Provincial Power User: Ms M De Goede (Director: Infrastructure Planning)
- Project Sponsor: Mr B G Gcaba (Chief Director Infrastructure Development)
- Project Control Group: HIAC
- Infrastructure Development: Mr B G Gcaba (Chief Director Infrastructure Development)
- Project Approver: Mr B G Gcaba (Chief Director Infrastructure Development)
- Project Verifier: Ms M De Goede (Director: Infrastructure Planning)

1.5.2. Stakeholders

Challenge Members include:

- National Department of Health
- Provincial Treasury
- Applicable Municipalities
- Organised Labour
- Local Councillor
- Project Steering Committee
- Special interest groups

1.5.3. Implementing Agent: KZN DoH

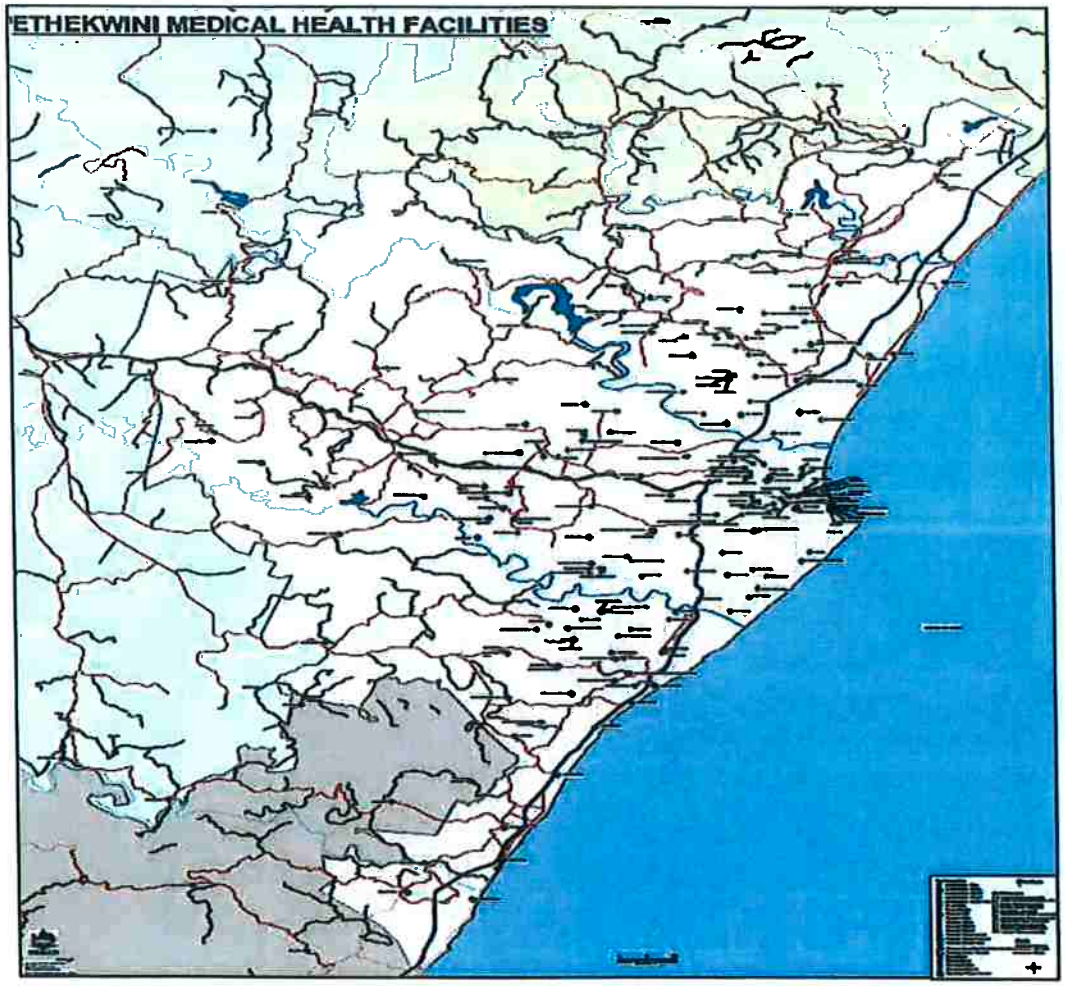
- Project Coordinator/Leader: Sihle Mazibuko
- Implementing Agent Champion: Stanley Gichia
- Project Monitor: SP Majola
- Professional Service Providers
  - Professional Civil & Structural Engineer — To be procured under same PSP
  - Professional Mechanical Engineer (wet services) — To be procured under same PSP
  - Professional Electrical Engineer — To be procured under same PSP
  - Professional Engineer (fire specialist) — To be procured under same PSP
  - Environment, Health & safety: — To be procured under same PSP
  - Professional Draftsperson — To be procured under same PSP
  - Civil Engineering Contractor — To be procured under same PSP
  - Fire Fighting Installation Contractors — To be procured under same PSP

1.6. The Site:

Nursing College and Accommodation

1.6.1 Location of site:

Addington Hospital is located in the vicinity of Durban South Beach. Both the Nursing College and Accommodation is next door to the Hospital.



MAP 1: The general vicinity in EThekwini DM where Addington Nursing College & Accommodation is situated

1.6.2 Services Offered:

- Antenatal Clinic / Ward 8A
- Adult Prim Health Care (Gateway)
- Audiology services
- Accident Unit (Trauma)
- Breast Clinic (OPDA)
- Beatrice Street Clinic
- Cardiac Clinic (CCU)
- Crisis Centre
- Children's Primary H/C
- Children's Outpatient Dept.
- Colposcopy Clinic
- CT Scanner
- Cystic Fibrosis Clinic
- Dental Clinic
- Dermatology (OPDD)
- Diabetic Clinic
- Dietetics Department
- ECG Department
- Emergency Unit - Casualty
- ENT Clinic
- Eye Clinic
- GI Unit
- Gynae Clinic
- Gynae Clinic / Ward 9A
- Haemodialysis Clinic
- Ikusasa Clinic
- Ischaemic Heart Disease (CCU)
- Joint Clinic (OPDA)
- Lwazi Clinic
- Medical Clinic (OPDD)

- MOPD
- Medical Reg Room
- Newlands East Clinic
- Nuclear Medicine
- Occupational Health
- Occupational Therapy
- Oncology Department
- Orthopaedic Clinic (OPDB)
- Output Location
- Pain Clinic (F4)
- Pharmacy
- Psychiatry Department
- Physiotherapy
- P.I. Clinic (MOPD)
- Post Natal Clinic
- Poly Clinic
- Rheumatology Clinic (OPDD)
- Reproductive Health
- Revenue Department
- Sinothando Centre
- Social Work Department
- Soft Tissue Clinic (F4)
- Speech Therapy
- Stomal Therapy
- Surgical Clinic (OPDA)
- Thyroid Clinic (OPDD)
- TOP Clinic (9A)
- Ultrasound Department
- Urology (OPDB)
- Theatre
- X-Ray Main

- S-Block X-Ray
- X-Ray Trauma

1.7 Project Background

The project was initiated after so many interruptions in water supply due to faulty plant, overflowing roof reservoir which flooded the lift shaft damaging the lift gear. An urgent delegation was approved and attached in Annexure A.

Both the Nursing college and Accommodation are situated in one building as shown on the picture below:

PICTURE 1: Building housing both the Nursing College and Accommodation at Addington Hospital.

1.7.1 Project Scope

The following is the scope of work;

Cold water:

i. Replacement of the cold water pumps with their electrical motors, refurbish all existing pumps and electrical motors to be kept as spares
ii. Replace existing Switchgear and Control panel (to include protection gear)
iii. Pressure control gear
iv. Replace all valves for cold water reticulation
v. Repair roof reservoir for cold water
vi. Repair cold water reticulation

vii. Water proofing the roof and repairing existing full bores
viii. Installing lateral fulling full bores in the cold water storage reservoir room
ix. Inspect entire cold water reticulation system and repair and/or replace specific sections on the rising main, gravity main and reticulation for cold water
x. Install of telemetry system to remotely monitor critical equipment and/or condition of entire system
xi. Produce O&M manuals
xii. Produce as-built drawings

Hot water:

i. Refurbish and/or replace existing hot water plant
ii. Replacement pumping gear for hot water
iii. Inspect entire hot water reticulation system and repair and/or install new sections of both the rising main, gravity main and reticulation for hot water
iv. Replace all valves for hot water reticulation system
v. Install telemetry system to remotely monitor critical equipment and/or condition of entire system
vi. Produce O&M manuals
vii. Produce as-built drawings

Wastewater:

i. Replace existing cast-iron sewer stack with suitable PVC material
ii. Inspect entire wastewater reticulation system and replace and/or repair specific sections
iii. Replace all wastewater valves
iv. Install additional inspection and/or maintenance access points
v. Produce O&M manuals
vi. Produce as-built drawings

Fire reticulation:

i. Re-design fire reticulation system to suit current statutory requirements
ii. Replace existing pumping gear and refurbish existing to be kept as spares
iii. Replace all safety, information and mandatory signage
iv. Install telemetry system to remotely monitor critical equipment and/or condition of entire system
v. Produce O&M manuals
vi. Produce as-built drawings

1.7.2 Project Estimate

The revised project scope to include "upgrade of existing sewer reticulation" requires budget revision from the initial R8 000,000.00. The revised scope inclusive of the above additional item is estimated at R12,540,000, an amount to be confirmed after approved detailed stage 4 Feasibility Report.

1.7.3 Resources

The project would require the following disbursement resources

- Professional Civil & Structural Engineer (Overall accountability of entire works)
- Professional Mechanical Engineer (Wet services)
- Professional Electrical Engineer (Switchgear and Telemetry)
- Professional Engineer (Approve Fire-fighting Installations)
- Environment, Health & safety: (Health & Safety)
- Professional Draftsperson (as-built drawings)
- Civil Engineering Contractor (Construction works and installations)
- Fire Fighting Contractors (Install fire-fighting equipment)

1.7.4 Exclusion

- Hospital buildings

2. Strategic Background

2.1. Strategic Outcome

Sub-Programme 2.2: Community Health Clinics
Render Health Care Service at Regional level

SOURCE: Strategic Plan 2015-2019 KwaZulu-Natal Department of Health

2.2. Strategic Objective

- Strengthen health system effectiveness
- Reduce and manage the burden of disease
- Universal health coverage
- Improved quality of health care

SOURCE: Strategic Plan 2015-2019 KwaZulu-Natal Department of Health

2.3. Project Outcome

To provide a 24hour comprehensive health care service.

2.4. Project Objective

Provide health care to the population of eThekwini central

2.5. Project Success Criteria

- To provide uninterrupted health care services
- To provide water supply that enables uninterrupted health care services

1.8 Statutory Requirements

1.8.1 Legislation

- **Legislation:**
  Public Finance Management Act

- **Policies:**
  KZN applicable Health Policies (structural Installations 2013)

- **Norms and Standards: Minimum applicable Norms and Standards**
  i. SANS 10400, 10120, 10252/3
  ii. DPW Civil Engineering Specifications
  iii. Red book
  iv. IUSS – Environment and Sustainability

- **Other requirements:**
  i. Municipal by-laws

2 Technical Brief

2.6 Detail Scope of Work

- Section 3 is referred

2.6.1 Standard specifications to be used in the project

- Red book
- DoPW Civil Engineering specifications
- SANS 10400
- SANS 10252/3

3 Project / Programme Management and Cost control

3.6 Project Management

IDMS guidelines and stage gates apply.

3.6.1 IDMS guidelines

Stage 0 **PROJECT INITIATIONS:** Project was identified and appears on the 2020/2021 AIP
Stage 3 **PREFEASIBILITY:** The brief is deemed to satisfy Stage 3
Stage 4 **FEASIBILITY:** Concept and viability report
Stage 5 **DESIGN DEVELOPMENT:** Development of the design to the approved execution plan

Stage 6 DESIGN DOCUMENTATION:

Deliverable Design documents complete

- Sub-deliverable 1 Complete working drawing
- Sub-deliverable 2 Specifications/Bills of Quantities completed

Stage 7 WORKS

Deliverable Works completion certified

- Sub-deliverable 1 Signed contractual document received
- Sub-deliverable 2 Site hand over certified
- Sub-deliverable 3 Construction technical certifications
- Sub-deliverable 4 Practical completion certified
- Sub-deliverable 5 Retention
- Sub-deliverable 6 Works completion certified

Stage 8 HANDOVER

Deliverable Liability acceptance by End-User

- Sub-deliverable 1 Defects liability
- Sub-deliverable 2 Training concluded
- Sub-deliverable 3 As-built/Manuals received
- Sub-deliverable 4 Commissioning completed
- Sub-deliverable 5 Facility opened

Stage 9 CLOSE OUT

Deliverable: Defects certificates or certificates of final completion issued, Final amount due to the contractor in terms of the contract is certified, Close out report is accepted

- Sub-deliverable 1 Final completion certificate issued
- Sub-deliverable 2 final accounts signed
- Sub-deliverable 3 Final payments certified
- Sub-deliverable 4 Report complete and submitted for signature
- Sub-deliverable 5 Report approved and signed
- Sub-deliverable 6 Asset verified and captured

3.6.2 Project Management Plan / Resource Management

The following Project Management plan is a guideline.

Table 1: Proposed Project Plan

ITEM	ELEMENTS
Needs Assessment/Analysis:	Projects has been identified and agreed to be implemented by KZN DoH due to urgency
Implementing Agent Brief:	Herewith is the brief to the IAP to implement the project on behalf of KZN DoH
Consultancy Brief:	Contractor and Technical consultant to be procured as per brief and implementation plan. The Consultant team: - Are to manage the project to successful completion within time, cost and to the required specification and to manage project associated risks for minimum impact. • Must develop, design, document, manage and close the project

	• May not proceed with any stage (IDMS) of the work until the KZN-DOH is satisfied with the stage of the project. • Must clarify any uncertainties, discrepancies, etc. to the satisfaction of KZN-DOH • Is expected to deliver a well-designed, cost effective, low maintenance facility that will suit the needs of the community and KZN-DOH • Must adhere to the timeframes for the work to be completed as presented.
Evaluation and Engagement:	• The project may not proceed to any stage until KZN-DOH is satisfied with the current stage (wherever that is) of the project; • KZN-DOH will follow the IDMS principles for approval and evaluation

3.6.3 Project Risk Plan

The following is some of the risk identified. However, it is required that the Implementer develop a full risk plan. This is not an inclusive list and must be reviewed at each stage.

Table 2: Risk Log

Risk	Owner	Probability (low/med/ high)	Consequence (L/M/H)	Actions
Services are currently in a state of collapse in a functioning hospital	DoH	High	High	DoH to fast track the project. Urgent delegation approved. Specifications and Tender document completed
Performance risk by one or more components in the value chain • IA implementing agent's failure to procure fit for purpose service providers • Poor performing service providers • Misinterpretation of the brief • Scope definition throughout the project life cycle	DoH	Med	High	• IA DoH to procure all fit for purpose service providers promptly, DoH to make contribution to the service providers RFP • Project management maturity at DoH. Good communication plan between both parties • Brief clarification meeting between DoH at tender compulsory site inspection • Brief clarification meeting when the PSP's are appointed • HIAC approvals
Prolonged services outages in a fully operational hospital	DoH	High	High	Fit for purpose procurement (right skill and resources). Contractor to take over running and operating the system during design stage
Cost escalation beyond 20%	DoH/DoPW	Med	High	Thorough scrutiny of the stage 4-6 gate reviews (at project leader and DoH resources level and at HIAC level. Due to level of uncertainty a 10% contingency built into the tender
Contract being constantly disturbed by empowerment	DoH/DoPW	Med	High	Stakeholder management plan, Communication plan at Stage 4

Risk	Owner	Probability (low/med/ high)	Consequence (L/M/H)	Actions
groups. EThekwini is rife ground for contract high-jacking and criminal threats				

3.6.4 Occupational Health and Safety Baseline plan

3.6.4.1 The project must comply with the requirements of the Occupational Health & Safety Act 85 of 1993 and its regulations.

- A Construction Work Permit is required because the project exceed 365 days and will involve more than 3600 person's days of construction work.

3.6.4.2 A client who intends to have construction work carried out; must at least 30 days before that work is to be carried out, apply to the provincial director in writing for construction work permit to perform construction work.

3.6.4.3 A Health & Safety Agent must be appointed.

3.6.4.4 Health & Safety constraints must be included in the project risk log (Table 7)

3.7 Communication Plan

The following plan is proposed.

- **Stakeholder engagement meetings (Minutes)**
  (Municipality, Facility Management, Business Forums)

- **Planning meetings (Minutes)**
- (DoH Health and Safety, Infrastructure Planning, Infrastructure Program Delivery and Infrastructure Engineering and Maintenance)

- **As needed Update meetings**

- **1 x Monthly Report back meetings (Minutes)**

- **2 x Monthly Site meetings (Minutes)**

4.2.1 Methodologies

Communication will be done though the following methods:

- Meetings with minutes
- Minutes
- Telecommunication
- E-mails
- Reports
- Letters
- Feedback Information
- Drawings

i. **Delivery**

Communication will be delivered through:

- Telecommunication
- E-mails
- Hand delivered/Postal Services/Courier Services
- Internal registry services
- Log Books
- Issue Sheets

ii. **Personnel**

Communication will be between KZN-DOH Infrastructure Development (KZN-DOH ID) and: -

- Addington Hospital Management and Maintenance staff
- KZN-DOH District
- Service Providers

- **Communication is expected to take place between:**
  - KZN-DOH ID, service providers and the facility on all infrastructure projects by means of a specific Annexure B for Addington Hospital

- **Communication is expected to take place between:**
  - KZN-DOH eThekwini Region and Community Stakeholders (Ward Councillor SMME's and labour groups)
  - IA (DoPW) and Consultants/Contractors
  - IA (DoPW) and Addington Hospital
  - Between Consultants

3.8 Project Milestones

Table 3: MILESTONES and TASKS

Milestone	Anticipated Completion Date	% Project Complete
PROJECT INITIATION DATE	18/09/2019	0
STAGE 3 BRIEF	10/09/2020	90%
STAGE 4 FEASIBILITY	10/09/2020	20%
SATGE 5 & 6	10/09/2020	0%
TENDER	10/10/2020	0%
CONSTRUCTION	20/11/2021	0%
Construction 0 - 25%	31/12/2020	0%
Construction 26 - 50%	30/01/2021	0%
Construction 51 - 75%	28/02/2021	0%
Construction 76 - 100%	30/03/2021	0%
PRACTICAL COMPLETION	30/03/2021	0%
HANDED OVER	01/06/2021	0%
WORKS COMPLETION	30/03/2021	0%
FINAL COMPLETION	30/03/2021	0%
CLOSE OUT	30/03/2021	0%

3.9 Project Cost Breakdown

The project cost is made up of the following elements:

Table 4: PROJECT COSTS

Building Cost (incl. VAT)			
Funding source	HFRG		
Budgetary Item	**Amount**		**Explanatory Notes**
Current Estimated Cost	R	9 500 000,00	First order estimate. Better estimate obtained at Stage 4, after investigation
Pre-tender escalation	R	475 000,00	5%
Post-tender escalation	R	475 000,00	5%
Estimated Fees	R	1 140 000,00	As a 12% of construction cost
Contingency	R	950 000,00	10% provision
Estimated Cost (incl. VAT)	R	12 540 000,00	

The Project Leader and Project Manager are responsible to ensure that necessary controls are in place and that the budgets are not exceeded without a fully motivated and approved submission to the CFO and HOD.

The District mentioned shall be responsible

Table 5: Responsibilities for EThekwini District Office

Annual Operating Cost (incl. VAT)			
Funding source			
Budgetary Item	**Amount**		**Explanatory Notes**
Servicing	R	500,000.00	Maintenance contract estimate (Corrective and preventative)
Food, catering services	R	0	
Rates & taxes	R	0	
Lease costs	R	0	
Legal	R	0	
Consumables	R	0	
Estimated Annual Operating Cost (incl. VAT)	R	5,000,000	

Table 6: Estimated Monthly Cash-flow (AIP) for Financial year 2020-2021

Estimated Cash-flow for current year (Total Construction cost + Fees, incl. VAT)											
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
0	0	0	0	0	0	0	0	0	0	1,250,000	2 540 000

Table 7: Estimated Monthly Cash-flow (AIP) for Financial year 2021-2022

Estimated Cash-flow for current year (Total Construction cost + Fees, incl. VAT)											
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1 750 000	1 750 000	1 750 000	1 750 000	1 750 000	0	0	0	0	0	0	0

Table 6: Projected Annual Cash-flow (U-AMP)

MTEF and beyond	Fees/Construction	Total
Yr 20/21	R 2,000 000.00	R 2,000 000.00
Yr 21/22	R 7,500 000.00	R 7,500 000.00
Yr 22/23	R 0	R 0
TOTAL	R 9 500 000.00	R 9 500 000.00

3.10 Expanded Public Works Programme and Community Participation Goal

3.10.1 EPWP

	EPWP Minimum Requirement	Project Values in Rand and minimum guidelines	Between 2 Million up to 10 Million	[illegible]	Between 30 Million up to R 99 Million	From 100 Million and above
Reporting	All required	All required	All required	[illegible]	All required	All required
Local Area	10 km radius	10 km radius	Local Municipality 60% @ 10 km radius	[illegible]	KZN Province 80% District 60% Local Municipality	South Africa 80% KZN 60%District 40% Local Municipality
Branding	Not Required	Site only	Site and Uniform	[illegible]	Site ,Uniform and tender documentation	Site ,Uniform and tender documentation
Recruitment	Managed via Councillor and Hospital Board/Clinic Committee	Managed via Councillor and Hospital Board/Clinic Committee	According to DOPW Recruitment guideline document	[illegible]	According to DOPW Recruitment guideline document	According to DOPW Recruitment guideline document
PSC	Not Required	Hospital board /Clinic Committee	Hospital board /Clinic Committee	[illegible]	Full PSC,CIDB Guidelines to be followed	Full PSC,CIDB Guidelines to be followed
CLO	Not Required	Required	Required	[illegible]	Required	Required
Tender Specification	Not Required	Required	Required	[illegible]	Required	Required

3.10.2 Reporting Requirements:

- Employment Contracts
- Copies of ID documents
- Photographs of employees
- Proof of daily attendance
- Proof of wage payments

4 Procurement

4.6 Procurement Strategy

Design and construct (Design approved by HIAC).

4.6.1 Primary and Secondary Objectives

To procure fit for purpose service providers.

4.6.2 Delivery Management Strategy

Design and build (Design by professionally registered professional or accredited by an externally recognized country-wide organization)

4.6.2.1 Professional Services

The project team should be made up of the following disciplines possessing adequate experience in the specific field:

i. Civil Engineer
ii. Mechanical Engineer-Wet Services (for all the work in the ducts)
iii. Fire specialist
iv. Water pressure and leak detector specialist
v. CCTV Camera specialist
vi. Health and Safety

The proposed contracting arrangements

Contracting Arrangements for Professional Services				
Professional services needed	**Procurement Strategy / Type of Appointment**	**Contracting strategy**	**Pricing Strategy**	**Form of Contract**
Project Manager with full professional Team	Investigate, Design and manage construction	Open Tender for Design and build	Open Tender	GCC with a professional services contract
Contractor with domestic sub-contractor	Contract	Open Tender for Design and build	Open Tender	GCC

4.6.2.2 For Works

The proposed strategic arrangements

Delivery Management Strategy for Works			Contracting Arrangements for Works			Procurement Arrangements for Works		
Delivery Mode	**Implementer**	**Estimated Project Control Budget (R.m)**	**Contracting strategy**	**Pricing strategy**	**Form of Contract**	**Procurement Procedure**	**Estimated Bid/Tender Award Date**	**Comments / Current Stage**
Individual Project	DOH	R9,500,000	Design and Build	BOQ	GCC	Public Open Tender	30/11/2020	Identified

4.6.3 Implementation Strategy

No decanting required. Services should be operational and shutting of services should be coordinated with hospital management

5 External Appointments

5.1.1 Appointment of External Service Providers

The Implementing Agent (IA) KZN DoH will enter into a legally binding agreement with a professional – contractor consortium or entity. However, over and above the agreements, the following expectations by KZN-DOH from the consultants are highlighted:

- Cost effective proposals including where possible alternative economical proposals
- A Maintenance conscious facility and including a baseline maintenance plan at the end of the project
- An Environmental conscious facility
- A Facility to promote healing
- A Facility that will stand the test of time
- Consideration to alternative, but tested and accepted construction methods, systems and installations
- Timeous response time and provision of documents including the following:
  - Programmes and milestones
  - Designs, reports and specifications
  - Cost reports
  - EPWP reports
  - Completion certificates
  - As-built drawings, specifications, manuals, baseline maintenance plan, certificate
  - Close-out report
- Compliance to Legislative requirements
- Compliance to Policies
- Compliance to Norms and Standards (both National and Provincial)

5.1.2 Additional Requirements

The IA will enter into a legally binding agreement with the Professional -Contractor. However, over and above the agreement, the following expectations by KZN-DOH from the Professional – Contractor Consortium are highlighted:

- Effective Time management
- Effective Project Management
- Effective Cost Management
- Effective Resource Management
- Effective Communication
- Adherence/Compliance to all applicable Legislation
- Adherence/Compliance to all applicable policies
- Adherence/Compliance to all applicable norms and standards
- Compliance to Norms and Standards (both National and Provincial)

5.2 Roles and Responsibilities of the Department of Health

The roles and responsibilities are highlighted below:

- Effective management and co-ordination of all stages of the project
- Effective management and co-ordination to al legislative requirements
- Manage quality control and compliance.
- Effective manage Procurement preparation processes in terms of the PFMA, SIPDM and Treasury Regulations.
- Manage the Contract (SCM)
- Manage the project using best practices
- Effective Financial management.
- Effective Time Management
- Manage completion processes and retention periods.
- Manage timeous and complete Close-out of Project including as-built documentation, manuals compliance certificates and related documentation.
- Manage all required reporting, documentation and archiving of documents

I. Contact Numbers

Stakeholder

Department of Health	Engineering & Infrastructure Services
Assistant Project Leader	**Mr T Dlamini** PrEngTech
Tel	033-940 2517
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Department of Health	Engineering & Infrastructure Services
Project Leader	**Mr ET Chiro** PrEng
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Mobile	084 214 7889
Email	edward.chiro@kznhealth.gov.za
Facility	Addington Hospital
Contact Person	**Dr M Ndlangisa** (CEO)
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Mobile	067 697 8844
Email	mthethelell.ndlangisa@kznhealth.gov.za
EThekwini Health District	Chief Director
Contact Person	**Mrs P Msimango**
Tel	031-240 5308
Mobile	083 798 4007
Email	penny.msimango@kznhealth.gov.za
Engineering and Technical Services	Director
Contact Person	**Mr ST Mhlongo**
Tel	033-940 2512
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Programme Delivery	Director
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Infrastructure Development Unit	Chief Director
Contact Person	**Mr BG Gcaba**
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6 Part 6 – Signatures

Signatories

The following have been fully advised and have read and understood the contents of this document.

Name:	**Mr T Dlamini** PrTechEng
Designation	Engineering Technologist
Date:	
Signature:	

Name:	**Mr ET Chiro** PrEng
Designation	Chief Engineer
Date:	
Signature:	

Name:	**Dr M Ndlangisa**
Designation	CEO: Addington Hospital
Date:	
Signature:	

Name:	**Mrs P Msimango**
Designation	Chief Director: EThekwini Health District
Date:	
Signature:	

Name:	**Mr ST Mhlongo**
Designation	Director: Engineering and Technical Services
Date:	
Signature:	

ANNEXURE 2

ADDINGTON HOSPITAL

Specifications for a Professional Construction Health and Safety Agent

1. Professional Construction Health and Safety Agent

1.1 Definition:
A Professional Construction Health and Safety Manager is a person who is registered as such in terms of the Project and Construction Management Profession Act, 2000 (Act No. 48 of 2000, as amended).

1.2 Level Descriptor:
A Professional Construction Health and Safety Agent is any competent person who acts as a representative for a client in managing health and safety on a construction project for the client and who has satisfied the registration criteria of the SACPCMP to perform the required functions

2. Scope of Work

1. STAGE 1A: Project Initiation and Briefing

1.1 Demonstrate the Construction Health and Safety Agent competency and resource.

1.2 Assist in developing a clear construction project health and safety brief.

1.3 Attend the construction project initiation meetings.

1.4 Conclude the terms of the agreement with the client.

1.5 Advise on the necessary surveys, analyses, tests and site or other investigations where such information will be required for the next stage of the project.

1.6 Advise the client on the adequacy of health and safety competency and resources of the other consultants.

1.7 Identify construction project health and safety risk profile.

1.8 Provide necessary information within the agreed scope of the construction project to the other consultants.

1.9 Define the Construction Health and Safety Agent scope of work and service

2. STAGE 2: Concept and Feasibility

2.1 Agree the documentation programme with the principal consultant and other consultants.

2.2 Attend design and consultants meetings.

2.3 Review and evaluate design concepts and advise on construction project health and safety in conjunction with the other consultants.

2.4 Review, update and agree the construction project health and safety risk profile and prepare the construction health and safety policy for the construction project.

2.5 Advise on preliminary cost estimates/budgets for construction project health and safety.

2.6 Prepare draft construction project baseline risk assessment.

2.7 Assist the client and principal consultant in the procurement of the necessary and appropriate specialists, including a clear definition of their roles, responsibilities and liabilities.

2.8 Advise the client on the adequacy of the health and safety competency and resources of the appropriate specialists.

2.9 Assess and approve the appropriate specialists health and safety plans.

2.10 Monitor the implementation of the appropriate specialists health and safety plans, including periodic audits.

2.11 Prepare the draft construction project health and safety specification.

2.12 Agree the format and procedures for health, safety and hygiene construction project control.

2.13 Advise and agree with the other consultants regarding their construction project health and safety requirements and related design risk management responsibilities.

2.14 Liaise, cooperate and provide necessary information to the client/principal consultant and the other consultants.

3. STAGE 3: Design Development

3.1 Review the documentation programme with the principal consultant and the other consultants.

3.2 Attend design and consultants meetings. 3.3 Finalise the construction project health and safety risk profile.

3.4 Advise designers of their health and safety legal liabilities and responsibilities for constructability, maintainability and operationability of the structure.

3.5 Manage, coordinate, integrate and record the design risk management process with the other consultants in a sequence to suit the documentation programme.

3.6 Monitor the integration of health and safety aspects for constructability, maintainability and operationability of the structure during the design process and finalise the construction project baseline risk assessment.

3.7 Identify and implement precautions necessary for construction project health and safety control and update the construction project tender health and safety specifications.

3.8 Agree on a format for the health and safety file.

3.9 Assess and approve necessary construction project health and safety plans for early works.

3.10 Monitor the implementation of necessary construction health and safety plans, including periodic audits for early works.

3.11 Assist the cost consultant with detailed information for initial construction project health and safety cost estimates/budgets.

3.12 Liaise, cooperate and provide necessary construction project health and safety information to the client, principal consultant and the other consultants.

4. STAGE 4: Tender Documentation and Procurement

4.1 Attend design and consultants meetings.

4.2 Assist in developing a clear construction project health and safety procurement process.

4.3 Finalise construction project tender health and safety specifications and integrate with procurement documentation.

4.4 Provide and record construction project health, safety, hygiene and design risk information to the principal consultant and other consultants.

4.5 Prepare 4 construction project health and safety documentation for submission to authorities.

4.6 Participate in construction project tender clarification meetings.

4.7 Assist with the evaluation of tenders and verify the contractors competencies, knowledge and resources to carry out the construction works in a safe and healthy manner.

4.8 Assist the cost consultant in the finalisation of the construction project health and safety cost estimate/budget.

4.9 Assist with the preparation of contract documentation for signature. 4.10 Prepare construction project health and safety mobilisation and access plans for the construction work.

4.11 Assess samples, mock-ups: and products for construction project, structural maintainability and operability health and safety safety compliance.

5. STAGE 5: Construction Documentation & Management

5.1 Assess, discuss, negotiate and approve the contractor(s) construction project health and safety plans.

5.2 Submit necessary construction health and safety documentation to authorities and facilitate permits that may be required to commence the construction work.

5.3 Attend site handover meetings and lead construction project health and safety mobilisation and access plans.

5.4 Attend regular site, technical and progress meetings.

5.5 Prepare revised construction project health and safety risk profile, specifications and cost estimates/budgets where there is scope of work changes

5.6 Monitor the implementation of the construction project health and safety plans in accordance with the construction project health and safety specification and further scope of work changes and recommend stop work orders where necessary.

5.7 Monitor design risk management.

5.8 Perform incident and accident investigations where necessary.

5.9 Audit compliance with the construction project health and safety plans and brief the project management team and contractor(s) following site audits.

5.10 Conduct construction health and safety management system audits.

5.11 Facilitate construction health and safety system and plans reviews for continual improvement.

5.12 Monitor the compilation of the construction project health and safety file by the contractor(s).

5.13 Prepare and maintain the consolidated health and safety file.

5.14 Prepare the structure commissioning health and safety plans.

6. STAGE 6: Project Close Out

6.1 Review, discuss and approve the health and safety file with the contractor(s) and manage the construction project health and safety during the defects 6 liability period.

6.2 Cancel alt construction project health and safety legal appointments.

6.3 Prepare the health and safety operations and maintenance report.

6.4 Prepare the consolidated construction project health and safety close - out report.

ANNEXURE 3

EYE SIZWE KZN MECHANICAL
CONSULTING ENGINEERS
PROJECT REF: ESKZN-03-2018

ADDINGTON HOSPITAL
(NURSES HOME)
-DOMESTIC HOT/COLD WATER, FIRE SERVICES & SEWER STACK DRAINAGE & FIRE DETECTION & EVACUATION-

(JANUARY 2021) – (REV-2)

-MECHANICAL FEASIBILITY / DESIGN / SCOPE OF WORK REPORT- (PART-1)

CLIENT:

Department of Health:
Kwa-Zulu Natal

CONSULTING ENGINEERS:

Eye Sizwe KZN Mechanical
Consulting Engineers (Pty) Ltd
Unit : 9 , King Shaka Estate
50 Valley Road , Desainager
Tongaat , Kwa Zulu Natal
4405

Contact: Mr Morgan Govender
E-mail: Morgan.G@eyesizwekzn.co.za
Cell: 082 920 1198
Direct Office : (032) 9412012
Reception : (032) 9412011

STAGE 4:

Stage 4 submission to include the following documents:

1	Department of Health Project Leader's Report	☐
2	Brief Development Report	☐
3	Copy of Approved Project Brief	☐
4	Copy of Stage 3 approval	☐
5	Line drawings	☐
6	OOM Estimate	☐
7	Baseline Risk plans	☐
8	Baseline Health and Safety report	☐
9	Minutes of planning Meetings including those with applicable external stakeholders such as Local Governments, AMAFA, Eskom, Water affairs, and any other relevant stakeholder.	☐
10	Specific requirements from relevant Head Office Programmes/Services, such as Tuberculosis Services, Primary Health Care services, etc.	☐
11	ANNEXURE H: MILESTONES AND TASKS	☐
12	EIA approval (if required)	☐
13	PDA approval (if required)	☐
14	AMAFA approval (if required)	☐
15	Confirmation of property ownership	☐
16	A basic condition assessment is required that include the following (as applicable)	☐
	Existing structures (include types, sizes, materials, etc)	☐
	Type of construction	☐
	Status of foundations	☐
	Status of structural elements	☐
	Status of walls	☐
	Status of roofs and ceilings	☐
	Status of windows and doors	☐
	Status of external finishes	☐
	Status of internal finishes	☐
	Status of all fittings (please breakdown per discipline/type)	☐
	Is there any asbestos in/on the facility?	☐
	State of maintenance	☐
	Underground structures	☐
	Type of structure (including size, depth, access, etc)	☐
	State of repair	☐
	All services (overhead, above and underground, external and internal - include availability, type, size, depths, current state, connection points, etc)	☐
	Water	☐
	Storm water	☐
	Sewer	☐
	Waste (all types)	☐
	Ventilations systems	☐
	Electrical	☐
	Lifts, hoists, chairlift, etc	☐
	Medical gasses	☐
	Fire	☐
	Steam	☐
	All communication systems	☐

STAGE 4 (Cont):

17 Design proposal which must include the following:

- Options (incl design, procurement and construction) considered (preferably 3) ☐
- Which Option is being recommended and why? ☐
- What "Green initiatives" are considered and why? ☐
- Any deviation from the scope/brief and why? ☐
- Does the facility comply with: ☐
  - NBR (National Building Regulations) and SANS 10400? ☐
  - IUSS ☐
  - Ideal clinic requirements ☐
  - National Core Standards ☐
  - DOH Standards ☐
  - What are the areas of non-compliance? ☐

Please confirm that the following has been addressed in the above documents:

- Influencing land issues (eg informal settlements on site or close by, environmentally sensitive areas, high crime areas, etc) ☐
- Full survey of the site including the following: ☐
- North point ☐
- Prevailing wind direction ☐
- All boundaries and corners with co-ordinates ☐
- Cadastral survey with 0,5 to 1m contours ☐
- Access roads ☐
- Building lines, flood lines, servitude, etc ☐
- Access points and/or entrances ☐
- Fencing and security points - type, height, status ☐
- Neighbouring structures ☐
- All existing structures surveyed ☐
- All underground structures determined ☐
- All above ground services with connection points, types, materials, depths, sizes and status ☐
- All underground ground services with types, materials, depths, sizes and status ☐
- Environmentally sensitive areas ☐
- Trees and other special vegetation ☐
- Graves ☐

Did you invite the following:

- Head Office programme /Service ☐
- District Manager ☐
- CEO/ Manager of the Facility ☐
- Implementing Agent Project Leader ☐
- Professional Service Providers ☐
- All projects exceeding R100 million ☐
- National Department of Health ☐

Has the document been signed off by:

- Head Office programme /Service ☐
- District Manager ☐
- CEO/ Manager of the Facility ☐
- Implementing Agent Project Leader ☐
- Professional Service Providers ☐

INDEX – STAGE 4 PAGE

HEALTH
KwaZulu-Natal

STAGE: 4 (ITEM:2 BRIEF DEVELOPMENT REPORT)

MECHANICAL SERVICES:

The site was visited on Tuesday 24th July 2018 with Mr T Chiro of the Department of Health. During the time of visit there was some site disruption from occupants due to poor services in building. Hospital maintenance pointed out that there was no hot & cold water to building. The hot water basement was being flooded from leaking pipes.
The site was re-visited by us on the 25th July 2018 for full investigation.

STAGE 4 – (ITEM:3 PROJECT BRIEF)

INTRODUCTION:

This report is based on an existing infrastructure high rise building, referred to as the nurse's residence.
From the initial report it can be seen that the services are in a poor state and in urgent need of repairs and replacement of pipe work and some equipment.
Further the repairs and upgrade to be carried out has to make the building fully compliant for it's occupational use.

Due to the fact that the infrastructure and services are existing, there is no need for a major re-design of existing services, as this would be a fruitless expenditure, ie: The existing services will be improved on and replaced.

The principal scope of work guideline would be to retain existing major equipment such as hot water storage tanks and the heat pump units and service them to good working condition.

All existing pipework in shafts which have long exceeded their life span, and being severely subjected to corrosion; these must be replaced with new pipe work but with a view to a more corrosive resistant material.

Management Strategy: The retrofit work implementation will involve the following strategy:

i) Due to the fact the building remains occupied during the construction stage, the plan would be to carry out the works with little or no disruption to existing services.

ii) The following methods can be implemented: -
(a) Where possible install new pipe work adjacent to existing to be removed and then do connection from existing points to new, one at a time.

(b) Where equipment to be removed (Run/Standby), replace one equipment at a time.

(c) New ground level water storage tanks and new pipe work links into building are new. This work can be carried out without disruption.

(d) Fire services on each point can be done individually without disruption. The fire pump replacement will pose no disruption as the existing is not in operation anyway.

(e) Fire detection installation will be new (currently non-existent), hence there will be minimal disruption.

(f) One-Off roof tank repairs currently dry and not in operation, remedial works will cause no disruption. This work will be done after the installation of the proposed new ground tank back up.

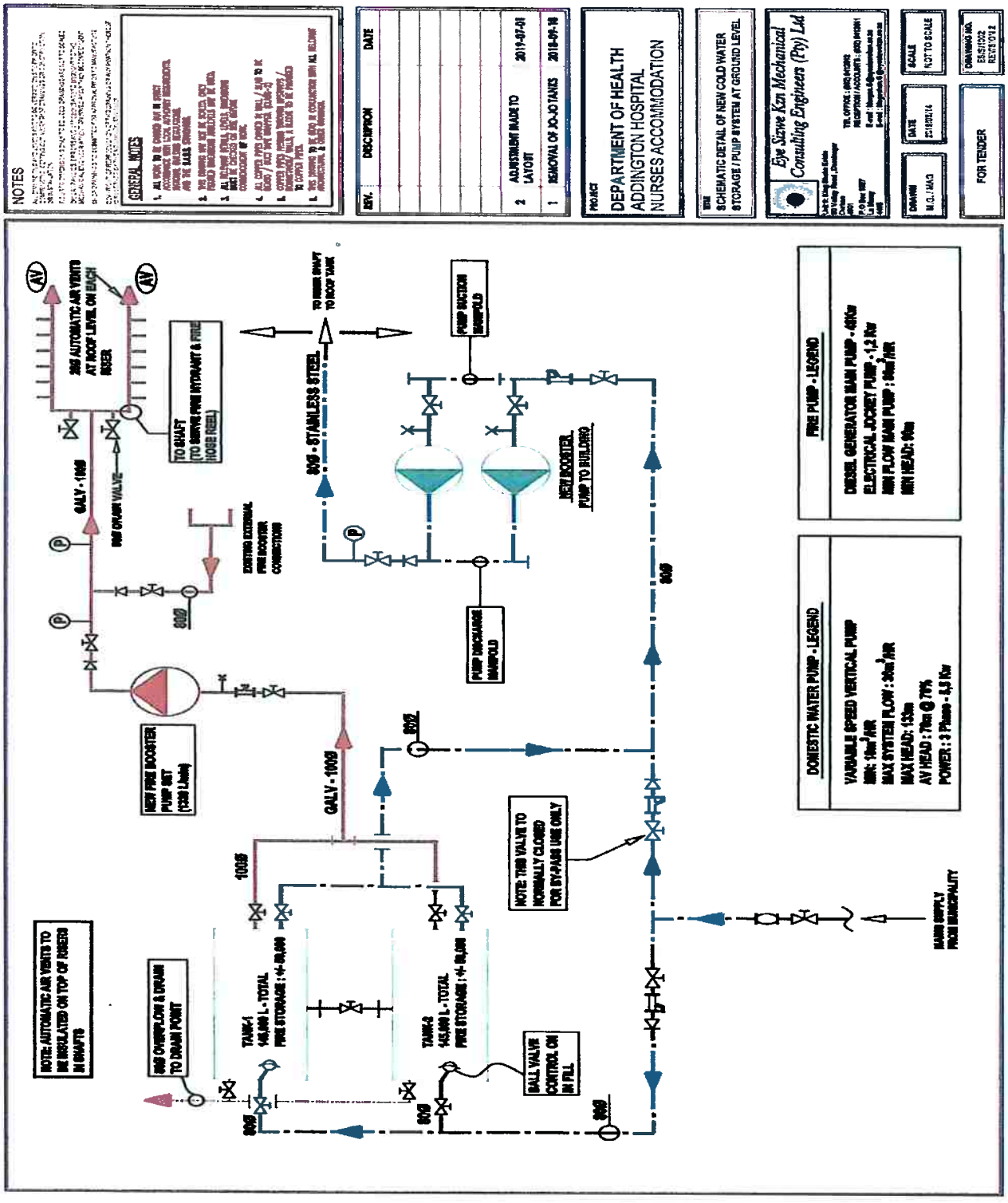
(g) **Sewer Stacks (Vertical & Horizontal)**

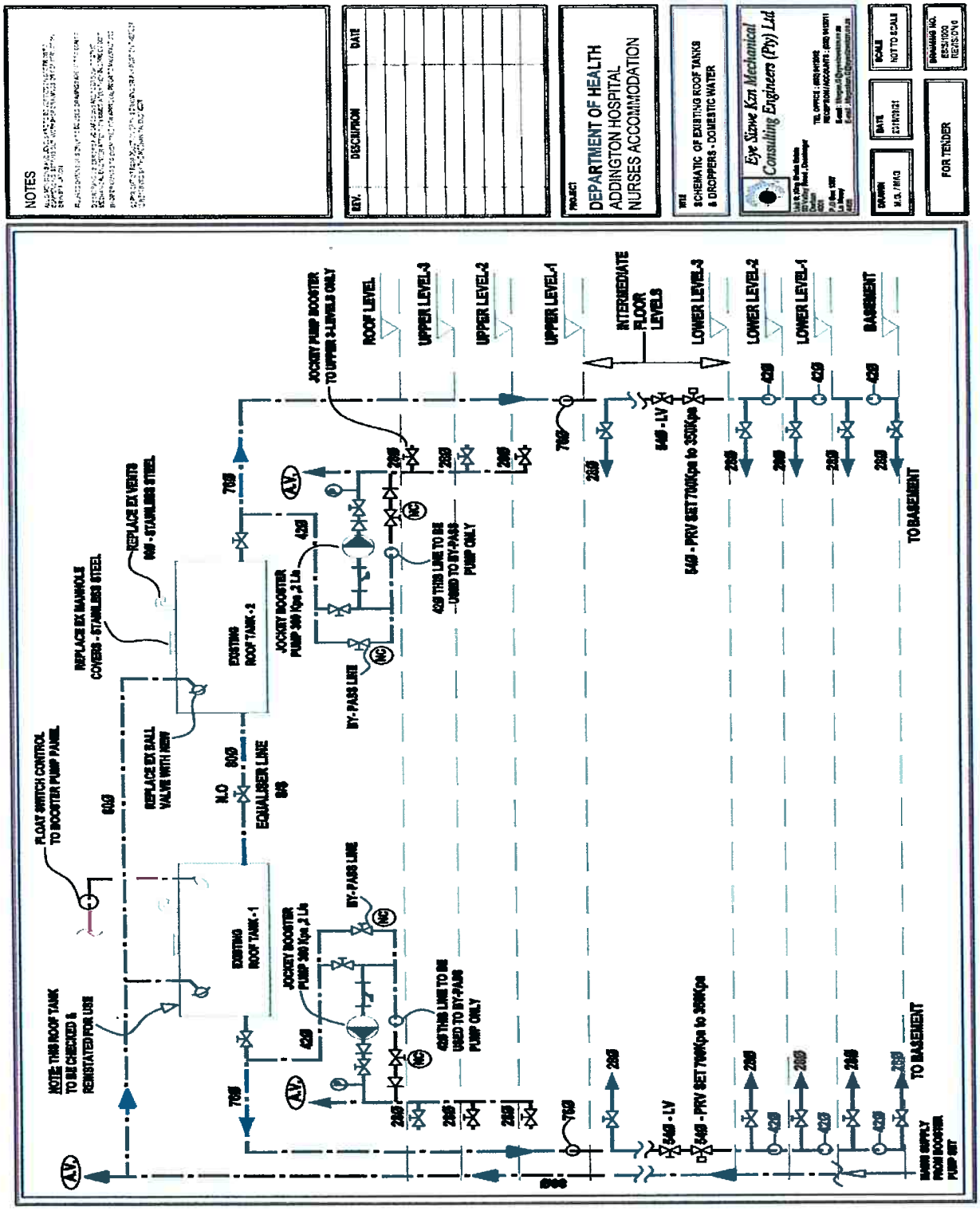
Due to the challenge, that this will be in use during the retrofit process, new mains will have to be installed adjacent to existing pipework. The one off final connection from each wing to stack will have to be co-ordinated on site when students are at classes.

The use of uPVC pipe work which is corrosive resistant and lighter to handle will also facilitate the retrofit work.

All support brackets will be stainless steel.

STAGE 4 – (ITEM:5 LINE DRAWINGS)




NOTES
REV.
DESCRIPTION
DATE
PROJECT
DEPARTMENT OF HEALTH
ADDINGTON HOSPITAL
NURSES ACCOMMODATION
SCHEMATIC OF EXISTING ROOF TANKS & DROPPERS - DOMESTIC WATER
Eye Sizwe Kzn Mechanical Consulting Engineers (Pty) Ltd
SCALE
NOT TO SCALE
DATE
DRAWING
FOR TENDER
ROOF LEVEL
UPPER LEVEL-3
UPPER LEVEL-2
UPPER LEVEL-1
INTERMEDIATE FLOOR LEVELS
LOWER LEVEL-3
LOWER LEVEL-2
LOWER LEVEL-1
BASEMENT
JOCKEY PUMP BOOSTER TO UPPER 6 LEVELS ONLY
REPLACE EX VENTS AND - STAINLESS STEEL
REPLACE EX MANHOLE COVERS - STAINLESS STEEL
EXISTING ROOF TANK -2
EXISTING ROOF TANK -1
JOCKEY BOOSTER PUMP 300 Kpa, 2 Ltr
BY-PASS LINE
REPLACE EX BALL VALVE WITH NEW
N.O EQUALISER LINE
FLOAT SWITCH CONTROL TO BOOSTER PUMP PANEL
NOTE: THIS ROOF TANK TO BE CHECKED & REINSTATED FOR USE
40B THIS LINE TO BE USED TO BY-PASS PUMP ONLY
B40 - PRV SET 700Kpa to 350Kpa
B40 - LV
TO BASEMENT
MAIN SUPPLY FROM BOOSTER PUMP SET
A.V.

LINE DRAWING ATTACHED ON NEXT PAGE

STAGE 4 – (ITEM:6 OOM ESTIMATE)

OPTION: 1 – BUDGET ESTIMATE - UPDATED - 21/01/2021

Ref	Description	Nett Amount
i)	Domestic/Fire Wet Services including Storage Tanks & Booster Pumps	R 4,730,546-00
ii)	Hot Water System Retrofit	R 4,983,000-00
iii)	Sewer Stack & Connection to External Manholes (Provisional Sum)	R 960,000-00
iv)	Fire Detection & Alarm Evacuation	R 4,714,739-25
v)	Sprinkler System	R 9,464,974-00
vi)	Fire Stops/Fire Signage's	R 120,000-00
vii)	Associated Builders Work	R 350,000-00
	Add: Contingency	R 300,000-00
	Total Nett	R 25,623,259-25
	Vat @ 15%	R 3,843,488-89
	Final Total	**R 29,466,748-14**

****Note: The above estimate excludes any consultant's fees.**

STAGE 4 – (ITEM:6 OOM ESTIMATE)

OPTION: 2 – BUDGET ESTIMATE - UPDATED - 21/01/2021

Ref	Description	Nett Amount
i)	Domestic/Fire Wet Services including Storage Tanks & Booster Pumps	R 4,730,546-00
ii)	Hot Water System Retrofit	R 2,573,263-00
iii)	Sewer Stack & Connection to External Manholes (Provisional Sum)	R 960,000-00
iv)	Fire Detection & Alarm Evacuation	R 4,714,739-25
v)	Sprinkler System	R 9,464,974-00
vi)	Fire Stops/Fire Signage's	R 120,000-00
vii)	Associated Builders Work	R 350,000-00
	Add: Contingency	R 300,000-00
	Total Nett	R 23,213,522-25
	Vat @ 15%	R 3,482,028-34
	Final Total	**R 26,695,550-59**

****Note: The above estimate excludes any consultant's fees.**

****Our Bill of Quantities is updated to Option: 2, updated to the current rates.**

STAGE 4 – (ITEM:7 BASELINE RISK PLAN)

EyeSizwe KZN are committed to designing and operating environmentally responsible installations and to design installations that are cost effective while improving the health and safety of the people who work in them, accordingly the mechanical design will incorporate all of these attributes.

OUR CHECK LIST

- ✓ Ownership of the mechanical agenda and on-going input with respect to sustainability performance of all aspects of the project
- ✓ Carry out all mechanical related design and work to suit
- ✓ Creating a system that is energy efficient
- ✓ Life-cycle cost assessment of sustainable design alternatives to business as usual systems
- ✓ Screen and make recommendations to assist the Client with tender evaluation
- ✓ Cost evaluation together with mechanical project management
- ✓ Prepare specifications and Bill of Quantity
- ✓ Will assure the appropriate quality systems are instituted
- ✓ Shall arrange for Client approvals in respect of designs, material etc. with project team
- ✓ Shall ensure compliance with OHS and other relevant legislation

Risks are associated with every project and should be identified in order to avoid negative impacts on the overall performance.
Effective risk management must permeate all areas, functions and processes of the project. The goal therefore must be to negotiate risks, assess these or even make these marketable and reduce them emphatically.

Each of the phases has a certain purpose and scope of work assigned. At the completion of each phase there is a decision point where risk assessment takes place. Based on the risk assessment, an appropriate decision is made regarding further actions or proceeding to the next phase.

Effective risk management requires commitment as well as the risk conscious behaviour of each individual. The motivation as well as the interplay of the team involved in the project in the end determines the quality of the work and thus the success of the project.

Risk management can therefore only be implemented and enforced effectively if communication channels in the enterprise are created, which guarantee the direction of the information to the places concerned in each case.

Risk management successfully installed in the project offers the chance to gain a clear understanding of the goals, duties and contents of the service and the feasibility of the project.

RISK LAYOUT PLAN:

RISK MANAGEMENT PLANNING	Prior to the initiation of risk management, activities in the proposed baseline (scope, schedule, and cost) are evaluated to determine their potential for risk.
RISK IDENTIFICATION	Identify risks that may impact the successful completion of the project. Risks are identified for the entire life cycle of the project.
RISK ASSESSMENT	Assess the risks to determine their likelihood and impact on the project's cost, schedule, and/or work scope.
RISK HANDLING	Determine the risk-handling strategy, whether (in order of preference) it is to eliminate, transfer, prevent, mitigate, or assume (accept the risk).
RISK MANAGEMENT IMPACT & CONTROL ACTIONS	Assess the risk impact on the project and the effect of the risk handling strategies.
RISK REPORTING AND TRACKING	Risk reporting and tracking is the documentation of the risk management process. Each identified risk shall be documented using the Risk Assessment Worksheet. The approach to each identified risk shall be documented using the Risk Management Worksheet.

STAGE 4 – (ITEM:8 BASELINE HEALTH & SAFETY REPORT)

1.0 INTRODUCTION

This safety policy is a document which outlines EyeSizwe KZN Mechanical Consulting Engineers intent to provide safe and healthy conditions at the workplace and contains the written organisation and arrangements for carrying out the policy.

Its aim is to prevent/reduce accidents and incidents of ill health at work.

There is a legal requirement to prepare such a document under the general duties of the health and Safety at work etc Act 1974 - hereafter referred to as the 'Act'.

Not only does the Act impose duties on employers regarding their employees but also on employees themselves, self-employed people, manufacturers and designers. Therefore, due to the contractual and supervisory nature of a consultant's work in the Building Services Industry, we not only have a responsibility for our own employees on site but also in part for our contractors. This requires knowledge and practice of the Act, relevant codes of practice and guidance notes which are in our Health and Safety file in the Library. As a professional body EyeSizwe KZN Mechanical Consulting Engineers, expects its employees to be knowledgeable and aware of hazards of the industry. Regarding particular hazards such as CO^2, Halon or Asbestos, engineers should at least be familiar with sources of information/guidance.

This policy comprises three parts:

The General Statement - a copy of this is on view in EyeSizwe KZN Mechanical Consulting Engineers offices

The organisation for implementing the Policy - where safety 'fits into' EyeSizwe KZN Mechanical Consulting Engineers

The Arrangements for carrying out the Policy - this identifies specific hazards that engineers are likely to encounter on site but is not an exhaustive list. This section also covers internal Office Procedures.

Familiarity with this policy and the regulations it refers to is encouraged so that its aims may be realised -

TO REDUCE/PREVENT ACCIDENTS AND INCIDENTS OF ILL HEALTH AT WORK

2.0 THE GENERAL STATEMENT

This is the statement of the policy which summarizes EyeSizwe KZN Mechanical Consulting Engineers objectives. It is on display for all staff's perusal and a copy is also issued to all engineers on commencement of employment within EyeSizwe KZN Mechanical Consulting Engineers.

2.1 Health and Safety Policy Statement

EyeSizwe KZN Mechanical Consulting Engineers aims, so far as is reasonably practicable, to ensure the health, safety and welfare of employees. As a consultancy we also have an indirect responsibility for contractors and their employees on site. However, the responsibility lies directly with the contractors themselves and is by no means relinquished by our involvement. All operatives and engineers have individual duties too.

As an employer EyeSizwe KZN Mechanical Consulting Engineers aims to:

1 Ensure provision of safe plant and systems of work
2 Ensure provision of a safe working environment and adequate facilities
3 Inspect plant and premises at regular intervals
4 Ensure arrangements for the safe handling, use, storage and transport of articles and equipment
5 Investigate accidents or dangerous occurrences and ensure remedial action is taken where necessary
6 Provide, where appropriate, protective clothing and equipment and ensure its use.
7 Develop the commitment of personnel at all levels through joint consultation, such as Safety Committees
8 Monitor the effectiveness of the policy
9 Consult with Safety Representatives
10 Respond to safety matters raised by staff
11 Revise the policy annually and bring to the attention of all staff.

Our objective is to obtain the co-operation of management and staff in executing the policy.

We expect all staff to familiarise themselves with the organisation and arrangements for carrying out the policy, and be aware of their responsibilities.

3.0 THE ORGANISATION FOR CARRYING OUT THE POLICY

This section identifies individuals responsible for health and safety within the structure of EyeSizwe KZN Mechanical Consulting Engineers and details their responsibilities. One must bear in mind, however, that this part cannot be as specific for a Building Services Consultant as, for example, a factory or office set-up. Our movements out to different sites are such that we do not have a typical 'static' arrangement for health and safety. Therefore, although the organisation is based in the office, it has to be implemented on site. A greater reliance on individual engineer's vigilance is therefore necessary.

3.1 Structure

Directors

General Safety Officer (GSO) Fire Officer (FO)

Deputy FO

All Engineers Reception First Aid Officer (FAO)
Deputy FAO

3.2 Responsibilities

Directors

Directors, shall be responsible for the health, safety and welfare of all members of staff. This covers both office staff and engineers on site and extends to other persons entering EyeSizwe KZN Mechanical Consulting Engineers offices.

They shall ensure that the Safety Policy is implemented through the GSO and that current legislation, Codes of Practice, etc. and any necessary changes are written into it.

They shall appraise the effectiveness of the policy on a regular basis.

General Safety Officer

The General Safety Officer, shall be responsible for the health and safety of engineers on site and also the office staff.

He shall ensure that all engineers, First Aid and Fire officers, Receptionist, and their deputies, know and fulfil their roles.

He shall report to the Directors on Health and Safety matters that she cannot resolve.

He shall ensure that all staff are made constantly aware of the Health and Safety Policy and their responsibilities. He must issue a copy to all staff on commencement of employment and obtain their signature to show their understanding and acknowledgement of it.

He shall ensure the continual revision of the policy, updating text, named persons (when personnel leave EyeSizwe KZN Mechanical Consulting Engineers offices) and the maintaining of an up to date Health and Safety Library. he shall take note of suggestions from engineers as to its revision.

He shall obtain any safety clothing/equipment deemed necessary for an engineer on site.

He shall ensure an accident record book is kept.
He shall investigate any dangerous occurrences and report to the H&S Executive Area Office in accordance with RIDDOR (1985), HSE 11 (Rev)
He shall respond to employee complaints.
He shall arrange Safety Committee meetings when necessary.

All Engineers

All Engineers shall ensure the health and safety of themselves, colleagues and contractors on site. They shall read the health and Safety Policy, heed it and suggest any revisions to the GSO.

They shall notify the GSO of any Codes of Practice, guidelines, etc and safety clothing/equipment that are needed.

They shall notify Reception when leaving the office for site.

They shall ensure the Main Contractor keeps an accident book. Accidents to EyeSizwe KZN Mechanical Consulting Engineers when on site must be recorded in this site book and also in the KZN Mechanical Consulting Engineers office book.

They shall co-operate in health and safety matters relating to the office.

Reception:

The Duty Receptionist shall be responsible for noting down Engineers' names leaving the office for site in the Reception Diary

She shall, in the event of a fire, take the Reception Diary to the designated assembly point and hand over to the FO or Deputy FO.

She shall ensure her Deputy is familiar with these responsibilities.

Fire Officers:

In the event of fire, the Fire Officer or Deputy shall ensure that the Fire Brigade is called, carry out a roll call for the office (based on The Reception Diary) and report to the Directors at the assembly point.

They shall ensure fire precautions are maintained in the office areas.

i. Reduce unnecessary storage of paper to a minimum
ii. Ensure that all fire extinguishers are checked during the 6 monthly service
iii. Ensure Fire Exits are not obstructed
iv. Ensure Fire Doors are not propped open
v. Check that during the Fire Alarm Tests that bells can be clearly heard.

They shall ensure that nobody takes personal risk in fighting a fire.

They shall ensure that their deputies are familiar with the responsibilities.

First Aid Officer

T.B.A., as First Aid Officer, shall ensure that any injury in the office is dealt with as quickly as possible.

He shall ensure that a small stock of basic first aid equipment is kept.

He, or his deputy shall administer first aid for minor injuries.

He, or his deputy, shall ensure the emergency services are called in the case of severe injuries.

He shall ensure all accidents are recorded in the office accident book.

He shall ensure his deputy is familiar with the responsibilities.

4.0 THE ARRANGEMENTS FOR CARRYING OUT THE POLICY

This section itemises, in the form of a 'Check List', a means of carrying out the responsibilities from Section 2. It identifies hazards likely to be encountered on site together with guidelines to follow and also incorporates internal office procedures under 4.14 and 4.15

4.1 General

1. Always 'book out' by notifying Reception before visiting site. Inform Receptionist where you are going and how long you are likely to be. Inform the Site manager of your attendance on arrival.

2. On a new project it is ideal to arrange an introductory meeting with the Main Contractor's Health and Safety Manager/Officer. Enquire of the Company's safety procedures and maintaining first aid and accident reporting procedures. To ensure the continued use of an accident book on site; it seems it is necessary to treat the information in it as the basis for training and not for disciplinary action. Keep a telephone number on which the Contractor's Safety Officer can be contacted.

3. Never wear shoes with worn, slippery soles.

4. Unless it is necessary to keep it with you, put your brief case down when walking around unfinished or external areas - it is always safer to have both hands free to steady yourself.

5. When stepping onto/off unfinished raised floors, take care that all four corners of the tiles are supported.

6. When walking through a wet area, try to dry your shoes before entering other areas to avoid slipping.

7. Beware of loose clothing such as raincoats, belts, etc. - especially in the vicinity of scaffolding. Tuck tie into shirt.

8. Watch out for protruding nails in struts, shuttering, etc.

9. Take care when looking down/up shafts especially if leaning on temporary barriers or unfinished walls. Look out for falling debris and rising dust.

10. Watch out for holes/shafts that are temporarily covered.

11. Never walk on lengths of pipe or scaffold poles.

12. Do not kick/throw masonry/rubbish off roofs, scaffolds, etc,

13. When attending a site with a known enivronmental hazard such as excessive noise, dirt/dust or falling masonry, take some protection. We have our own earmuffs, masks and hard hats. Please notify Adrian Lee if you require use of these.

14. Obey site rules, eg wear hard hats in designated areas.

15. Do not loiter under scaffolds.

16. If you notice any practices/procedures which clearly contravene or have no regard for safety regulations, even if not part of services work, inform the appropriate employer - you have a duty to do so. If danger is imminent, stop the operative concerned.

17. Do not leave gauges, thermometers, tools, etc balanced on high level structures.

18. Do not leave tools, etc lying on machinery - it may be started up from a remote position.

19. Before lifting/moving a heavy object ensure that it has no sharp/rough edges and that the way is clear. When lifting, stand with feet apart no wider than hips, with one foot in advance of the other, bending knees to a crouch position. Keep a straight back, not necessarily vertical, get a firm grip of the object and keep the load near to the body. Lift using the thigh muscles by straightening the legs and using a knee for an intermediate support if needed. Ensure that you can see over the object you are carrying and never change grip when carrying - always stop and rest the object on a steady support before changing grip.

20. Always wash hands soon after lagging, tar, asbestos, chemical cleaning solutions, etc. Ensure stained clothes are separately washed as soon as possible.

21. Look out for rubbish and obstructions on the floor/ground and at high level.

22. Ensure stairways are sufficiently illuminated. Look out for rubbish/debris.

23. Watch out for holes and trenches - barriers or warning signs should be erected.

24. Watch out for dust hazards, rubbing down of paint, etc. Dry rubbing of known lead paint is normally prohibited.

25. Do not smoke.

26. Use/removal of asbestos must be carried out in accordance with HSE guidelines. Advice can be obtained directly from local Environmental Health Officers and they must issue a re-occupation certificate before areas, in which work has taken place, can be re-occupied.

27. Warning signs must be displayed in the vicinity of all potentially dangerous activities/hazards.

28. If an engineer injures his/her self on site, make sure this is notified to the Contractor's Safety Officer and entered in the accident book. Ask for a copy to be sent to our office.

4.2 Ladders

When using a ladder:

1. Ensure there are no tools balanced on top.
2. Look out for overhead cables.
3. Ensure it is not defective.
4. Ensure it stands on a firm base.
5. Ensure it is tied at the top if used for access to scaffolding.
6. Ensure it is set at the correct angle - about 75' to horizontal (1 in 4)
7. Carry ladders with front end elevated.
8. Never use a ladder that is not long enough - do not over-stretch.
9. Face the ladder on both ascent and descent

4.3 Scaffolds

When using a scaffold look out for:

1. Absence of toe boards.
2. Absence of guard-rails.
3. Loose, split, overlapping boards.
4. Gaps in boards.
5. Obstructed walkways.
6. Bent or rusty poles.
7. Absence of bracing or tie pins.
8. Absence of base plates.
9. Wrong use of couplers.
10. Worn/rusty couplers.
11. Protruding poles especially horizontal members at head or low level
12. Do not walk on scaffold poles laid on the ground - they may roll.
13. Mobile scaffolds (towers) must not be higher than 3 or 3.5 times the shorter base width for outside and inside use, respectively.
14. Never increase the height of a tower by using a trestle, steps, etc on top.
15. Do not move a tower with someone on it.

4.4 Welding

Ensure cylinders are stored properly:

1. Oxygen must be kept separately from combustible gases, eg propane, butane, acetylene.
2. Oxygen bottles should be stacked no more than four high.

3. Acetylene and liquefied petroleum gas cylinders must be kept upright.

4. Propane must be stored above ground level in well ventilated areas.

5. Watch out for welding occurring overhead - falling sparks. Welding activities should normally be screened.

6. To watch welding, wear the appropriate visor/goggles.

7. Ensure that welding is carried out in a well ventilated area - mechanical ventilation is necessary in basements, or enclosed spaces.

4.5 Electrics/Powered Tools

1. When watching operations with drills, hammers, grinders, etc, wear safety spectacles/goggles.

2. Look out for cables trailing in water/oil, etc.

3. If a machine has a guard, it must be used.

4. Ensure portable tools are used on a 110V supply with properly wired trailing leads and plug connections - 240V may only be used for site huts, fixed floodlighting and some small static machines. To aid identification, 110V plugs should be yellow and 240V plugs blue.

5. Most plant working on 415V should have a warning sign stating this.

6. Watch out for snagging overhead cables, for example, with ladders.

7. Look out for signs of damage to wires and cables.

8. Ensure proper use of plugs and do not use any equipment with bare cable ends.

9. Before opening a control panel, ensure that it is isolated by a door interlock or by other means.

10. Rubber insulating mats should be placed in front of switchgear/control panels.

11. If inspecting live apparatus, removing terminal covers, etc, two engineers must always be present.

12. Operatives must have permits to work from the employers Authorised Person in transformer rooms, switchgear rooms, etc. (the Authorised Person must have a current annual certificate issued by the Statutory Authority).

4.6 Hoists

If using a hoist, ensure:

1. That a regime of inspections is carried out and recorded in accordance with H&S recommendations.

2. There is an enclosure where necessary to prevent people being struck by a moving part.

3. Gates are provided at all landings.

4. The control rope is arranged so that the hoist can be operated from one position only.

5. The safe working load is displayed.

6. There is a proper signalling system

4.7 Roofwork

Take care when walking on a roof.

Ensure:

1. There are crawling boards on roofs of pitch greater than 30^0 or if the roof is slippery. If no boards or ladders are present, are there hand and footholds?

2. When working on a fragile roof, ensure use of the appropriate crawling/duck boards.

3. There is sufficient perimeter protection in the form of a handrail, etc to prevent falling over the edge.

4. There is sufficient protection/warnings on display if open expanses of asbestos cement sheets or glass are nearby.

5. All rooflights are properly covered.

6. Where other men are working underneath, precautions are taken to prevent debris falling on to them, eg netting.

7. That you do not have to balance holding a case - pass it to a colleague first if possible.

4.8 Excavations

Take care when entering dugouts.

Ensure:

1. There is sufficient support to the sides.

2. The angle of shoring is appropriate.

3. The excavation is inspected daily and the support structure weekly.

4. There is safe access to the excavation.

5. There is a barrier around the hole to prevent persons falling in.

6. The stability of the excavation is not affected by vehicles nearing it.

7. That the excavation is well ventilated especially where gases heavier than air are likely to collect eg diesel fumes, cold nitrogen gas, refrigerants, etc.

4.9 Confined Spaces

1. Ensure that they are well ventilated.

2. Ensure they are well lit.

3. You do not venture into unoccupied spaces alone, and ensure that the site management know of your whereabouts and how long you intend to be there.

4.10 Cooling Towers

Ensure a proper water treatment regime is in operation with varying biocides being used.

Face masks should be used when working nearby.

If it is suspected or known that a particular Tower is not properly maintained using a water treatment programme in general accord with CIBSE TM13 it should be should be shut down and inspected. Any signs of excess scale or growth of slime, algae etc should be reported to the building owner immediately and they are to be instructed to carry out a thorough cleaning operation which should be carried out with the Tower drained down. Chlorine is the best substance for use for initial disinfection of a neglected or high risk system at 15ppm with a contact time of 2 hours. A pH of between 7.5 and 7.8 should be maintained to enable the chlorine to work effectively. Any damaged components particularly the eliminators are to be repaired and a recognised regime of water treatment adopted including the use of alternate doses of biocides.

(It is understood that Legionnaires Disease can only be contracted by inhaling contaminated water droplets in an atomised form)

4.11. Air Systems (See CIBSE Commissioning Code A)

1. Do not poke fire dampers with fingers.

2. On inspecting a fan chamber, ensure that the fan is electronically isolated - use the emergency stop if necessary - (remember to reset it afterwards). Have a colleague at the control panel to ensure the fan is not started by anyone else whilst inside.

3. When walking above false ceilings, be sure to walk on members that are strong enough to support your weight.

4. If checking fan belt tension, ensure that the fan is isolated first and belt guard replaced afterwards.

5. If starting up a system for the first time, ensure there is no loose debris near the intake louvre and that all access doors are in place.

6. If you use tachometers on fans within AHU's, take care - be comfortably positioned. Do not try, yourself, to hold open the chamber door as well.

7. Do not enter AHU chambers with muddy shoes.

8. Do not enter AHU chambers with loose clothing or holding loose papers.

9. Do not walk on ducts, especially if lagged.

10. Ensure fire dampers are installed where required - generally where ducts pass through fire compartment walls and at a builder's work vertical shaft, in which case dampers are needed where branch ducts enter or leave the shaft and/or between floors. Ensure access panels are correctly located and adequately sized.

4.12 Water Systems (see CIBSE Commissioning Code W)

1. When visually inspecting pump rotations, take care for spraying hot water.

2. Do not prod pump impellers when pumps are not isolated.

3. Ensure the appropriate guards and covers are fitted to pump belt drives, boilers, fuel feed devices, etc.

4. Take care when inspecting pumps that they are not started automatically.

5. Do not hang/walk on pipes.

6. When touching pipes, heat-emitters/exchangers, always do so with a 'glance' of the fingers to avoid scalding/burning.

7. Never stand directly underneath a pipe, where manometer tappings are being used to avoid 'drip scalding'.

4.13 Sewers, manholes, drains, refuse etc.

When involved in work associated with sewers, manholes, drains, refuse etc, simple hygiene procedures are necessary to protect yourself from infection.

The infection to which you could be exposed include Tetanus, Hepatitis and Leptospirosis (Weils Disease).

Concern may be raised about exposure to AIDS, but the diseases previously mentioned are more infectious and the following measures listed below are designed to protect you from them, and AIDS.

Keep your Tetanus injections up-to-date, your Doctor will be able to advise you on how often boosters are necessary.

1. Always cover any wounds, cuts, abrasions or areas of sore skin on exposed parts of the body with waterproof dressings before you start work.

2. Always wash your hands after work and before eating or touching food, your eyes or mouth or any wounds.

3. Don't touch your eyes or mouth whilst working. If you are splashed in the eyes or mouth, wash them well with clean water straight away. Always wash off any splashes as soon as possible.

4. Always wear the protective clothing provided. Particularly important are gloves which are water proof and will also protect your hands from abrasions etc, and also overalls to protect your every day clothes from contamination.

5. Protective clothing must be looked after properly eg. Wash the gloves with soap and water before taking them off and let them dry thoroughly. Make sure you wear clean overalls.

6. Be careful not to cut yourself, eg. on sharp objects left in refuse sacks etc. If you are cut, encourage the wound to bleed freely by squeezing it, then wash it and apply antiseptic. Tell your supervisor and note the incident in the accident book. Seek medical advice.

4.14 Office Fire Alarm Procedure

This notice is to be displayed at a prominent position within the office.

The following procedure shall be adopted in the event of a fire

1. If you discover a fire:

   Raise the alarm at the nearest call point. These are situated adjacent to each staircase.

   If there is sufficent time, notify Reception and ask them to call the Fire Brigade.

   You should not attempt to fight the fire if this involves personal risk. However, water extinguishers are located adjacent to the exit doors from our office. These extinguishers should not be used on electical fires.

   Green painted Halon 121 fire extinguishers located adjacent to concentrations of computer equipment are to be used for electrical fires.

2. On hearing the fire alarm sounding continuously you should immediately evacuate the building via the nearest exit and staircase. Do not stop to collect belongings, but proceed immediately to the Assembly Point.

   The Fire Officer shall be responsible for checking that all staff has safely left the building. In his absence the Deputies shall take charge.

   The Receptionist shall take the Reception Diary with her to the assembly point as a record of those staff absent from the office.

   The Fire Officer shall carry out a roll call at the assembly point (Note: A schedule of staff is included in the Reception Diary.) Any absentee shall be reported to a Director immediately.

   The following are the appointed Fire Officer and Deputies:

   The Fire Officer (or Deputies) shall report to a Director once the roll call has been carried out.

4.15 Office Duties

1 Extreme care should be taken within the office when lifting items. If in doubt ask for assistance.

2. If you are unsure of any electrical equipment or connection within the offices, you must notify one of the electrical engineers who will inspect this for you.

3. Please note portable steps are available in the archive area for access to high level storage.

4. Do not accrue unnecessary paper as this is a potential fire hazard.

5. Any injury, no matter how slight shall be reported, at once, to reception where it will be entered in the Accident Book.

6. In the case of minor injury, treatment can be provided from our First Aid Equipment by the First Aid Officer, or the Deputy FAO

7. In the case of injury too severe for in-house treatment, emergency services shall be called.

8. Do not obstruct or prop open fire exits.

5.0 Summary

This Safety Policy is written in accordance with the HSC leaflet 'Guidance on the implementation of Safety Policies'. Its aim is to show EyeSizwe KZN Mechanical Consulting Engineers intent to care for its employees, show the structure for doing so, and highlight the potential hazards which engineers may encounter on site. Any suggestions as to additions to this policy will always be welcomed - remember, the continual revision of the policy is equally as important as its implementation.

Also note that, as Section 9 of the Act declares, no employee who does anything to create/keep the working environment safe and healthy, can be legally reprimanded by his/her employer.

Conversly each person is legally prohiited from doing anything which interferes with safety equipment and precautions.

It is important to remember that EyeSizwe KZN Mechanical Consulting Engineers is responsible for the engineers' health and safety on site and indirectly for our contractors too. Equally, we are individually responsible, and responsible for those around us, affected by our work, including the public.

Remember, for most industrial, large scale sites, the Health and Safety Executive (HSE) are the enforcing body. Local Authorities cover some industrial and commercial buildings with Environmental Health Officers.

Most HSE publications, guidance notes, etc applicable to the construction industry, are in our H&S library. The Heating and Ventilation Contractors' Association (HVCA) also publish booklets on site safety, of which we have a list. We have masks, hard hats and ear protectors and a safety-equipment supplies catalgoue. If any engineer knows of any of the publications to be out-of-date, then it is his duty to ensure the renewal of such information through the Health and Safety Officer.

STAGE 4 – (ITEM:16 BASIC CONDITION ASSESSMENT)

1.) **Domestic Cold Water**

i.) Two concrete water reservoirs at roof level. One found to be in operation and the other reported by site maintenance as dry and not operational.

ii.) Two booster pumps (operated by timer control) located in basement, pump water up riser pipes in shaft to one off roof tanks.

iii.) Pumps found to overheat and cut off, hence no continuous pumping at times.

iv.) Pumps suction found to be connected directly to municipal supply mains with no strainers or pressure gauges.

v.) No control on pumps to switch off, when tank is full, however existing float level control shuts off valve on filler pipe. This means pump continues to pump against closed head, when valve closes increasing pressure onto leaking pipes.

vi.) Currently no access to second tank which appears to be a fire water storage tank. It was recommended that openings be cut on top of shaft for access.

PS: (a) Currently no water on fire system due to a dry storage tank.

(b) Existing (2-Off) fire booster pumps found to be not operational. These pumps are probably seized due to long standing from not being used.

vii.) Existing pipes found to be repaired at various sections due to ongoing leak repairs from age of pipe work.

viii.) Branch pipe work to each level has no isolating valves making it difficult for repair, without shutting entire water system.

ix.) Due to single water storage tank in operation and due to the fact that the existing pumps are too small, the operational tank does get empty on excessive draw off.

10.) **HOT WATER SYSTEM :**

i) The existing system consists of three 8300 L storage tanks served by several electrical heat pump units.

ii) At time of inspection the hot water system was not in operation due to technical faults and leaking pipes. The plant room floor found to be flooded.

iii) Pipe work on hot water system found to be incorrectly piped. Also hot water pumps found to be connected in series, ie: One pump pumping into another pump halfway up building.

iv) Insulation on large sections of hot water pipe work found to be removed to fix leaks and not replaced. Pipe work found to be in a poor state.

v) Mains hot water pipe work has no proper supply and return ring mains or balancing system of hot water to each floor level.

vi) **FIRE WATER SYSTEM**:

At request of Department of Health , we had carried out temporary emergency repairs to 3-Off the 12 heat pump units, repaired some leaking pipes in basement, fixed controls to heat pumps and brought part of system into operation, to meet some of the hot water demand.

(a) **Fire System**: At time of inspection there was no fire water in hydrant and fire hose reels. As noted earlier the second roof tank which appears to be not in operation is the fire tank, hence no water in fire system.
The site maintenance had no explanation as to why this tank No:2 had no water. It is assumed currently the only reason could be a tank leak accompanied by leaking pipes in shafts.

(b) **Sewer Stack**: The stacks in shafts which are of the cast iron type are showing signs of leaks due to exposure to corrosive environment in excess of 50 years. Similar pipe runs exposed in basement are also corroded and leaking.

(c) **Fire Detection**: It was noted that this building has no fire detection system and alarm evacuation. In terms of the building occupancy and class which is H2 it is a compulsory requirement as per SANS regulation.

(d) **Sprinkler System**: Nonexistent.

DESCRIPTION OF PICTURES : A,B,C

(PICTURE : A)

(PICTURE : B)

(PICTURE : C)

Notes: (Pics : A,B,C) – These pictures taken on inside of a typical riser shafts. Pictures shows the poor status of pipe work.
Ongoing leak repairs clearly visible. Insulation on hot water pipes removed for leak repairs and not replaced.

Due to no water on the fire mains pipe (**red in color**), there was some emergency back-up where someone tried connecting the domestic cold water supply to fire hose mains.

DESCRIPTION OF PICTURES : L,M

(PICTURE : L)

(PICTURE : M)

DESCRIPTION OF PICTURES : L,M

Notes: (Pics : L,M) – Show poor status of existing hot water plant with several leaks at time of inspection. These leaks had to be temporary fixed by ourselves to stop water wastage. The piping system very poor from design point of view, ie: No specific primary & secondary system, hence these systems perform very poorly.

Of the two existing hot water circulation pump, only one was found to be operational. These pumps which are only suitable to circulate water between hot water tanks and heat pumps, were also expected to pump hot water into building.

When hot water only reached up to halfway up the shafts, someone had decided to install inline pumps to assist hot water flow to higher level, due to insufficient flow to these inline pumps, they continually burnt out due to cavitations.

DESCRIPTION OF PICTURES : E,F

(PICTURE : E)

(PICTURE : F)

Notes: (Pics : E,F) – Installation showing cold water mains supply to pumps directly from municipal mains, ie: No break "pressure" or storage tanks.

DESCRIPTION OF PICTURES :H,I,J,K

(PICTURE : H)

(PICTURE : I)

(PICTURE : J)

(PICTURE : K)

Notes: (Pics : H,I,J,K) – These pictures show mains cold water supply pipes to and from the roof tanks. These pipes are subject to severe corrosion from exposure, hence leak repairs have been ongoing. All valves and ball control valves are seized and do not work.

DESCRIPTION OF PICTURES : O & P

(PICTURE : O)

(PICTURE : P)

Notes: (Pics : O & P) – Shows existing fixed speed undersized hot water pumps. History of operation shows motors burning out due to excessive cavitations, due to undersized head pressure.

DESCRIPTION OF PICTURES : G

(PICTURE :G)

Notes: (Pics : G) – Existing cold water booster pumps, to pump water to roof tanks are of the fixed speed, ie: Not energy efficient as variable speed pumps.

Existing pumps do not have sufficient head and flow to meet the maximum demand.

DESCRIPTION OF PICTURES : Q

Notes: (Pics : Q) – Picture shows poor design on installation for air discharge from heat pump units. Common air discharge duct with no non return dampers.

Discharge air short circuit will prevail if the extract fan does not work.

The ducted system is not necessary.

DESCRIPTION OF PICTURES : D

Notes: (Pics : D) – Shows typical sewer stack on LHS, which is of cast iron and severely corroded with leaks.

STAGE 4 – (ITEM:17 DESIGN PROPOSAL)

Due to the fact that the infrastructure and services are existing in confined spaces such as vertical shafts and basements plant, this allows for only a similar or equal type of retrofit installation.

OPTION 1: (i) Domestic Water: Supply & Install all new pipework, new ground storage tanks and booster pumps.

(ii) Hot Water System: Supply & Install all new pipework, circulating pumps, heat pump units and hot water storage tanks.

(iii) Fire Water System: Supply & Install all new pipework, new fire water storage tanks, booster pumps and all new firefighting equipment.

(iv) Sewer Stack System: Supply and Install all new pipework uPVC Class-12.

(v) Fire Detection: Non-existent. supply and install new system.

(vi) Sprinkler system: Non-existent supply and install new.

(vii) Repair and restore both roof level water storage tanks.

OPTION 2: (i) Domestic Water : Same as Option-1.

(ii) Hot Water System: Supply and install all new pipework and circulation pumps. Service/repair and re-used existing heat-pumps and hot-water storage tanks.

(iii) Fire Water System: Same as Option-1.

(iv) Sewer Stack System: Same as Option-1.

(v) Fire Detection System: Same as Option-1.

(vi) Sprinkler System: Same as Option-1.

(vii) Roof Tank Restoration: Same as Option-1.

**** The only difference between Option 1 and Option 2 is the re-use of the existing heat pumps and hot water storage tanks.**

Option Recommendation:

Option 2 will be recommended in favour of some savings for re-use of existing heat-pumps and hot water storage tanks. Savings of +/- R 2 million.

The equipment for re-use is +/- 5 years old and therefore we recommended this option, as it is not as old as the other existing services which are in a very poor state. With some minor repairs and service, this equipment can be restored to good working order.

Green Initiatives:

i) Re-use of hot water reverse cycle heat-pumps, in lieu of electric element heating. This system offers approx 60% on energy savings.

ii) Specification for use of variable speed booster pumps. Great energy savings, as pumps run from minimum to maximum speed only to meet draw off demands, ie: There will be no maximum start-up and constant draw off current as would be in a fixed speed pump.

Deviation From Original Scope: (Yes)

The following are reasons for some deviation from the existing scope off works: -
i.) New ground fire storage tanks. Currently no fire water storage in building.

ii.) Supply and install new fire detection and alarm evacuation, to make existing building compliant to SABS-0400 fire regulation, Clause TT-31-1(c) . Currently no detection system in building.

iii) Supply and install sprinkler installation to comply to fire regulation SABS-0400 building class E.3. Currently no sprinkler system in building

iv) Installation of fire stops on every 5th level in vertical service shafts to comply to rational fire design requirements.

National Building Regulations , SABS 0400 / SANS 10400:

Currently the existing building does not meet the rational fire design requirements. The proposed upgrade in scope of works will make it fully compliant after the installation is complete.

Areas of Non Compliance:

i) Firefighting equipment (Hydrants, Fire Hose Reels) not in operation due to leaking pipework and no water in system, ie : No fire water storage.

ii) No fire detection system.

iii) No automatic system sprinkler system.

iv) No fire stops in service shafts.

v) Limited fire signage's.

Survey Conducted:

The mechanical services inspected and reported on are as follows: -
i) Cold water storage and reticulation.

ii) Hot water plant and reticulation.

iii) Fire water system and reticulation.

iv) Sewer drainage stack in shafts and to outside building.

v) Rational fire design compliance.

Invitation: Yes

Department of Health – Infrastructure & Planning
Mr T Chiro

Duly Prepared by:
Mr Roland Albert De Groep **(Senior Mechanical Engineer)**
Bsc Mech Eng (Natal Univ), Pr Eng

Assisted by:
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Moderated by:
Mr Morgan Govender **(Senior Projects Manager)**
Projects Manager

EYE SIZWE KZN MECHANICAL
CONSULTING ENGINEERS
PROJECT REF: ESKZN-03-2018

ADDINGTON HOSPITAL
(NURSES HOME)
-DOMESTIC HOT/COLD WATER, FIRE SERVICES & SEWER STACK DRAINAGE & FIRE DETECTION & EVACUATION-

(JANUARY 2021)

-MECHANICAL FEASIBILITY / DESIGN / SCOPE OF WORK REPORT- PART 2

CLIENT:

Department of Health:
Kwa-Zulu Natal

CONSULTING ENGINEERS:

Eye Sizwe KZN Mechanical
Consulting Engineers (Pty) Ltd
Unit : 9 , King Shaka Estate
50 Valley Road , Desainager
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Reception : (032) 9412011

STAGE 5: ☐

Stage 5 submission to include the following documents:

1	Department of Health Project Leader's Report	☐
2	Design Development Report	☐
3	Copy of Approved Project Brief	☐
4	Copy of Brief Development report	☐
5	Copy of Stage 4 approval	☐
6	Sketch Plans which must include the following (as required)	☐
	Architectural including Room layouts (including furniture, fittings, etc) and dimensions	☐
	Electrical	☐
	Mechanical (All systems and Installations)	☐
	Civil	☐
	Structural	☐
	Fire Installation, Protection, Detection, Evacuation, etc (including fire Chief's comments)	☐
	Data and Telephone	☐
7	Cost reports	☐
8	Risk plans	☐
9	Health and Safety report	☐
10	Minutes of planning Meetings including those with applicable external stakeholders such as Local Governments, AMAFA, Eskom, Water affairs, and any other relevant stakeholder.	☐
11	Specific requirements from relevant Head Office Programmes/Services, such as Tuberculosis Services, Primary Health Care services, etc.	☐
12	Approved decanting plan (if amended)	☐
13	ANNEXURE H: MILESTONES AND TASKS attached	☐
14	ANNEXURE I: ESTIMATE attached	☐
15	ANNEXURE J: CASH FLOWS attached	☐
16	Deviations	☐
	Any deviation from Scope / brief and why?	☐
	Any deviation from Stage 4 and why?	☐
	Any other deviations?	☐

Did you invite the following:

Head Office programme /Service	☐
District Manager	☐
CEO/ Manager of the Facility	☐
Implementing Agent Project Leader	☐
Professional Service Providers	☐
<u>All projects exceeding R100 million</u>	
National Department of Health	☐
Provincial Treasury	☐

Has the document been signed off by:

Head Office programme /Service	☐
District Manager	☐
CEO/ Manager of the Facility	☐
Implementing Agent Project Leader	☐
Professional Service Providers	☐

STAGE: 5 – SUBMISSIONS

ITEM 2: DESIGN DEVELOPMENT REPORT

(a) **Cold water Storage and Reticulation:**

Additional new ground level water storage tanks will store water direct from municipal mains, for domestic use and fire fighting. Booster pumps will pump water from new storage tanks up to existing roof level storage tanks.

Domestic use water is fed into building via gravity from roof tank down two separate shafts. Each level has a valve off supply point to feed existing pipe runs. Due to all existing pipework in shafts being in a very poor state, theses will be replaced with new non corrosive pipework.
(Refer to Schematic Line Diagram Part of Stage-4)

(b) **Fire Wet Services:**

This system only feeds fire hose reels and fire hydrants to comply to rational fire design requirement, ie : One fire hydrant per 1000m² and one 30m fire hose reel per 500m² and one fire extinguisher per 200m².

New fire booster pump set will draw from fire reserve in storage tanks and boost two fire riser mains (One in each shaft). Each fire main will supply the existing fire hydrant and hose reel points on each level.

Due to all existing pipework in shafts being in a very poor state, these will be replaced with new corrosive resistant pipework.

(c) **Central Hot Water Plant:**

The existing plant consists of 12-Off heat pump units operating simultaneously and 3-Off hot water storage tanks (8300L Each). The hot water circulation is currently dependent by a single little pump to pump

Hot water from tanks to heat pumps and up into building, ie: Only one circuit. The existing plant was temporarily repaired to have 3-Off the heat pumps operating to supply water up to only half way up the building, ie: The existing pump head is to small.

Upgrade: The existing reverse cycle heat pump units will be services and repaired to work satisfactorily.

The existing hot water pipe system will be redone to operate as primary and secondary systems with each system having its own pump set.
ie: The primary system will operate water circulation between tanks and heat pump units.

The secondary system will operate between the hot water storage tanks and the supply to the building.
The existing hot water storage tanks will be restored with minor repairs and back-up element replacements.

Due to all pipework especially in shafts, being in a very poor state, these will be replaced with new copper pipework.

Refer to schematic line diagram part of Stage-4.

(d) **Mains Drainage Stacks in Shafts and Pipework from Shafts to External Manhole**

As per initial report, the existing pipework which is of cast iron origin is corroded and leaking, hence in a poor state. The retrofit works will involve replacing all these pipes with new, non corrosive pipework such as uPVC Class-12 or equal.

(e) **Fire Detection and Alarm Evacuation:**

The existing infrastructure is a high rise building and its occupancy, Class is E.3. As per national building regulation , Clause TT.31 this building must be fitted with a fully integrated fire detection system, with a manually activated fire alarm and emergency evacuation communication system.
The proposed design and installation will comply to this requirement.

(f) **Identification of fire escape routes and fire signage's:**

Fire plan layouts will clearly indicate escape routes via signage's and emergency light positions in escape routes.
Firefighting equipment signage's and directions to its locations will also be indicated on fire drawings.

(g) **Sprinkler Installation:**

With reference to Clause TT-32 of the National building regulation, this building will require the installation of a fully automatic sprinkler system to comply to rational fire design requirements.

The design proposal will comprise of water storage tanks (Modular Galvanised Type) with a minimum of 144,000 L storage.

A booster pump set consisting of a main pump and a jockey booster pump. The main pump can be either diesel generator driven or electric with back-up power. All exposed pipework will be galvanized and internal pipework black mild steel painted.

Fire water under pressure from pumps, will be boosted into system via a sprinkler valve chamber.

Mechanical Systems: As described under Item 2.

Item 7: Cost Report: As per Option-2 of Stage-4.

Item 8: Risk Plans: As per submission as Stage-4

Item 9: Health & Safety Report: As per submission in Stage 4.

Item 16: Deviations: As stated in Stage-4. No further in this Stage-5.

Invitation: Yes

Department of Health – Infrastructure & Planning
Mr T Chiro

Duly Prepared by:
Mr Roland Albert De Groep **(Senior Mechanical Engineer)**
Bsc Mech Eng (Natal Univ), Pr Eng

Assisted by:
Mr Mageshan Govender **(Mechanical Engineer)**
NDip Mech Eng (UNISA) , BTech Mech Eng (UNISA) , SAIRAC Reg (Associate) , SAFHE Reg (Member) , SAIMechE Reg (Member) , NSBE (Member) , SABTACO (Member) , ISO 9001:2008 Registered , AIFireE

Moderated by:
Mr Morgan Govender **(Senior Projects Manager)**
Projects Manager

ANNEXURE 4

KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CURRICULUM VITAE TEMPLATE

1. Personal Details

Name:	
Date of Birth:	
Current Employer:	
Current Position Held:	

2. Education (Degrees, Diplomas, BTech and Post Graduate Qualifications ONLY)

Qualification	Year Obtained	Institution

3. Professional Registration/s

Professional Body	Year Obtained	Expiry Date	Category of Professional Registration

4. Relevant Project Experience (Provide a maximum of 3 relevant projects)

Name of Project	Client	Project Start Date	Project End Date	Project Value	Role on Project

ANNEXURE 5

KWAZULU-NATAL DEPARTMENT OF PUBLIC WORKS

EXPANDED PUBLIC WORKS PROGRAMME

The Attendance Register for on-site Workers

Reporting month: _____ Cell No: _____

Project Name: _____ WIMS no: _____

Surname: _____ First Name: _____

IDENTITY NUMBER:

Day	Date	Time In	Signature	Time Out	Signature	Report On Any Formal Training Provided In The Reporting Month
WEEK 1						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 2						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 3						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 4						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 5						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
Total Days worked						

(Insert Your Company Logo)

(*This shall serve as the cover page on employment contracts for local labour*)

EMPLOYMENT AGREEMENT

BETWEEN

CONTRACTOR NAME.....

AND

WORKER NAME.....

1. PARTIES

The Parties to this Agreement are -

1.1. Contractor....., herein represented by ..... duly authorised thereto

And

1.2. MR / MS. .....

2. DEFINITIONS AND INTERPRETATION

2.1 In this Agreement and any Annexure thereto, unless inconsistent with or otherwise indicated by the context-

*"Agreement"*means the contents of this Agreement.

"Company"	means the company that employs the worker
"Department"	means the Department of Public Works
"Worker"	is a person that performs a specific or necessary task or who completes tasks in a certain way
"EPWP"	The Expanded Public Works Programme is a government programme aimed at the alleviation of poverty and unemployment. The programme ensures the full engagement on Labour Intensive Methods of Construction (LIC) to contractors for skills development. The EPWP focuses at reducing unemployment by increasing economic growth by means of improving skills levels through education and training and improving the enabling environment for the industry to flourish

3. PURPOSE

The purpose of this agreement is to:-

Ensure that the agreement is biding to both the Worker and the Employer.

4. TERMS AND CONDITIONS

- The worker will have **no entitlement** to the benefits **of a full time employee** of .....
- The worker should not have the expectation that this contract will be renewed or extended.
- The worker will be subject to all laws, rules, policies, codes and procedures applicable to the .....
- The worker must meet the standards and requirements of the contractor
- The worker must render his/her services during normal working hours of minimum of forty to fifty five hours in any week; which comprise of an eight-hour working day in a five-day week.

5. REMUNERATION

The worker will receive compensation to the amount of R ..... 00 which must be paid on fortnightly-basis.

6. ROLES AND RESPONSIBILITIES

5.1 Employer / Worker

- Work for ..... in terms of the period as specified in the employment agreement contract.
- Be available for and participate in all learning and work experience required by the company.
- Comply with workplace policies and procedures.
- Complete any attendance or any written assessment tools supplied by the contractor to record relevant workplace experience.
- Demonstrate willingness to grow and learn through work experience.
- Provide the following documentation to the employer,
    - ✓ Certified identity document not longer than 3 months
    - ✓ ID size photos
    - ✓ Signed employment contract

5.2 Employer

- Employ the worker for a period specified in the agreement.
- Provide the worker with appropriate work based experience in the work environment.
- Facilitate payments of wages / stipends.
- Keep accurate records of workers.
- Where a worker/ learner is disabled, the employer will have to provide in the additional needs e.g. special materials, learning aids and in some cases physical or professional support (such aids remain the property of the employer).
- Keep up to date records of learning and discuss progress with the intern on a regular basis.
- Apply fair disciplinary, grievance and dispute resolution procedures to the worker.
- Prepare an orientation/ induction course to introduce worker/ learner to the workplace and specific workplace requirements.
- Ensure the daily attendance register is signed by the worker.

7. DURATION

This agreement commences on ..... and expires on .....

8. BREACH

If either party commits any breach of the terms of this contract (and fails to rectify it within 30 days of receipt of a written notice calling it to do so, then) the other party shall be entitled to terminate the contract or to claim specific performance without prejudice to any of its other legal rights, including its rights to claim damages.

9. CONDITIONS OF EMPLOYMENT

9.1. Meal Breaks

9.2A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

9.3An employer and worker may agree on longer meal breaks.

9.4A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

9.5A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

9.2. Special Conditions for Security Guards (Only applicable to security Guards)

92.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

92.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

9.3. Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

9.4. Work on Sundays and Public Holidays

9.4.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.

9.4.2 Work on Sundays is paid at the ordinary rate of pay.

9.4.3 A task-rated worker who works on a public holiday must be paid;

(a) the worker's daily task rate, if the worker works for less than four hours;

(b) double the worker's daily task rate, if the worker works for more than four hours.

9.4.4 A time-rated worker who works on a public holiday must be paid

(a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;

(b) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

9.5 Sick leave

9.5.1 Only workers who work more than 24 hours per month have the right to claim sick-pay in terms of this clause.

9.5.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

9.5.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

9.5.4 Accumulated sick-leave may not be transferred from one contract to another contract.

9.5.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

9.5.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

9.5.7 An employer must pay a worker sick pay on the worker's usual payday.

9.5.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is

(a) absent from work for more than two consecutive days; or

(b) absent from work on more than two occasions in any eight-week period.

9.5.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

9.5.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

9.6. Maternity Leave

9.6.1 A worker may take up to four consecutive months' **unpaid** maternity leave.

9.6.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

9.6.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

9.6.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

9.6.5 A worker may begin maternity leave as follows;

(a) four weeks before the expected date of birth; or
(b) on an earlier date
(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or
(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

9.7. Family responsibility leave

9.7.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances
(a) when the employee's child is born;

(b) when the employee's child is sick;

(c) in the event of a death of

(i) the employee's spouse or life partner;

(ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

9.8. Keeping Records

9.8.1 Every employer must keep a written record on site for the duration of the project and three (3) year after completion records should consists of at least the following
(a) the worker's name and position;

(b) copy of an acceptable worker identification

(c) in the case of a task-rated worker the number of tasks completed by the worker;

(d) in the case of a time-rated worker, the time worked by the worker;

(e) payments made to each worker in a form of Proof of Payment, Payroll registers and the acknowledgement of payment receipt signed by the worker.

9.8.2 The employer must keep this record for a period of at least **three years** after the completion of the EPWP.

9.9. Payment

9.9.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

9.9.2 A worker may not be paid less than the Ministerial Determination wage rate.

9.9.3 A task-rated worker will only be paid for tasks that have been completed.

9.9.4 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

9.9.5 A time-rated worker will be paid at the end of each month.

9.9.6 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

9.9.7 Payment in cash or by cheque must take place
(a) at the workplace or at a place agreed to by the worker;

(b) during the worker's working hours or within fifteen minutes of the start or finish of work;

(c) in a sealed envelope which becomes the property of the worker.

9.9.8 An employer must give a worker the following information in writing
(a) the period for which payment is made;

(b) the numbers of tasks completed or hours worked;

(c) the worker's earnings;

(d) any money deducted from the payment;

(e) the actual amount paid to the worker.

9.9.9 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.

9.9.10 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

9.10. Inclement weather

If no work has begun on site, and if an employee has reported for work, the employee will be paid for four hours. Should work be stopped after the first four hours, the employee will be paid for the hours worked. Where the employer has

given employees notice on the previous working day that no work will be available due to inclement weather, then no payment will be made.

9.11. Deductions

9.11.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

9.11.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

9.11.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement of Law; court order or arbitration

9.11.4 It is the responsibility of the employers to arrange for all persons employed on a Project to be covered in terms of the Unemployment Insurance Fund Contributions Act, 2002 (Act No. 4 of 2002)

9.11.5 An employer may not require or allow a worker to

(a) repay any payment except an overpayment previously made by the employer by mistake;

(b) state that the worker received a greater amount of money than the employer actually paid to the worker; or

(c) pay the employer or any other person for having been employed.

9.12. Health and Safety

9.12.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

9.12.2 A worker must

(a) work in a way that does not endanger his/her health and safety or that of any other person;

(b) obey any health and safety instruction;

(c) use any personal protective equipment or clothing issued by the employer;

(d) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

9.13. Compensation for Injuries and Diseases

9.13.1 It is the responsibility of the employers to arrange for all persons employed on a Project to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993 as amended by COIDA Act 61, 1997.
9.13.2 A worker must report any work-related injury or occupational disease to their employer or manager.

9.13.3 The employer must report the accident or disease to the Compensation Commissioner.

9.13.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

9.14. Termination

9.14.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.

9.14.2 A worker will not receive severance pay on termination.

9.14.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

9.14.4 A worker **who is absent for more than three consecutive days** without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available.

9.14.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available.

Notice procedure is as follows

- One week if employed for four weeks or less
- Two weeks if employed for more than four weeks but not more than a year
- Four weeks of employed for one (1) year or more

9.15.Certificate of Service

9.15.1 On termination of employment, a worker is entitled to a certificate stating

(a) the worker's full name;

(b) the name and address of the employer;

(c) the Project on which the worker worked;the work performed by the worker;

(e) any training received by the worker;

(f) the period for which the worker worked on the Project; and

(g) any other information agreed on by the employer and worker.

9.16. DOMICILE

The address to which notices and all legal documents may be delivered or served are as follows:

Employee Details

Name & Surname:.....

ID No:.....

Residential Address:.....

.....

Contact No:.....

Date of Employment:.....

To be supervised by Main Contractor..... or Sub Contractor:.....

Category of employment: Skilled..... Semi-skilled..... Unskilled.....

For Skilled & Semi-skilled state the trade:.....

Period of employment: ***Fixed for until when your services are still required on site***

I confirm that I have been inducted and fully understand the condition of my appointment

Employee Signature:.....

Witness by SGB/CLO:.....

Signature by Witness:.....

Employer Details

Name & Surname:.....

Designation:.....

Contact No:.....

Signature:.....

KZN Department of Public Works
EPWP Acknowledgement of receipt of Payment

EXPANDED PUBLIC WORKS PROGRAMME
Creating opportunities towards human fulfilment

AKNOWLEDGEMENT OF RECIEPT OF PAYMENT OF SALARIES BY WORKERS

Name of Contractor:_____

Name of Project:_____

WIMS No:_____

Reporting month:_____

No	Name	Surname	Identity Number	Job designation	Days Worked	Training Days	Daily Wage Rate	Total paid to employee	Employee Signature
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
Total									

PREPARED BY: NAME & SURNAME..... SIGNATURE ..... DATE ..... CONTACT No.....

DESIGNATION:.....

KZN PUBLIC WORKS
Monthly Data collection form

EXPANDED PUBLIC WORKS PROGRAMME

Name of Contractor:_____ WIMS No:_____ Project location name (area):_____

Name of Project:_____ Reporting month:_____ Project location (Ward No.):_____

Beneficiary Details														Experience/Literacy				Location Details				Household Details		
No	First Name	Initial	Surname	ID number	D.O.B	Gender F/M	Disability Y/N	Start Date on the current month	End Date on the current month	Total days worked	Are you receiving any Gov grant?	1st Language		Other Language 1	Other Language 2	Education Level See Codes	Highest Level of Education	Address	Ward No.	Cell No.	Nationality	No. of people in Household	No. of Dependants in Household	No. of Children attending school
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

- Education Levels – use the codes (1,2,3) on the excel spreadsheet
  - (1) Unknown (3) Grade 1-3 (Sub A – Std 1) (5) Grade 5-6 (Std 3-4) ABET 2 (7) Grade 9 (Std 7) ABET 4 (9) Grade 12 (Std 10)
  - (2) No Schooling (4) Grade 4 (Std 2) ABET 1 (6) Grade 7-8 (Std 5-6) ABET 3 (8) Grade 10-11 (Std 8-9) (10) Post Matric

Contractor sign:_____
Designation:_____
Date:_____
Contact no:_____

DPW Official sign:_____
Designation:_____
Date:_____
Contact no:_____

EPWP Official sign:_____
Designation:_____
Date:_____
Contact no:_____