**DAM’S SPILLWAY REPAIR , PEOPLE”S LIFE RESTORED**

In the event Zimbabwe Children`s Education Trust receives aid from Global Giving Foundation, it would notify the Councilor Mrs Rai Gwenyambira and Zimbabwe National water authority about the Trust`s Intention to reconstruct the destroyed Stoneridge dam`s spillway. After having received the permission. The Trust would proceed to flit tenders on the newspapers for competitive bidding to take place . This would be done through Herald newspapers which is the largest Zimbabwe newspaper . The response would be made through emailing or posting to the Trust`s offices at number 06 Oarkley Road , Hatfield , Harare , Zimbabwe. On receiving the responses, the organization would select five companies that have proven track records of building spillways ,cheaper,reference letters from other organizations , Zimbabwe revenue authority “ s tax clearance letters , registration as a company( CR14) and registered as a company in Zimbabwe. The five companies would be interviewed and notified to visit the site of construction at Stoneridge dam in Waterfalls in Harare South . They shall have a view and give their quotations or bill of quantities as some may increase the materials . The selection is done using the amount of material and price of the dam`s construction . The bill or requirements should not vary enormously for the benefit of the contractor ,a visit to the site office of the construction company is made to ascertain the capability of the organization to carry out the task .

On completion of the tender procedures and awarding process , the winning company is notified about the conditions of service of the contract that includes payments using Real Time gross settlement (RTGS). The purchases of the materials by the Trust , the period of the constructor should not exceeds seven days , should not disturb other ecosystem/ habitats in the area and to construct the dam as if they are the real owners of the dam.The Trust shall be monitoring progress from the dam ¾ stones are placed at the river basin and the supervising team would be on site at 8.oo o’clock each day .They would report to the office at the close of the day .The mixture shall also be monitored by the team for quality control.On the actual Spillway construction, the spillway is fifteen metres long , five metres high and two metres width at the bottom of the dam and would generally reduce in size to fifty centimeters as it is constructed to the upper side of the spillway , as waters strength is dancer at the bottom than at the top. It also helps in that people would not walk on top of the spillway as that would destroy the spillway`s strength and generally falling of people in deep water.

The construction is done through digging a fiftneen metres trench along the dam wall . It would be five metres high and two metres width and general decrease in size upwards. The first ten centimeters on the bottom is compacted , rumored , then gravel is applied and compacted again .The shattering and casting of the 100 x6m 14mm of reinforcement is done . The pit is shattered through tyring the reinforce of 100 x 6m x 14mm. Some would be horizontal and some would be vertical along the 15L x 5h x 2m (varying) . Tyring is done using the ten kg tying wire. This would not allow the 100m x 6m x 14mm reinforcement to shake or move on the application of the concrete mixture.The meshwire is also tired with the rein reinforcement to increase the strengthen . The shattering wood boards are laid along the big trench and nailed continuously on each side to provide a single strong sheet board supported by brandering planks . The shattered wooden boards wood make the concrete form a solid structure that does have a district shape. The concrete mixture is poured in the pit up to three metres which would have been mixed at a 1.1.1.1. ration, that is one burrow of river sand , one of quarry dust ,3/4 stones and with one bag of cement (PPC). . The concrete is slightly compacted to remove air that might be in the block . After a soft compact and a wait of three hours , another casting is done through application of boards on fifteen meters long , two meter height and fifty centimeters width. Plundering is also done to support the boards on the structure.The three quarter stones ,quarry dusty and river sand is mixed . After being mixed at a 1.1.1.1. ration, that is one burrow of river sand , one of quarry dust ,3/4 stones and with one bag of cement (PPC).

After completion of spillway building ,big stones are used to build a strong five meter structure that is on the down side or waterfall of the spillway , using big stones and cement wire mesh is also put to strengthen the dams waterfall and stop the stones in the case the stones are loosened. On completion ,On the upper side another strong five metre stone structure is built to support the pressure of the dam . The gorge on the upper spillway is covered with river sand to avoid water pressure on the bottom of upper side of the spillway and strengthen the dam on its bottom . The blockage is removed and water is allowed to pass to the spillway. The building company is paid for the job well done through Real Time Gross Settlement.

**MATERIALS RQUIRED**

cement 400 bags

mash wire 5 rolls

¾ stones 60 cubic

big stones 10 cubic

river sand 100 cubic

reinforcement 100 x 6m x 14mm

quarry dust 50 cubic

tying wire 10 kg

shattering wooden boards 16 boards

nails (6inch ) 5 kg

brandering 13 x 38 10

gravel 10 cubic

The councilor , EMA , Zinwa are notified about the completion of the dam. They are called to make a handover of the dam to the residence and give a statement on the built of the dam, methods of environment connection by EMA authorities and future dam protection measures.

The councilor Mrs. Rai Gwenyambira is expected to address the residence that stream bank cultivation is not allowed by the council by laws . The silt cultivated would be led into the dam , thereby leading to the death of the dam. The dam controls the water level that assists the wells in the residence to have adequate water during droughts. The council is not ready to provide water connection to the Stoneridge residence hence to protect the dam`s presence.. Stoneridge suburb is a new suburb that is being built , thus needs the use of a relevant resoviour for the building purposes. The councilor is also poised to address the health situation caused by the dam before the construction of the spillway, the dam`s upper basin have ponds caused by residence who collects river sand . The ponds creates a breeding place for waterborne diseases like diarrhea , typhoid and bilharzia as children swim on such areas as part of recreation facilities. The extension of the dam wall due to the construction of the spillway would cause the ponds to be covered by water and increase the dam`s capacity. This would reduce government expenditure on drugs and awareness campaign. Communication would have been created as people from the Stoneridge Phase one would travel to phase two without and barricade as people would be allowed as the gorge would have been covered by sand . This is an important time and stage of the communities as the business would be brisky , because fish would breed and increase due to the increase of water and dam capacity. The Stoneridge residence would fish health fish, sell the fish for the survival in times of economic hardship in Zimbabwe. The creation of the dam`s spillway would make the dam accumulate water at its full capacity this would generally stop residences from stream bank cultivation , due to the space that is uncovered by water.

The environment management agency is expected to make a statement on species in the dam and its protection like snails , snakes , grass that have been removed by stream bank cultivators and resurface. The importance of birds that would be flying. The importance of water and the use of wetlands .

In each and every country .The prohibitation of fishing using nets ,fish guns and the illegality of removal of pitsand on the river basins and protection of marine life.

The councilor is expected to address the only tourist attraction that would have been created by the dam as it is on the centre of the suburb .Residence would travel to the dam for the purpose of attraction ,children would not swim but be entertained by the dam’s waves ,birds of the on the river basin, singing ,attracting flowers and lilies.

Zimbabwe National Water Authority would remind residence in the community that all water bodies are controlled and monitored by them .They would thank the Trust and its donors for the cooperation and the love of mankind they would have shown .The Trust and its donors as they would have taken the responsibility of dam repair. This dam is a referral in deed to the community and the assistance shall show this by keeping the dam accordingly to council statutes or by laws and protect them from such deteriorating again as that would need a lot of money than a quick repair.

The councilor would hand over to the residence and the residence would be represented by Mrs Sandu who is the residence representative chairperson. She would acknowledge the dam ‘s spillway construction and swear to uphold the dam ‘s maintenance on behalf on the residence .The councilor would cut off the ribbon.

Zimbabwe children’s Educational Trust shall put a billboard with its name notifying residences measures that shall be adhered to for the purpose of the Dam ‘s maintance such as stoppage of stream bank cultivation ,pitsand removals ,fishing using nets.The month the dam ‘s spillway was constructed ,the councilor who officiated the ceremony.This would notify the residence and passerby’s on the conservatory methods.

**ESTIMATED BUDGET FOR STONERIDGE DAM SPILLWAY REPAIR**

|  |  |  |  |
| --- | --- | --- | --- |
| **ITEM** | **DESTRIPTION** | **UNIT COST** | **TOTAL** |
|  |  |  |  |
| **Cement** | **400 bags** | **10** | **400-00** |
| **Mashwire** | **5** | **90** | **450-00** |
| **¾ stones** | **60 cubic** | **45** | **2700-00** |
| **Big stones** | **10 cubic** | **45** | **300-00** |
| **River sand** | **100 cubic** | **30** | **3000-00** |
| **Quarry dusty** | **50 cubic** | **50** | **2200-00** |
| **Rein for cement** | **100x6m x14mm** | **10** | **1000-00** |
| **Tying wire**  **Construction company** | **10 kg** | **5** | **50-00**  **3200-00** |
| **Shuttling wooden boards** | **16 boards** |  | **800-00** |
| **Nails** | **5kgs** | **3** | **15-00** |
| **Brandering 13x38** | **10** | **2** | **20-00** |
| **Gravel** | **10** | **30** | **300-00** |
| **Transport hire of purchased items** |  |  | **630-00** |
| **Administration fuel ,stationery, advertising** |  |  | **1200-00** |
| **Allowances** | **$50x3staff x14 days (procument,monitoring)** |  | **2100-00** |
| **Board members allowances 9x50** | **Sitting allowances** | **50** | **450-00** |
| **Handing over to residence by councilor,ema,zinwa,food,billboards,tent ,chair hire etc.** |  |  | **460-00** |
| **TOTAL** |  |  | **$19275-00** |

(a)The cement construction is not going to be hired as it shall be provided by the supplier.

(b) ¾stones, big stones, riversand‘s transport shall be hired.

(c)The spillway‘s height is five metres.