

**Monthly progress report No. 5**

Design and Construction of a Medical Stores Warehouse- Chipata,  
Zambia.

**Submitted: S.H Mazakaza**

**Designation: Project Manager**

**Report Period: 1<sup>st</sup> - 31<sup>st</sup> December, 2017**

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**MONTHLY PROGRESS REPORT NO. 5**

**1.0.0 Project: Design and Construction of a Proposed New Medical Stores Warehouse, Chipata, Zambia**

**2.0.0 Project Data**

<b>Participants</b>		
2.01	<b>Employer:</b>	United National Development Programme (UNDP)
2.02	<b>Beneficiary:</b>	Medical Stores Limited (MSL)
2.03	<b>Supervisors</b>	
-	Project Focal Person	D. Kampamba (UNDP)
-	Project Manager (External Consultant)	S.H. Mazakaza (UNDP)
	Assistant Project Manager (External Consultant)	D. Pfumbauta (UNDP)
	Clerk of Works (External Consultant)	P.Mayembe (UNDP)
2.04	<b>Contractor:</b>	Sunshare Construction Limited
2.05	<b>Design Consultants</b>	
-	Architects	A+Urban Technics Ltd

-	Quantity Surveyors	MNL Associates
-	Mechanical & Electrical Engineers	DH Engineering Consultants.
-	Civil & Structural Engineers	Civilinks Engineering Designers Limited
2.06	<b>Insurer</b>	Golden Lotus Infrastructure
2.07	<b>Subcontractors:</b>	Appointment (outstanding)

**2.1 Time Management.**

2.1.1	Letter of Award Date:	<b>17/07/2017</b>
2.1.1	Contract Signing Date:	<b>18/07/2017</b>
2.1.3	Site Handover Date:	<b>24/07/2017</b>
2.1.4	Possession of Site:	<b>24/07/2017</b>
2.1.5	Contract Commencement Date:	<b>18/07/2017</b>
2.1.6	Contract Period:	<b>Five (05) Months</b>
2.1.7	Contract Completion Date:	<b>15/12/2017</b>
2.1.8	Extension to Contract:	<b>16/02/2018</b>
2.1.9	Revised Contract Completion:	

**2.2 Defects Liability Period.**

2.2.1	Start of the Defects Liability Period
2.2.2	End of the Defects Liability Period

2.3 Financials

2.3.1	Contract Amount (USD):	<b>1,685,307.73</b>
2.3.2	Approved Variations to Date (USD):	<b>N/A</b>
2.3.3	Revised Contract Amount(USD) :	<b>N/A</b>
2.3.4	Payment Certified (USD):	<b>252,796.16 ( Paid if full)</b>
2.3.5	Penalties per day (USD):	<b>500.00</b>
2.3.6	Maximum Retention to be Held (USD):	<b>10% of Contract Sum</b>

2.4 Performance

3.0

2.4.1	Percentage of Contract Period Lapsed:	<b>100.00%</b>
2.4.2	Percentage of Contract Value Certified out:	<b>90.0%</b>
2.4.3	Percentage of Project Completed:	<b>92.00%</b>

**Attendance**

3.1 During the period under review, the United Nation Development Programme, Medical Stores Limited and Sunshare Construction Limited attended all site inspections and site meetings held during the month. The design consultants attended the last monthly site meeting which was held on 14<sup>th</sup> December, 2017.

**4.0 Progress**

4.1 The following are the major milestone activities and how they were carried out in the month under review as shown in the schedule of works (appendix i) attached:

- (i) Site establishment, continued.
- (ii) Mobilization activity, continued.
- (iii) Dispatch warehouse building, continued.
- (iv) Hazardous Store in progress.
- (v) Perimeter boundary block wall fence, Continued.
- (vi) Warehouse external works, continued.

A breakdown of how each of the individual activities fared by the end of the month is as in the tables below.

**A).Mobilization Activity**

No.	Activity	State Date	Finish Date	Progress	Comments
i	Contract Award	18/07/17	18/07/17	100%	Done
ii	Compile & Submit Safety Plan	21/07/17	21/07/17	100%	Done
iii	Method Statement	21/07/17	21/07/17	100%	Done
iv	Preliminary Drawings	21/07/17	23/07/17	100%	Done
v	Detailed Set of Drawings	19/07/17	05/08/17	95%	Detailing in progress

**B). Site Establishment**

No.	Activity	State Date	Finish Date	Progress	Comments
i	Receive Access to Site	24/07/17	24/07/17	100%	Done
ii	Erect Hoarding	25/07/17	02/08/17	100%	Done
lii	Clear Site & Bulk Excavation	25/07/17	07/08/17	100%	Done
iv	Erect Offices & Store room	26/07/17	09/08/17	100%	Done
v	Installation & Connection of Services	25/07/17	03/08/17	100%	Borehole ( Water) done Generator ( Electricity) done
vi	Appointment of Subcontractors	23/07/17	25/07/17	50%	To be confirmed. Behind schedule.

**C).Warehouse dispatch Building**

No.	Activity	State Date	Finish Date	Progress	Comments
1	Setting Out	02/08/17	04/08/17	100%	Done
2	Excavate to Foundations	04/08/17	10/08/17	100%	Done
3	Blinding in foundations	10/08/17	12/08/17	100%	Done
4	Placing of reinforcement	12/08/17	19/08/17	100%	Done
5	Cast foundation concrete bases	19/08/17	25/08/17	100%	Done
6	Foundation solid filled block work	25/08/17	08/09/17	100%	Done
7	Fill and Compact	08/09/17	16/09/17	100%	Done
8	Indoor Floor reinforcement and concrete	16/09/17	26/09/17	100%	Done
9	Cast concrete to external column	16/09/17		100%	Done
10	Structural steel fabrication and erection	26/09/17	07/10/17	99%	Installation of canopies outstanding due to subsequent activities
11	Structural roofing, re-Insulation and Covering	09/10/2017	19/10/2017	78%	Structural roofing done, insulation/sisalation being re done.
12	Bond decking for the office (Mezzanine)	13/10/2017	18/10/2017	100%	Done
13	Electrical Installations	19/10/2017	14/12/2017	75%	In progress. Behind schedule
14	Block work/walling to warehouse	23/10/17	14/11/2017	100%	Done
15	Plastering internally and Externally	10/11/2017	30/11/2017	100%	In progress. Behind schedule

16	Concrete to Mezzanine floor (Offices)	12/11/2017	13/11/2017	100%	Done
17	Doors, Windows and Partitioning	15/11/2017	30/11/2017	78%	In progress. Behind schedule
18	Painting externally	30/11/2017	4/12/2017	80%	On hold due to subsequent activities. Behind schedule
19	Floor Tiles	04/12/17	14/12/17	50%	In progress. Behind schedule
20	Ceiling installation to offices	04/12/17	14/12/17	80%	In progress. Behind schedule
21	Plumbing, Electrical Data Airconditioning 2nd Fix	08/12/17	14/12/17	60%	In progress. Behind schedule
22	Painting internal	11/12/2017	13/12/2017	65%	In progress. Behind schedule

**D). Warehouse External Activities**

No.	Activity	State Date	Finish Date	Progress	Comments
1	Hazardous House	02/10/17	22/10/2017	95%	In progress. Behind schedule
2	Guardhouse building (Block work completed)	04/10/17	30/11/17	95%	On hold. Behind schedule awaiting materials from Lusaka
3	Boundary block work (Perimeter Fencing)	01/10/17	22/10/2017	95%	On hold due to subsequent activities. Behind schedule
4	Road works (Paving and Drainage)	1/09/2017	4/12/2017	68%	In progress. Behind schedule
5	Sewer Reticulation	24/07/2017	31/11/2017	90%	On hold. Delayed due to subsequent work. Behind schedule
6	External Electrical and Water Reticulation	24/07/2017	06/10/2017	75%	On hold due to subsequent activities. Behind schedule
7.	Lunch shade	27/12/2017		5%	In progress. Behind schedule

The general progress on site mobilization, site establishment and works to the warehouse building as well as external works are as shown on the attached schedule (Program of works), Appendix i. Progress for the works is estimated at ninety-two (92%) against the planned one hundred percent (100%). The project is generally behind schedule and the contractors were asked to work more efficiently; engage more labour force, continue with overtime shifts and enhance material delivery to site in order for them to complete the works within the given extension time.

**4.2 Delayed Activities**

All activities are behind schedule on account of:

- (i) Erect hoarding (Substituted with permanent wall fence) in progress
- (ii) Late submission of method statement and quality assurance plan

- (iii) Some subsequent construction activities
- (iv) Improper and Inadequate operational and administrative planning by the contractor .

**4.3 Mitigation Measures**

The Contractor put up some measures such as employing more personnel and working overtime shifts. This is working well so far. The subcontractors' nomination is still poor. The contractor has been asked to improve on this aspect.

**5.0 Resources**

**5.1 Labour/Personnel**

The contractor had adequate personnel against planned activities during the period under review. The site crew comprised of both local and foreign personnel. Table 4.1 indicates the labour data as at 31<sup>st</sup>December, 2017.

**Table 5.1.0 - Personnel Data**

Description	Number	Males	Females	Disabled	Foreign	Local
Contracts Manager						
Site Agents	1	✓			✓	
Site Engineers	1	✓			✓	
Surveyor						
Site Administrator	2	✓			✓	
Safety/Environmental Officer						
Lab Technician						
Foreman	5					
Operators (drivers)	2	✓				✓
Skilled Labour	1	✓				✓
Semi-skilled Labour	60					
Unskilled Labour	70	✓	✓			✓
<b>Total Employees on Site</b>	<b>142</b>					

5.1.1 Some of the key personnel for the works stated in the technical proposal submission will not be available on the project. The contractor has been instructed to indicate the affected positions and provide alternative personnel whose credentials should be equal or better than for those initially proposed on the project.

5.1.2 The Design Team is maintaining the key personnel stated in the contractor's technical proposal

**5.2.0 Plant and Equipment**

The plant and equipment deployed on site is indicated in **Table 5.2**

**Table 5.2 Equipment on Site**

No.	Description	Plant No.	Date on Site	Qty
1	15t Tipper Truck		21/08/2017	01
2	380 liters Concrete mixer		25/08/2017	01
3	32KW Output power Generator		25/08/2017	01
4	2000L Water storage tank		25/08/2017	01
5	Small Generator		25/08/2017	01
6	12ton roller compactor	Off hired	2/10/2017	01
7	Front end loader	Off hired	2/10/2017	00
8	25t Mobile crane	Off hired	6/10/2017	00
9	Concrete Poker Vibrator		25/08/2017	03
10	500 liters Concrete mixer		01/12/2017	01

The plant is not adequate for the current activities. The contractor has therefore, been instructed to bring in plants like Grader or Front end loader for road works and drainages.

**6.0 Materials**

Materials deployed for warehouse works are inadequate. The contractor has been instructed to improve on the procurement and quick delivery of materials to site. The quantity of materials available on site is adequate for the current activities but the contractor has been urged to continue ensuring availability of the materials for efficient operations.

In terms of quality, kerb stones manufactured by the contractor on site were found to be of poor quality. Therefore, contractor was instructed to get rid of all the kerb stones on site by 20<sup>th</sup> December, 2017 and buy good ones directly from reputable suppliers in Lusaka.

Item No.	Materials Description	Qty/Unit
1.	River sand	150 tons
2.	19 mm stones	200 tons
3.	50kgs cement bags	1200 pockets
4.	Building sand	50 tons
5.	Structural Steel members	100% delivered to site
6	500micronable DPM	05Rolls
7	257 Mesh Wire	10Rolls
8	DPC	15 Rolls
9	Roofing sheets	100% delivered to site
10	8" Concrete blocks	500 No
11	6" Concrete blocks	1000 No
12	4" Concrete blocks	500 No
13	Concrete paving bricks	5000No
14	Clear view material	100% delivered to site
15	Door frames	100% delivered to site
16	Neelkanth cables	7 rolls
17	Durkeesox air dispenser system	4 boxes
18	Glazed wall tiles	45 boxes
19	DB	10 units
20	Solid core flash doors	45No.

**7.0 Quality Assessment (Works and Designs)**

The quality of mobilization infrastructure namely, site offices, storage, warehouse building and associated services – water and electricity installation meet the minimum expected specifications for quality standards. Also the plant and equipment deployed on site are in good working condition. In addition, the quality of drawings and associated detailing has also met the minimum quality standard based on the latest revised drawings.

## **8.0 Health and Safety Plan**

Generally Health and Safety Site requirements are satisfactory. Borehole water has been tested for human consumption and the results submitted to the Engineers for certification of quality. Ablution facility construction is completed and water born toilets provided with fair sanitation which is enhanced with regular disinfection. The Healthy Plan has been submitted and the Contractor has First Aid Kit on site.

Safety management, in terms of ensuring all workers on site have requisite safety clothing, safety shoes and helmets had been breached on a number of occasions before. The contractor was however, instructed to adhere to safety clothing provisions as stated in the safety plan. This instruction is being adhered to and safety monitoring is continuing on a daily basis. The contractor is to ensure Safety and Health standards on site are adhered to as postulated in the contract. This requires employment of a Safety Officer. The contractor has been asked to employ a new safety officer although no accident was recorded in the month of December.

## **9.0 Waste Management**

The Waste Management Plan is in place and implementation. The contractor is abiding to the control measures basing on general guidelines. The environment is generally clean, disinfection is regularly done to the toilets and rubbish bins have been brought on site for waste disposal.

## **10.0 Documents Submission**

## **11.0 Financial Matters**

The project manager confirms that stage one to three has been paid.

## **Contractual/ Technical Matters**

### **12.1 Subcontracting**

The following works have been subcontracted and the Subcontractors are as follows:

- Electrical Installation- sun share( internally)
- Fire Protection Systems-outstanding
- Air Conditioning Installation
- Mechanical - Ndykay Limited
- Security Installation – Win-Link Limited
- Chiller installation – BJ Cooling
- Gen set installation-outstanding PM to provide guidance

- Telephone ( outstanding)
- Turnstiles, electrical boom and access control outstanding.

It is reported that the contracts are for labour only as the two parties could not agree on final rates for supply and fix.

## 12.2 Designs

The Design Team was working on the various disciplines with the following anticipated milestone to be achieved;

Activity
Architectural and Structural Foundation preliminary layout drawings with associated details completion and subsequent approval by the Project Manager. Completed
Submission of architectural and structural drawings to the Local Authorities and lodging of an application-in- principle to commence construction works prior to drawings approval. Submitted and approved.
Submission of final detailed architectural drawings to the Project Manager. Done
Mechanical drawings were submitted
Bills of Quantities to be finalized upon receipt of detailed and final drawings from the Architects and Engineers.

## 12.3 Insurance

The total insurable cover for project is equivalent to the total contract value.

## 12.4 Communication

### 12.4.1

All communication to be managed effectively, between the client, the contractor, and the design team and vice versa, and it should be channeled through the Project Manager. The contractor and their design team have been advised to fully read the entire contract to avoid unnecessary assumptions, which might have negative impact on the project in terms of expected deliverables.

## 12.5 Construction Activity Progress Projection Plan (CAPPP)

### Work planned for next two weeks

- I. Sisalation/ insulation and covering will be completed 100%
- II. Hazardous store will be completed 100%
- III. Sewer reticulation will be completed 100%
- IV. Boundary block work ( perimeter fencing )will be completed 100%
- V. Tile fixing to offices and ceiling will be 100%
- VI. External and internal wall painting to be completed 100%
- VII. Road works (Paving and drainage) to be completed 100%
- VIII. Guard house to be completed 100%
- IX. Electrical installations to continue
- X. Doors and windows installation to be completed 100%
- XI. Lunch shade to continue.
- XII. Electrical reticulation to be done 100%
- XIII. Plumbing, Electrical Data Air-conditioning fix1 to continue
- XIV. Floor Tiling to be completed 100%
- XV. Ceiling installation to offices to be completed 100%
- XVI. Painting internal to be completed 100%
- XVII. Air Condition works to continue
- XVIII. External Electrical and Water reticulation to be completed 100%

Note: The Contractor to submit a recovery plan and follow it and level the delay in a weeks' time.

### 13.0 Conclusion/Recommendation

The overall project progress stands at 92% against 100%. Recovery measures should include: the contractor to revise the Programme for the outstanding works, timely ordering and delivering of outstanding materials, continue increasing labour/personnel and introducing overtime on selected activities. The contractor is however, reminded to ensure there is adequate lighting in all work places in times of overtime shifts. Rain coats should also be availed to workers to promote productivity during light rains. In addition, more equipment is to be brought on site as demand increases. The Project Manager and Clerk of Works will closely monitor the delayed activities and ensure that the delays are worked over in the stipulated time frame without further delays.

**Photographs**

The pictures below show the latest progress of the works on site as at 31/12/17.



*Figure 1. South Eastern side elevation- (painting, and road civil /concrete works)*



*Figure 2: Mezzanine floor passage Window or door frames /ceiling.*



*Figure 3. Roof insulation- new layer being added*



*Figure 4: Paving road works -Northern side of the warehouse building*