EMERGENCY REHABILITATION OF WATER SUPPLY AND SEWAGE SYSTEMS IN CHITUNGWIZA

PROJECT COMPLETION REPORT

March 2013

DONE BY

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1 INTRODUCTION

Arising from the economic crises, most of the infrastructure is dilapidated and in dire need of rehabilitation. A request was received from the Government to support the funding of the water sector programmes in general, water being one of the main instruments of economic growth. A proposal from the Chitungwiza Municipality, the third largest community in Zimbabwe and which has borne the brunt of cholera epidemics was also submitted to the African Water Facility (AWF) to support its ailing water and sanitation systems. The AWF responded with a mission in May 2008 to follow up these proposals and to prepare and appraise a suitable project for AWF financing. The project grant agreement was signed on the 22nd February 2010.

The proposed project was aimed at:

(a) Stabilising the deterioration in the provision of water and sanitation services in the Municipality of Chitungwiza and

(b) Enhancing institutional capacity for efficient and sustainable operation and management of the water supply and sanitation services.

The project addressed urgent repairs to broken down equipment and appurtenances necessary to ensure equitable and improved distribution of water supply. Access to drinking water supply was augmented with boreholes fitted with hand pumps pending improvements to the Harare supply sources, which serve the municipality of Chitungwiza. The project was aimed at equipping the municipality with adequate capacity to evacuate wastewater from households and industry, re-commission the three sewage pumping stations.

The works consisted of the following components:

1. Pump Station No 1
2. Pump Station No 2:
3. Pump Station No 3
4. Trunk Sewers (sewers 2,6,7,8,9,10,11,12,13 and 14)
5. Water Pipes, Valves, Fittings, Meters
6. Boreholes
7. Equipment Supply

The proposed project in Chitungwiza was meant to bridge intervention between emergency and longer-term development assistance. This intervention therefore constituted an entry point for AWF to deliver on its mandate to build stakeholder confidence, catalyze internal and donor resources, support the preparation of long-term investment plans and generate knowledge on transitional assistance in a post-conflict setting. The project stabilised the existing ailing water and sanitation system by stopping the deterioration and thereby establish the platform for more rational planning of subsequent stages of interventions needed to bring the services back to normalcy and for future developments.

2 CONTRACT DATA

Table 2.1

1. **Name of Contract**	Emergency Rehabilitation of Water Supply and Sewage Systems in Chitungwiza
2. Contract Reference No	4226/C/M/E
3. Contractor	R Davis and Company
4. Project ID No.	P-ZW-EAZ-001
5. Grant No.	5600155001951
6. Contract Value	Euro 1,998,000 ($2,400,000.00 equivalent)
7. Handover of Site to Contractor	15 July 2011 (before Contract signing)
8. Date of Grant Contract	22nd February 2010
9. Effective Date	1st November 2011
10. Works Contract Date	1st September 2011
11. First Extension Expiry Date	22nd December 2012
12. Second Extension Expiry Date	22nd August 2013
13. Commencement Date	16th January 2012
14. Contract Period	7 Months with 12 months defects liability period
15. Contractual Completion Date	15th August 2012 (31 weeks)
16. Extended Completion Date	22nd February 2013
17. Weeks Worked	48wks in 2012 and 6 wks in 2013 (54 wks)
18. Target Completion (%)	100%
19. Actual Completion (%)	100%
20. Overall Progress	Project completed 23 wks behind schedule
21. **PAYMENT CLAIMS**	
Claimed Advance Payment	US$ 907,018.32
Revised Advance Payment	**US$ 876,857.28**
IPC 1	**US$ 82,911.00**
IPC 2	**US$ 312,973.42**
IPC 3	US$ 316,507.78 (adv repayment 15% = US$131,528.59) **US$184,979.19**
IPC 4	US$ 600,991.47 (adv repayment 45% = US$394,585.78) **US$206,401.69**
IPC 5	US$ 678,217.73(adv repayment 40% = US$350,742.92) **US$ 327,474.81**
IPC 6	**US$ 103,966.78**
Penultimate PC	**US$ 204,851.54**
Total Value of Certificates (excl ultimate)	**US$ 2,299,519.82**
Ultimate PC	
22. **PAYMENTS RECEIVED**	
Advance Payment	US$ 876,857.28 (16th Jan 2012)
IPC1 Disbursement	US$ 80,928.26 (25th June 2012)
IPC2 Disbursement	US$ 305,532.18 (25th June 2012)
IPC3 Disbursement	US$ 192,173.86 (2nd August 2012)
IPC4 Disbursement	US$ 204,151.15 (17th October 2012)
IPC5 Disbursement	US$ 319,716.38 (9th Jan 2013)
IPC6 Disbursement	US$ 99,788.13 (7th March 2013)
Penultimate Disbursement	US$ 220,372.58 pending
Total disbursements	**US$ 2,079,147.24**
23. Project Completion Date	22nd February 2013
24. Project Handover Date	7th March 2013
25. Expiry of Performance	Held with RM Insurance Company (Pvt) Ltd. It expires at end of

Guarantee	construction.
26. Expiry of Insurances	31th December 2012 (Renewed)
27. Defects Liability Period	365 Days
28. Expiry of Retention Bond 5% for construction period only and 5% for construction and maintenance period ($240,000.00)	22nd February 2014
29. Project Acceptance Date	22nd February 2014
30. Contractors All Risk Insurance Policy	Contract works to US$2.4 million only and expiring after the defects liability period i.e. 22 Feb 2014.
31. Expiry of Advance Payment Guarantee	On repayment of advance payment but to receive written confirmation
32. **CONTRACTOR/SUBCONTRACTORS** Main Contractor (Civil) Mechanical Sub-Contractor Electrical Sub-Contractor	 R Davis and Company H E Jackson Onel Engineers / Kaizen Electrical Services
33. **PROJECTS STAFF** AfDB AWF Project Manager **R Davis and Company** Contract Director Site Agent	 Engineer Herbert Nyakutsikwa John Whitehead Pillon Nhliziyo

3 PROJECT CLOSE-OUT ACTIVITIES

The project close out activities started at the completion of the rehabilitation of each sewer and in January 2013 for the pump stations. Roles and responsibilities were shared between the Contractor, Beneficiary (Owner) and the Project Manager (PM) with the PM taking the lead and ensure effective communication and cooperation from the Contractor and Owner.

4 INSPECTION STRATEGY

4.1 Contractor Inspections

As works become ready, the contractor and its sub contractors snagged their works and invited the project manager for inspection. After checking the works, the PM issued a corrective action report. All of the snagging was documented. Once this was completed the area of works was declared complete and commissioned particularly with reference to the sewers.

Training and familiarization of the users and maintenance teams was ongoing but that for the pump stations was carried out after testing and before commissioning and handover.

4.2 Project Manager Inspections

The process was generally that the Contractor carried out its inspection, followed by the Project Manager. A list of defects was managed by project manager and the contractor would advise which works were available for inspection once these had been rectified. The User/ Beneficiary/Client staff would also witness these inspections and tests.

Final inspections were carried out prior to commission to confirm that any snags raised by the Client representative were addressed.

4.3 M&E Inspections

No M&E inspections was scheduled

4.4 User Inspections

The Client/User Staff participated in the day to day activities on the project and would be invited to attend inspections with the project manager and sometimes on their own. The comments made by the Client/User were evaluated by the project manager and were added to the snag lists or managed via the change control process. Completed sewer rehabilitation work was commissioned and de-snagged and handed over as completed awaiting final handover.

4.5 Technical Advisors

No external Technical Advisors were specified for this project.

4.6 Statutory Services and others

Electrical works were the only ones inspected by an external statutory organisation. The Municipality, being a statutory organization, inspected these works in their role as Client/ User. The document did not call for inspections by other statutory organizations.

4.7 Commissioning

During commissioning the various installations and plant items were tested and balanced as individual entities to ensure that they perform to the required design duties. The culmination of the individual testing established the completeness of the systems and by definition the project to proceed into the integrated testing processes. The contractor was responsible for commissioning working to a draft commissioning programme developed and issued to the PM for review.

4.8 Integrated Testing

This period was specifically to ensure that all of the individual independent tests done and mentioned above were definitively integrated as determined by the design and specification requirements and incorporated all of the design requirements and changes instructed throughout the duration of the installations. Dates for the testing of integrated systems were provided by the Main Contractor and agreed on.

5 THIRD PARTY APPROVALS

5.1 Building Control

No building control was necessary as all works of building nature was rehabilitation to the existing pump stations that already comply with municipality and national by laws.

5.2 Fire Authority

No fire requirements were specified in this contract.

5.3 Local Authority

Planning approval was granted by the Client/Beneficiary who is also the local Authority in the area the project was implemented.

6 FILES, LOGS AND MANUALS

This section covers files, logs and manuals used in the management of this contract. Three sets of O&M's have been prepared for the pump stations.

6.1 Operation and Maintenance Manuals

The Mechanical and Electrical Sub contractors oversaw the production of the Operation and Maintenance Manuals for the Pump Stations 1, 2 and 3. The PM prepared the record information.

The manual are broken down into sections. Preliminary O&M information, as-built records will be retained on site at the Town Engineer's Office and a set will be given to the Zimbabwe Field Office of the Funding Organisation, the African Development Bank.

6.2 Test Certificates

Test certificates for the Generator, Bell Loader backhoe and transformer were handed over to the Municipality stores.

6.3 As Built Information

Preliminary as built information has been provided by the Project Manager and issued with the draft issue of O&M manual.

7 CLIENT ENGAGEMENT AND TRAINING

7.1 Client Training

The schedule of client training was developed by the Contractor as per the Contract specification and BOQ prior to the commissioning and handover. The training took place over a week's period and conducted at each of the three pumping stations. All Municipal workers involved in the running of the infrastructure were trained.

7.2 Spares

The Contractor proposed a list of recommended spares complete with parts number and all relevant information for all pump stations as required by the BOQ.

7.3 Tools and Equipment

A shopping list of tools and equipment required for the running of the project components was provided as specified.

7.4 Keys

The following keys were provided at handover.

Table 7.1

	Keys to be provided at Handover	By Who?
1.	Distribution boards, etc at Pump Station 1.	ONEL
2.	Distribution boards, etc. at Pump Station 2	ONEL
3.	Distribution boards, etc. at Pump Station 3	KAIZEN

8 KEY MILESTONES

8.1 Materials Supplied by the Client

Table 8.1

Item	Description	Quantity (No)
1	450mm AC Sewer Pipes, collar and seals	176
2	300mm AC Sewer Pipes, collar and seals	150
3	225mm AC Sewer Pipes, collar and seals	60
4	Concrete Manhole Rings	9

8.2 Materials Handed over to the Client (April 2012)

Table 8.2

Item	Description	Quantity (No)
1	400mm PN 9	8
2	315mm PN 9	23
3	250mm PN 9	33
4	200mm PN 9	15
5	160mm PN 9	82
6	110mm PN 9	167
7	75mm PN 9	288
8	50mm PN 9	168
9	200mm PN 16	5
10	160mm PN 16	8
11	110mm PN 16	35
12	90mm PN 16	11
13	75mm PN 16	30
14	50mm PN 16	15
15	50mm Double Sockets	15
16	675mm AC sewer pipes	36 (144m)
TOTAL		5418m

8.3 Equipment Supplied and Serviced

Table 8.3

Description		Quantity (No)
a.	150 kVA Generator (tested, commissioned and handed over 26 July 2012)	1
b.	Transformer (tested and handed over July 2012)	1
c.	Bell 315SJ Backhoe (used and taken away by contractor)	1
d.	High Pressure Sewer Cleaning Jet Pump (removed on scope reduction)	1
e.	Rodding Equipment (removed on scope reduction)	0
f.	Three tonne truck (removed on scope reduction)	0
g.	Compressors (serviced by Computech and returned on 7 August 2012))	2
h.	High Pressure Jet Pump Machine from Ian Dicke RSA (serviced 22/2/13)	1
i.	Sewer Cleaning Bucket Machine from Ian Dicke of RSA (serviced Feb 2013)	1

8.4 Construction Completion

8.4.1 Sewers Rehabilitated

Table 8.4

Item	Length (m)	Ø(mm)	Material	Remarks
Sewer 2	535	300	Concrete	Complete 19 Dec 2012, commissioned 1 March 2013
Sewer 2.1	250	225	AC	Complete 28 Feb 2013 , commissioned 1 March 2013
Sewer 2.2	076	225	AC	Complete 28 Feb 2013, commissioned 1 March 2013
Sewer 6	100	300	AC/Concrete	Complete14 Sept 2012, commissioned 17Sept 2012
Sewer 7	162	300	AC/Concrete	Complete 19 Oct 2012, commissioned 19 Oct 2012
Sewer 8	200	525	AC	Complete 28 Aug 2012, commissioned 31 August 2012
Sewer 8B	72	450	AC	Complete 30 Aug 2012, commissioned 31 August 2012
Sewer 9A	805	300	Concrete	Complete19 July 2012, commissioned 27 July 2012
Sewer 9B	117	225	AC	Complete 23 July 2012, commissioned 27 July 2012
Sewer 9C	78	225	AC	Complete 27 July 2012, commissioned 27 July 2012
Sewer 10	285	450	AC	Complete 12 Nov 2012, commissioned 20 Feb 2013
Sewer 12	13	600	Steel	Complete 8 Nov 2012, commissioned 8 Nov 2012
Sewer 13	328	225	AC	Complete 31 Aug 2012, commissioned 31 Aug 2012
Sewer 14	498	375	AC/PVC	Complete 31 Aug 2012, commissioned 31 Aug 2012
TOTAL	**3519m**			

8.4.2 Pump station No 1

Table 8.4.2

Description	Comments
a. Pump Station Building With Dry & Wet Wells	Complete 22 Feb 2013
b. Compressor Building	Complete 8 Feb 2013
c. Pumping Gear (Pump & Motor)	Complete 9 Nov 2012
d. Compressor And Accessories	Complete 18 Feb 2013
e. Switch & Control gear, Cabling, Ducting & Trays	Complete 15 Feb 2013
f. Inlet Channel And Accessories	Complete 20 Feb 2013
g. Vertical Flow Grit Chamber	Complete 2 Oct 2013
h. Decanting Bay	Complete 8 Feb 2013
i. Storm Water Drainage System	Complete 3 Dec 2012
j. Electricity Supply	Complete 29 Nov 2012

8.4.3 Pump Station No 2

Table 8.4.3

a. Pump Station Building With Wet Well	Complete 22 Feb 2013
b. Pumping Gear (Pump & Motor)	Complete 20 Sep 2012
c. Switch & Control gear, Cabling, Ducting & Trays	Complete 2 Oct 2012
d. Inlet Channel And Accessories	Complete 22 Feb 2013
e. Storm Water Drainage System	Complete 14 Feb 2013
f. Electricity Supply	Complete 15 Oct 2012
g. Lifting Gantry	Complete 20 Sep 2012

8.4.4 Pump station No 3

Table 8.4.4

a. Pump Station Building With Dry & Wet Wells	Complete 19 Feb 2013
b. Compressor Building	Complete 15 Oct 2012
c. Compressor And Accessories	Complete 11 Feb 2013
d. Pumping Gear (Pump & Motor)	Complete 18 Feb 2013
e. Switch & Control gear, Cabling, Ducting & Trays	Complete 19 Feb 2013
f. Inlet Channel And Accessories	Complete 21 Jan 2013
g. Vertical Flow Grit Chamber	Complete 18 Feb 2013
h. Decanting Bay	Complete18 Feb 2013
i. Storm Water Drainage System	Complete 22 Feb 2013
j. Electricity Supply	Complete 7 Feb 2013
k. Holding Pond	Complete 15 Oct 2012

l. Lifting Gantry	Complete 19 Feb 2013

8.5 Water

Table 8.5

Boreholes	Completed 20 Sept 2012, commissioned and handed over
Valves & Fittings	Completed 17 Oct 2012, commissioned and handed over
Water Meters	Complete 13 Dec 2012, commissioned and handed over

9 PAYMENTS

Table 9

CERTIFICATE NO	DATE INVOICE DUE	Amount Disbursed by Bank (USD)	Amount Received by Contractor (USD)	Discrepancy Against Contractor (USD)	DATE INVOICE PAID	DAYS (late/early)
Advance	01 /08/ 2011	907,018.32	876,857.28	30,161.04	13/01/2012	169 late
IPC No 1	06/04/ 2012	312,965.59	305,532.18	7,433.41	22/06/2012	21 late
IPC No 2	30/ 04/ 2012	82,911.10	80,928.26	1,982.84	22/06/2012	3 days early
IPC No 3	04/06/ 2012	184,979.19	192,173.86	-7,194.67	01/08/2012	2 days early
IPC No 4	28/08/ 2012	208,635.27	204,151.15	4,484.12	07/10/2012	10 days early
IPC No 5	26/12/ 2012	331,957.93	319,716.38	12,241.55	09/01/2013	16 days early
IPC No 6	12/02/ 2013	103,066.78	99,788.13	3,278.65	07/03/2013	
Ultimate	22/03/2014		pending		**********	**********
TOTAL		**2.131.534.18**	**2,079,147.24**	**52,386.94**		

10 PROJECT FINANCES

10.1 Contract Value

To date US$2,299.519.82 has been claimed excluding Value Added Tax (VAT) amounting to US$344,927.97 and two claims, one for standing time for US$100,000.00 and another for price increases of US$173,484.87 due to wage and material increases. The Contract is however very clear in that the contract price is fixed. By the completion of the project on the 22nd of February 2013, **US$2,079,147.24** had been disbursed.

Outstanding works are those on the snag list and are being corrected during the defects liability period. Any defects not due to poor workmanship of the Contractor or defective equipment supplied by the Contractor will be invoiced and claimed in the ultimate payment claim to be submitted on 22 February 2014. Outstanding works on the snag list include are detailed in Appendix A and include such items as rectification of pumps for station # 3 for mixing of cooling liquid and sewage and clearing blockage on pumps at station #2 . Other works include the handing over of the Bell front loader - backhoe machine.

10.2 Value Added Tax

The project value of USD 2.4 million did not include the VAT component as the project was meant to enjoy a tax free status. The situation has changed from what it was meant to be because of the misinterpretation of the tax laws at the beginning of the project and the Contractor has to pay VAT amounting to US$344,927.97. On several occasions during execution of the project, the Contractor slowed down progress and even downed tools protesting to the nonpayment of the VAT component on their monthly payment claims. Various meetings were held with the Zimbabwe Revenue Authority (ZIMRA) and its parent Ministry of Finance and the local African Development Bank Field Office (ZWFO) on the issue.

Various solutions were proposed including the gazetting of Statutory Instrument 167 of 2012 on Regulations governing the refund of VAT African Development Bank. The regulation states that the refund of Tax shall be made to the African development Bank or its agents in respect of goods or services purchased by the African Development Bank or its Agents, if a responsible officer of the African Development Bank or its Agent makes an application in writing to the Commissioner. The Bank in Harare has now registered for VAT but a mechanism has to be put in place for the payment of the VAT.

A letter was written by the AfDB local Field Office to ZIMRA to request a solution to this matter and this letter is attached in Appendix B. This VAT issue has remained unresolved matter at the completion of the project.

10.3 Claims

The contractor submitted two claims during the course of the project as follows:

a. Standing time for an amount of USD100, 000.00 arising from the time between contract award and payment of advance payment.
b. Increase in costs of USD173,484.87 due to labour and materials cost increasing between the award date and time of project execution.

The Bank ruled that the contract was a fixed cost contract and no increases were entertained. It was also ruled that one of the decisions made to award this tender was based on the understanding that the Contractor was well resourced and had a good cash flow. The contractor has protested to these rulings throughout the duration of the contract. Since the contract is between the Contractor and the Beneficiary, it was resolved that the Municipality addresses these two issues.

The Municipality acknowledges both claims but has no resources to settle them. At the end of the project, the Contractor withheld the TLB backhoe machine in lieu of the standing time claim. Discussions were initiated to negotiate for the return of the machine as it is key in the maintenance of the sewerage system in Chitungwiza.

11 PLANNED VS INSTALLED INTERVENTION

Table 11

No	Planned Intervention	Implemented Intervention
1	**Improve access & availability of water supply to all areas**	
	- Supply and installation of control valves and pressure reducing valves (PRVs) on pumping main to water reservoir site.	- Control valves supplied but not installed. PRVs not supplied
	- Replace bulk meters (Prince Edward W/Works) 300 & 500mm dia	- 500mm meter supplied but not installed. 300mm supplied & installed
	- Install a volumetric (integrating) flow meter on Harare supply line	- Not supplied
	- Drill 15 new boreholes to augment emergency supplies to high pressure areas, including installation of all electrics for motorized pumps, local elevated reservoirs & distribution to pipes & kiosks.	- 10 boreholes drilled with 5 being successful and equipped with hand pumps. No connection to distribution and kiosks.
	- Install 10 (ten) pressure regulating valves on each of the 300mm diameter & 150mm diameter off-takes from the supply main from Harare to optimize water flow to high lying zones.	- Meters and valves supplied but not installed
	- Supply spare sewer pipes of various sizes for use in repair to infrastructure by Chitungwiza Municipality	- 675mm supplied as spares
2	**Equipment**	- Not supplied–scope of works reduction item

	- Supply rodding equipment - Supply one high pressure jet flushing pump with spare parts, tools & repair two sets of existing equipment - Supply one excavator for the water / sewage sections. - Supply one, 3 tonner truck for workshops. - Supply one generator.	- Not Supplied-scope of works reduction item Repaired high pressure jet pump & sewer cleaning bucket machine - Supplied Bell Front loader & back hoe - Not Supplied- scope of works reduction item - Supplied Kipor 150kVA generator
3	**Small tools and equipment for use (list to be attached)** - Water Workshops - Sewer Workshop - Electrical and Mechanical Workshops Personal Protective Equipment to Water section, Sewer section, Workshops section, and Solid waste section	Not Supplied as these items were removed to reduce the works to be within the 2.4million budget
4	**St Mary's Raw Sewage Pump Stations No. 1** - Replace all 3 Raw sewage pumps & motors. Refurbish pipework - Construct new intake works complete with screens and degritting channel (VFGC) and measuring flume - Compressor room completion and air pipework - Repair 300mmϕ AC PN18 rising main to Zengeza 5 gravity main - Repairs to durawall and External lighting - Supply and install bilge pump - Supply and install 11/0.4 kV (200kVA) pole mounted transformer complete with metering unit in pump station enclosure (need to extend 11kV power line into the enclosure). - Check, test and re commission MCC. - Small power & lighting refurbishment to pump & radio rooms. - Refurbishment of external lighting.	- Supplied Gorman-Rupp Pumps and refurbished all pipeworks, valves and fittings - Done as planned - Done - Done - Supplied & installed Pedrollo Pump instead - Supplied transformer but not installed as the existing one was still functional as it only needed servicing. 11kV power line extended into the pump station enclosure - Done successfully - Done successfully - Done successfully
5	**St Mary's Raw sewage Pumpstation No.2** - Replace two submersible pumps and repair pipework - Repairs to inlet pipework and chamber - Repairs to Durawall for security of station. - Refurbishment of small power & lighting in toilet & radio room. - Supply and install new MCC. - Supply and install incoming supply cable from ZESA pole mounted substation to main DB. - Supply new MDB complete with metering. - Refurbish/supply new external lighting.	- Done with NP3153 HT3~451 Flygt pumps - Done - Not Done - Done - - Did not supply new, refurbished existing - Done - Refurbished - Done
6	**St Mary's Raw Sewage Pump station No.3** - Repairs to one Raw Sewage pump and motor - Repairs to compressor – degrittingair pipework - Complete instillation of gates& baffles at VFGC & decanting facility - Recommission VFGC - Security wall - Repairs and (desluding) emergency diversion pond - Service and repair flow meter	- Repair to two ABS FR150/150-38 pumps - Supply of a 3rd brand new ABS FR150/150-38 - Done successfully - Done successfully - Commissioned - Not done - not adequate funds - Done successfully - Done successfully - Done successfully

	- Improve storm water drainage to protect station from flooding. - Substation to be refurbished by: i) replacement of transformer oil; & ii) Check for other damages due to vandalism & re commission - Supply & install of 6 Nr 10m steel poles complete with double bracket HPS light fittings for external lighting refurbishment. - Refurbish small power and lighting in compressor room, radio room and shower/changing room. - Refurbish small power & lighting to panels & drywell - Remove existing starters & move to beneficiary stores. Check, test, re commission 2Nr compressor 17.25kW starters. Supply and install new 2 Nr 75kW star/delta starters for pump No. 1 & No. 2 c/ with new circuit breaker. - Clean out and tidy up existing panels.	- Done successfully - Refurbished existing tower light by shortening the tower - Done successfully - Done successfully - Done successfully - Compressors were serviced successfully - Done successfully for the three pumps - Old MCC taken out & replaced with new.
7	**Improve water supplies** - Repairs to station pipework & valves at Reservoir Site - Supply pressure pipes and fittings for system repairs	Not done, removed from scope Supplied variety of pipes ranging from 50 to 400mm totaling 5418m
8	**Improve sewer system** - Flush sewers in built-up areas, using flushing pumps for large diameter, difficult to access sections & std rods for domestic & shallow secondary section - Complete missing trunk sewer in Manyame Park (between St Mary's infill phases 2 and 4. Assess requirements – design, drawings, may require survey.	- NOT DONE - Done successfully
9	**Phase 1: Priority 3** - Supply bulk water meters on the following branches at St Mary's, Police Station, Tilcor branch,Unit H, B, & O. - Survey & complete missing sewer reticulation in St. Mary's infill Phase 3 & complete refurbishment of trunk sewers & reticulation. - Sewering St Mary's infill stands below level of p/stations No. 1 & 2 to p/station No.3. (Consider Communal septic tanks & SAs). - Repair &replace defective sewers in various locations. - Inspect & test water pipes & equipment & undertake topographic surveys to produce as built drawings. - Repair defective sections of the pipelines, air & scouring valves at 20 key locations in the distrib system. Replace rusted & leaking pipes in Zengeza St. Mary's & Seke reticulation network (15km)	- - Meters supplied and not installed - Not done - Not Done - Done for sewers 2,6,7,8,9,10,12,13,14 - Not Done - Pipes supplied but no repairs done
10	**Institutional Inability** Crowning the technical problems enumerated above is the institutional inability of the municipality to operate & manage the water & sanitation system, in particular, mobilising adequate revenues to fund the operations & maintenance of the system. Corporate governance leaves room for improvement. Policy is unclear & outdated. There are inadequate management and	Not Done

	engineering systems & inadequate skills to implement them were they to be provided. There are insufficient decision support systems in terms of basic information and management models to run the infrastructure. Human skills have also eroded while motivation levels are low among staff who are reported to go for months without salary payments.	

12 LESSONS LEARNT

1. VAT was not part of the Grant to Chitungwiza but has ended up being the responsibility of the contractor. On a number of occasions the contractor gave notice to stop work for nonpayment. The lesson here is to fully understand the Zimbabwean tax law and how it works and also to get full commitment on responsibilities by the funding agent and the beneficiary. All documentation to project funding must be at hand before project commencement.

2. Sewer 2 rock excavation caused progress delays since the rock was not expected. The lesson here is that full topographic and geotechnological surveys must be done at design stage to ensure correct designs and realistic and reliable specifications and Bills of Quantities.

3. During project execution, it was necessary to shut valves to isolate the water reticulation system so as to allow rehabilitation works to proceed. In some instances it took a long time to locate the isolation valves because the council operators did not know where these were. They also did not carry relevant maps that show the location of the valves. The lesson learnt was that it is necessary to have IDs for the water reticulation components. These assets also need to be marked and cleaned regularly for easy of reference and use.

4. During the works, it was difficult to located and identify some of the manholes and sewers. Some of these ran under houses. The lesson was that the Municipality must have a record of their sewerage reticulation system showing all manholes and giving their bearings for easy of location. The municipality must also keep their manholes and sewers well maintained for better operation and maintenance as this would keep costs low.

5. Failure by Municipal Sewerage Dept workers to unblock sewers 10, 12 and 2 meant that sewage overspills would persist. The lessons learnt are twofold. Firstly the Municipality must be fully equipped to clear blockages in sewers. Their equipment must always be in tip top condition and the workshop must be capacitated to service the sewer cleaning machines and equipment. Secondly a full sewer Management Plan must be in place as this will give information on all sewers and their interdependency and interaction in getting the sewage flow.

6. Failure to get appropriate concrete drilling bits by the Contractor for fixing metal work at VFGC 1 & 3 delayed progress on this structure. The lesson learnt was that the local supply market cannot be relied on and that the Contractor's tools and equipment plan was poor. At the beginning of the Contract it is necessary to secure all plant, equipment and tools even considering foreign supply markets.

7. The Bell TLB loader and backhoe machine was shared between Contractor & Client causing some delays on the core works being carried out by the contractor. The contract allowed the contractor to use the machine during the contract where as the Client (Beneficiary) also had urgent sewers maintenance works including dealing with blockages that needed the same machine. The lesson here is that the machines and equipment acquired for the Beneficiary must be handed over immediately it is acquired and the contractor must not have access to it, they must use own plant and equipment to execute works. A problem further arises if they do dayworks with such machinery as they will not have submitted rates for it.

8. Refusal by the Contractor to work over the shutdown period pushed the works to January 2013. The Contractor cited several reasons for not wanting to work over the holiday period including the following
    - Failure to get clearance from Workers Union Body to work over the period
    - Reported refusal by workers to work in that period
    - Lack of backup from head office during that period

    The lesson learnt is that works should be on programme so as to avoid working during the mandatory shutdown period in December. However if works are of emergency and urgency in nature, the shutdown period must be included in the programme and arrangements made earlier.

9. Incessant rain slowed down progress especially for outdoor work and earthworks. The lesson learnt is that the overall project planning and programming must be such that all earthworks and outdoor work must be planned for completion before the rains and activities must run in parallel if need be.

10. Reduction of Scope of works for this contract was agreed as a lump sum without being specific on which works were to be removed and was finalized five months after the contract had started. The lesson learnt is that the scope reduction must pinpoint the specific items to be removed from the contract before commencement of the works and fully agreed in writing between all parties to the contract.

11. The commencement date was understood differently by the client, contractor and the Bank. The Contractor understood it to be 11 July 2011 when they accepted the offer and submitted their invoice for the advance payment as requested by the Consultant but before the Contract was signed. The Client and the Bank understood it to be a date after the signing of the Contract on 1st September 2011. The lesson learn is the commencement date must be clearly spelt out and not left out to be interpreted from other activities e.g. signing of contract as opposed to payment of advance or site handover etc.

12. A lot of work related surprises surfaced on site during constructions because specifications, drawings and bill of quantities differed from what was on the ground. The documents indicated the need for new inlet works at pump station #1 and as the contractor was excavating to set out these works, they discovered that the inlet works had been done previously but got buried by grit removed from the incoming sewage. Drawings indicated a concrete decanting bay but the bill specified a brick one. The BOQ did not identify the sewers to be rehabilitated but specified the sizes and lengths. As a result no 675mm sewer could be identified for rehabilitation but 675mm pipes were specified for and ordered. The lessons learnt are that at the design stage, detailed must be obtained for the civil components as much as possible and where information cannot be obtained because condition cannot be assessed, an allowance must be given in the document that the final design and assessment must be done when the contractor is on site and can expose the problem clearer such as ground conditions requiring large scale excavations, or establishing the existing sizes and conditions of sewer or water pipes or pump impeller or other interior parts. Ordinarily the Consultant does not do this type of investigation on a working system. Tender documents to have very clear specifications and detailed BOQs. The Consultant must not have time pressures to do assessments. They must produce detailed designs and related documents that are not compromised regarding work quality and reliability of estimates. There must be good communication and dialogue between the Consultant, Client (Beneficiary) and maybe the Bank as well in order that the tender documents are reliable. The Consultant must be supervised to make sure his time and resources are fully utilized for the project at hand.

13. The tender documents for this project did not have consistent page numbers in addition there were two copies of the BOQs. The original and amended which were mixed up and had different descriptions and figures. These documents seemed to have been done in a hurry. Tender documents to have very clear specifications and detailed BOQs. This caused confusion during project execution. The lessons learnt were that the specifications must be very clear and specific. There must be good communication

and dialogue between the Consultant, Client (Beneficiary) and maybe the Bank as well in order that the tender documents are reliable. The Consultant must be supervised to make sure his time and resources are fully utilized for the project at hand.

14. Sewers to be rehabilitated were specified in the BOQ as "Supply, lay, bed, joint and test ……. ". No specific instructions were given on how to deal with the existing sewers to be replaced. This will give the Contractor an opportunistic chance to try and claim for compensation for handling the existing sewers during the rehabilitation. The lesson learnt is that if an existing sewer pipeline is to be replaced, it must be clear how it is intended whether the existing is to be uprooted and a new one installed in its place or the existing is to be abandoned and left in place with a new one installed parallel but on a different route etc.

15. The detail for the final design of mechanical and electrical is to be left to the contractor and specialist suppliers as they will need to match things precisely including dimensioning and fitting details. It must therefore be covered under provisional sums.

16. For works of this nature the Project manager has to be full time and must have a full time Engineer's representative in the form of a junior engineer or qualified technician. A chainman is also necessary to assist with the general work associated with site management.

17. The project went off course on a number of occasions due to many reasons. The project programming is to be realistic by the Consultant, Contractor and the Bank. The project completion time must be well thought and the times for payment must realistically take into account the start off difficulties experienced at the Bank in setting up their payment systems. Communication should be good so as to let each other know of what needs to be corrected or attended to in order that payments are affected on time.
18. Contractual roles to be very clear between the Bank, Client (Beneficiary) and the Contractor.
19. Site was handed over to Contractor (11 July 2011) before the Contract was signed (October 2011)
20. Preamble to tender BOQ well done as it specified a number of issues and covered the general responsibilities required of the contractor.

21. Drawings must be well managed. At the start of the Contract, correct construction drawings must be issued and recorded. Generic drawings must be avoided at all costs.

22. The advance repayment plan was not well stipulated in the contract causing difficulties in managing payment claims and payments. The contract must have a clear advance payment repayment plan.

23. Solving problem partially may create other elsewhere in the system.

24. Local problem solution may have a little impact on whole system as the entire system may be interdependent and requires a global solution.

25. The issue of claims and VAT payment remain after project completion mainly due to failure to take decisions and action by the authorities. The lesson learnt is to deal with problems as they arise and not avoid them even if they have undesirable outcome. One must consult widely and large so as to address the problem fairly and decisively. In so doing one may be able to negotiate a settlement.

26. Training of the Client Staff was specified as 'instruction to the Client's personnel before handover' and did not specify the training period. The lesson learnt is that a properly scheduled training plan should be specified.
27. The Contract currency was USD whilst the Grant currency was Euro. This caused discrepancies against the Contractor of USD52, 386.94 before the ultimate payment claim was processed, depleting

the grant account of resources that could be used to settle other project issues. The lesson learnt is that the contract and grant currencies should be the same wherever possible as would have been in this case.

13 RECOMMENDATION FOR THE FUTURE

13.1 Water Supply

- For short to medium term solutions, motorized boreholes should be considered even outside the Chitungwiza town boundaries.
- For long term solution, Kunzwi, Musami and Muda Dam and own treatment works should still be pursued.
- The Japanese water master plan should be used to implement development necessary in solving the city's problems.
- A Water Management Plan must be put in place.

13.2 Sewerage

- A full check on adequacy of existing sewerage system is required.
- Establish the effect of new housing projects on carrying capacity of existing water and sewerage system.
- The Japanese water master plan must be used to implement development necessary in solving the city's problems.
- The waste water treatment works must be rehabilitated in order to have a final effluent that complies with discharge regulations.
- A sewer Management Plan must be put in place.

13.3 Institutional Capacity Building

The Engineering Department must have a water, sewerage and projects engineers assisted by qualified technicians so as to get work done on time and efficiently. Currently the existing setup of relying on the Director of Engineering Services for everything does not work. Institution Memory must also be improved.

14 CONTRACTUAL ARRANGEMENTS

14.1 Completion Certificate

Project Manager has issued a contract completion certificate to the Contractor dated the 22nd February 2013 confirming the completion of the works with a snag list to be attended to.

14.2 Take-over certificate

Take-over / handover certificate was issued on the 7th March 2013 to the Client at the handover ceremony.

14.3 Insurances/Bonds/Guarantees

The status of all guarantees and insurances is summarized in the table below.

Table 14.3

Expiry of Performance Guarantee	Held with RM Insurance Company Pvt Ltd. It expires at end of construction.
Expiry of Insurances	31th December 2012 (Renewed)
Defects Liability Period	365 Days

Expiry of Retention Bond 5% for construction period only and 5% for construction and maintenance period ($240,000.00)	22nd February 2014
Project Acceptance Date	22nd February 2014
Contractors All Risk Insurance Policy	Contract works to US$2.4 million only and expiring after the defects liability period i.e. 22 Feb 2014.
Expiry of Advance Payment Guarantee	On repayment of advance payment but to receive written confirmation

14.4 Completion Meeting

Meetings were held at the times set out below to review any Contractor/ Project Manager/User comments and confirm that all concerned were happy that the project was ready for completion and handover by dates set out below. The following people were requested to attend at Pump Station 3:

Table 14.4

Attendees	Position	Representing
Herbert Nyakutsikwa	Project Manager)	AfDB
Eng A Tinofa	Director of Engineering Services,	Municipality of Chitungwiza
Mr Witness Govero	Snr Sewage Works Superintendant,	Municipality of Chitungwiza
Mr Andy Mhlanga	Electrician,	Municipality of Chitungwiza
Mr John Whitehead	Project Manager,	R Davis Construction Company – Main Contractor
Mr John Massey	Sub contractor	Electrical Sub contractor 2
Mr L Nyamutowa	Sub contractor	Electrical Sub contractor 1
Mr C Bando	Sub contractor	Mechanical Sub contractor

14.5 Formal Handover Meeting

A formal handover meeting was held prior to full completion of the snagged items on the 7th March 2013. The following people were requested to attend:

Table 14.5

Attendees	Position	Representing
Mrs Makwara	Councillor	Mayor of Chitungwiza
Eng A Tinofa	Director of Engineering Services,	Municipality of Chitungwiza
Mr Witness Govero	Snr Sewage Works Superintendant,	Municipality of Chitungwiza
Mr Andy Mhlanga	Electrician	Municipality of Chitungwiza
Mr Sango	District Administrator	Ministry of Local Government
Mr H Chiradza	Director of Health	Municipality of Chitungwiza
Mr Muziti	Chief Accountant	Municipality of Chitungwiza
Mr T. Mukomondera	Environment Management	Municipality of Chitungwiza

Attendees	Position	Representing
Cnl Tembo	Councillor Ward 9	Municipality of Chitungwiza
Cnl Mawanga	Councillor Ward 15	Municipality of Chitungwiza
Cnl Mudheredhe	Councillor Ward 10	Municipality of Chitungwiza
Cnl Wendy	Councillor Ward 23	Municipality of Chitungwiza
Washington	Councillor Ward 21	Municipality of Chitungwiza
Cnl Mukewezha	Councillor Ward 25	Municipality of Chitungwiza
Mr T Fuji	Consultant to Municipality	NJS Consultants Japan
Mr Damoni Kitabire	Officer in Charge	African Development Bank
Mr Emmanuel Nzabanita	Zimfund Manager	African Development Bank
Mr Eskendir Demissie	Snr Water and Sanitation Engineer	African Development Bank
Herbert Nyakutsikwa	Project Manager	African Development Bank
Mr Mawire	Water Superintendent	Municipality of Chitungwiza
Mr John Whitehead	Project Manager,	R Davis Construction Company – Main Contractor
Mr Pillon Nhliziyo	Site Agent	R Davis Construction Company – Main Contractor
Mr John Massey	Sub contractor	Electrical Sub contractor 2
Mr L Nyamutowa	Sub contractor	Electrical Sub contractor 1
Mr C Bando	Sub contractor	Mechanical Sub contractor
	Compliancy Officer	Environmental Management Auth

15 POST COMPLETION CERTIFICATE ISSUE (ACCEPTANCE CERTIFICATE)

15.1 Public Relations/Press Releases/Marketing

Press release was organised on the 7th March 2013 and details are given in Appendix H.

15.2 Defects Close Out Strategy and Programme

This section covers defects known at the handover time. A list was compiled and the contractor is and its sub contractors are attending to it. The defects liability period expires 22 February 2014. A programme for the resolution of known defects at completion was agreed between the PM, Client's works supervisors and the Contractor.

15.3 Latent Defects Reporting Strategy

The proposed process for dealing with latent defects will be that the operators at the pumping stations will make reports to the senior works superintendant, Mr. Witness Govero who will in turn write a report to the Director of Engineering Services, Eng A Tinofa and copy the Water and Sanitation Engineer at African Development Bank, Eng H Nyakutsikwa and Messrs John Whitehead and Mark Bradshaw of R Davis and Company, the contractor. The intention is to capture all defects for action as snags or dealt with by Contractor in the defects liability period. Any issues identified as snags will be added to the central snag list for record purposes.

The snagging list will be categorised snags as to whether remedial works can be done immediately or during planned periods (e.g. out of term time). A meeting can be called for ensure that all parties understand the process involved if necessary.

15.4 Demobilisation Arrangements

15.4.1 Archiving

All the project records will be given to the Director of Engineering Services and a copy kept at African Development Bank Offices in Harare.

15.4.2 Contractor accommodation, Welfare and Storage

The contractor has vacated the site premises leaving behind the site offices with their furniture for use by the owner.

15.4.3 Plant, Equipment and Materials

All plant, equipment and materials belonging to the contractor have been removed with that belonging to the Client having been handed over. The new Bell TLB front loader backhoe machine.

APPENDICES

Appendix A

Current Defects and Outstanding Works Snag Lists

SNAG LIST FOR STMARY'S PUMPSTATIONS

ST MARY'S 1 PUMPSTATION

- Pump # 3- this pump won't start when set on automatic regardless of how high the water level is allowed to rise.
- Compressor Tech used wire in place of the recommended plastic cable ties when securing power supply cables for compressors.
- Security wall repairs still not completed along the gate side of the fence
  Control panel labelling still outstanding.
- There is a leak in the pumping main just outside the fence where contractor previously carried out some repair work on the line.

ST MARY'S PUMPSTATION# 3

- Sewage transfer pump # 1 –the glycol lubricant is getting contaminated by sewage leaking into the glass container- the pump has been stopped because of this fault.
- Pump # 2 is still off line awaiting repairs (leaking glycol lubricant)
- Generally all pumps produce a very loud noise on starting which fades out as the pumps continue to run.
- Grit tank agitation lines- both lines not working although airlift pump operational.
- The flow meter has not been commissioned yet?
- Some fluorescent light tubes not working.
- It was noticed that at handover of the old equipment removed from the pump stations the old bilge pump for STMARY'S 1 was not handed over to us and does not appear on the hand over list.
- The High Pressure Sewer Jet machine was delivered to our workshops by the contractor but had starting problems. It was noticed that a previously requested by-pass valve was not replaced. Contractor representative said they would return to fix the starting problems.

Return of Bell front loader backhoe machine

Appendix B

AfDB to ZIMRA Letter on Project VAT Issue

Appendix C

As Built Drawings

I. DRAWINGS

Drawings that have been made include the following:

Item	Drawing Number	Sub Drawing Title	Status
1	CHITUGWIZA/AFDB/SWS/1-12	Chitugwiza Sewerage System Layout Plan	Prepared
2	CHITUGWIZA/AFDB/SWS/2-12	Trunk and Outfall Sewer Layout	Prepared
3	CHITUGWIZA/AFDB/SWS/3-12	Trunk Sewers Under Buildings	Prepared
4	CHITUGWIZA/AFDB/SW2/1-12	Sewer 2 Locality Plan MH1-14	Prepared
5	CHITUGWIZA/AFDB/SW2/2-12	Sewer 2 Locality Plan MH1-26	Prepared
6	CHITUGWIZA/AFDB/SW2/3-12	Sewer 2 Sectional Profile MH1-14	Prepared
7	CHITUGWIZA/AFDB/SW2/4-12	Sewer 2 Sectional Profile MH14-20	Prepared
8	CHITUGWIZA/AFDB/SW2/5-12	Sewer 2 Sectional Profile MH20-26	Prepared
9	CHITUGWIZA/AFDB/SW6/1-12	Sewer 6 Locality Plan	Prepared
10	CHITUGWIZA/AFDB/SW6/2-12	Sewer 6 Sectional Profile	Prepared
11	CHITUGWIZA/AFDB/SW7/1-12	Sewer 7 Locality Plan	Prepared
12	CHITUGWIZA/AFDB/SW7/2-12	Sewer 7 Sectional Profile	Prepared
13	CHITUGWIZA/AFDB/SW7/3-12	Sewer 7 Ramp and Collector to Trunk Connection Detail	Prepared
14	CHITUGWIZA/AFDB/SW8/1-12	Sewer 8 Locality Plan	Prepared
15	CHITUGWIZA/AFDB/SW8/2-12	Sewer 8 sectional Profile	Prepared
16	CHITUGWIZA/AFDB/SW9/1-12	Sewer 9 Locality Plan	Prepared
17	CHITUGWIZA/AFDB/SW9/2-12	Sewer 9 Sectional Profile	Prepared
18	CHITUGWIZA/AFDB/SW10/1-12	Sewer 10 Locality Plan	Prepared
19	CHITUGWIZA/AFDB/SW10/2-12	Sewer 10 Sectional Profile	prepared
20	CHITUGWIZA/AFDB/SW11/1-12	Sewer 11 Locality Plan	Prepared
21	CHITUGWIZA/AFDB/SW11/2-12	Sewer 11 Sectional Profile	prepared
22	CHITUGWIZA/AFDB/SW12/1-12	Sewer 12 Locality Plan	Prepared
23	CHITUGWIZA/AFDB/SW12/2-12	Sewer 12 Sectional Profile	Prepared
24	CHITUGWIZA/AFDB/SW12/3-12	Sewer 12 Reinforcement Detail	Prepared
25	CHITUGWIZA/AFDB/PS1/LOP/1-12	Pump Station 1 Layout Plan	Prepared
26	CHITUGWIZA/AFDB/PS1/MEC/1-12	Pump Station 1 Mechanical Detail	Prepared
27	CHITUGWIZA/AFDB/PS1/CVL/1-12	Pump Station 1 Civil Detail	Prepared
28	CHITUGWIZA/AFDB/PS1/ELC/1-12	Pump Station 1 Electrical Detail	Prepared
29	CHITUGWIZA/AFDB/PS1/DRN/1-12	Pump Station 1 Drainage Layout Plan	Prepared
30	CHITUGWIZA/AFDB/PS1/DRN/2-13	Pump Station 1 Stormwater Sectional Profile	Prepared
31	CHITUGWIZA/AFDB/PS1/DRN/3-14	Pump Station 1 Foot Path Drainage Sectional Profile	Prepared
32	CHITUGWIZA/AFDB/PS1/WCAP/1-12	Pump Station 1 Water and Compressed Air piping detail	Prepared
33	CHITUGWIZA/AFDB/PS1/OFF/1-12	Pump Station 1 Overflow sectional profile	Prepared
34	CHITUGWIZA/AFDB/PS1/VFGC/1-12	Pump Station 1 V.F.G.C Detail	Prepared

Item	Drawing Number	Sub Drawing Title	Status
35	CHITUGWIZA/AFDB/PS1/VFGC/2-12	Pump Station 1 Penstock Gate Detail	Prepared
36	CHITUGWIZA/AFDB/PS1/DC/1-12	Pump Station 1 D.C Detail	Prepared
37	CHITUGWIZA/AFDB/PS2/LOP/1-12	Pump Station 2 Layout Plan	Prepared
38	CHITUGWIZA/AFDB/PS2/MEC/1-12	Pump Station 2 Mechanical	Prepared
39	CHITUGWIZA/AFDB/PS2/CVL/1-12	Pump Station 2 Civil	Prepared
40	CHITUGWIZA/AFDB/PS2/ELC/1-12	Pump Station 2 Electrical	Prepared
41	CHITUGWIZA/AFDB/PS2/DRN/1-12	Pump Station 2 Stormwater Drainage Sectional Profile	Prepared
42	CHITUGWIZA/AFDB/PS3/LOP/1-12	Pump Station 3 Layout Plan	Prepared
43	CHITUGWIZA/AFDB/PS3/MEC/1-12	Pump Station 3 Mechanical	Prepared
44	CHITUGWIZA/AFDB/PS3/CVL/1-12	Pump Station 3 Civil Detail	Prepared
45	CHITUGWIZA/AFDB/PS3/ELC/1-12	Pump Station 3 Electrical Detail	Prepared
46	CHITUGWIZA/AFDB/PS3/DRN/1-12	Pump Station 3 Drainage Layout Plan	Prepared
47	CHITUGWIZA/AFDB/PS3/DRN/2-13	Pump Station 3 Drainage Sectional Profile	Prepared
48	CHITUGWIZA/AFDB/PS3/VFGC/1-12	Pump Station 3 V.F.G.C Detail	Prepared
49	CHITUGWIZA/AFDB/PS3/DC/1-12	Pump Station 3 D.C Detail	Prepared
50	CHITUGWIZA/AFDB/WPN/1-12	Chitungwiza Water Pipeline, Valve and Meter Detail	Prepared
51	CHITUGWIZA/AFDB/DBL/1-12	Chitungwiza Drilled boreholes layout Map	Prepared

Appendix D

Operation & Maintenance Manuals

Appendix E

Asset Register

Appendix F

Meetings Carried Out To Date

Pre-Award Contract Meetings

Pre-Tender Meeting and Site Visit	2 February 2011
Pre-Contract Award Meeting	1 July 2011
Site Handover Meeting	15 July 2011
Site Kick off Meeting	24 January 2012

Site Progress Meetings Number	**Date**
Progress Meeting Number 1	13th February 2012
Progress Meeting Number 2	27th March 2012
Progress Meeting Number 3	17th April 2012
Progress Meeting Number 4	15th May 2012
Progress Meeting Number 5	29th May 2012
Progress Meeting Number 6	12th June 2012
Progress Meeting Number 7	26th June 2012
Progress Meeting Number 8	10th July 2012
Progress Meeting Number 9	24th July 2012
Progress Meeting Number 10	7th August 2012
Progress Meeting Number 11	28th August 2012
Progress Meeting Number 12	11th September 2012
Progress Meeting Number 13	25th September 2012
Progress Meeting Number 14	9th October 2012
Progress Meeting Number 15	23th October 2012
Progress Meeting Number 16	6h November 2012
Progress Meeting Number 17	20th November 2012
Progress Meeting Number 18	4th December 2012
Progress Meeting Number 19	15th January 2013
Progress Meeting Number 20	29th January 2013

Technical Meetings

Extra Ordinary Meeting	16th March 2012
Project Review Meeting	26th March 2012
Project review Meeting	22nd August 2012
Management Meeting	24th August 2012
Project Review Meeting	31st August 2012

Appendix G

Collaboration With Other Watsan Stakeholders

AfDB Zim Fund

This project is reported to be implemented sometime in 2013 and will look at the waste water treatment and sewerage aspects.

JAICA Master Plan

NJS Consulting Engineers of Japan is working on the IMPROVEMENT OF WATER SUPPLY SEWAGE AND SOLID WASTE MANAGEMENT IN CHITUNGWIZA funded by JICA. The basic investigation stage was completed in June 2012 and the second phase of the Master Plan is almost midway and will be completed in May 2013. The third phase of the feasibility study and pilot project will be between June 2013 and February 2014. From Dec 2012 to March 2013 they commissioned the study to establish the details of all manholes in the town.

Appendix H

AfDB Press Release For Project Handover

http://www.afdb.org/en/news-and-events/article/the-african-water-facility-increases-access-to-water-supply-and-sanitation-fights-cholera-in-zimbabwe-11590/

The African Water Facility Increases Access to Water Supply and Sanitation, Fights Cholera in Zimbabwe

Funded by the African Water Facility (AWF) to the amount of US $3 million, the project designed to rehabilitate the water supply and sewerage systems in Chitungwiza will be handed over today to the Municipality of Chitungwiza, following the completion of the construction works.
This direct investment by the AWF will improve the hygiene, the health and social well-being of an estimated 350,000 people by reducing the incidences of water-borne and related diseases such as cholera and typhoid, through a system now better equipped to provide drinkable water and remove sewage from residential areas.

Chitungwiza has borne the brunt of cholera epidemics, and counts on this intervention to avert another outbreak, which has been severely plaguing the city since 2008.

Launched in January 2012 and completed in February 2013, the project is poised to help stabilise the deterioration in the provision of water and sanitation services in the Municipality of Chitungwiza, meanwhile enhancing institutional capacity for efficient and sustainable operation and management of the water supply and sanitation services.

“We give great importance to this project as a means to helping Chitungwiza quickly recover from years of poor water supply and sanitation service delivery and improve people’s lives,” said Akissa Bahri, Coordinator of the African Water Facility. “It is hoped that the results will also contribute to building stakeholder confidence, catalysing donor resources and generating knowledge on transitional assistance in a post-conflict setting.”

The handover ceremony has been jointly presided over by Damoni Kitabire, Officer-In-Charge of the Zimbabwe Field Office for African Development Bank, and Councillor Mrs C.M. Makwara, representing the Mayor of Chitungwiza Municipality, and attended by local stakeholders and city officials.

Appendix I

Herald Newspaper Press Release on Project Handover

Appendix J

Project Photographs