

| Item No |   | Quantity | Rate | Amount |
|---------|---|----------|------|--------|
|         | <b><u>SECTION No. 5</u></b>   |          |      |        |
|         | <b><u>BILL No. 1</u></b>  |          |      |        |
|         | <b><u>EXTERNAL WORKS (PROVISIONAL)</u></b>  |          |      |        |
|         | <b><u>MODEL PREAMBLES</u></b>   |          |      |        |
|         | <b><u>The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates</u></b>          |          |      |        |
|         | <b><u>THE FOLLOWING IN PLATFORMS, ETC.</u></b>  |          |      |        |
|         | <b><u>Site Clearance, ETC</u></b>   |          |      |        |
| 1       | Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris. | m2       | 870  |        |
| 2       | Stripping average 200mm thick layer of topsoil and stockpiling on site.   | m2       | 700  |        |
|         | <b><u>Open face excavation not exceeding 2m deep:</u></b>   |          |      |        |
| 3       | Excavate to cut in open face, not exceeding 2m deep to reduce levels and grade to fill and compact to 93% mod AASHTO density at optimum moisture content.   | m3       | 60   |        |
|         | <b><u>Extra over all excavations for carting away:</u></b>  |          |      |        |
| 4       | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.   | m3       | 135  |        |
|         | <b><u>Earth filling from excavated material</u></b>   |          |      |        |
| 5       | Dig, load and remove filling selected from spoil heaps on site and deposit as filling in platforms including spreading and compacting to cambers and falls in layers not exceeding 150 mm thick to a minimum of 95% Modified AASHTO dry density.    | m3       | 120  |        |
|         | <b>Carried Forward</b>  |          | R    |        |
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|         | EXTERNAL WORKS  |          |      |        |
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| Brought Forward  |   |    | R   |
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| <b><u>Filling supplied by the contractor to form platforms</u></b>   |   |    |     |
| 6  | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 35  |
| <b><u>Surface Preparation:</u></b>   |   |    |     |
| 7  | Trim and level off surface of ground (excavated or filled under this Contract) including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 300mm to a density of at least 90% Mod. AASHTO maximum density, part to falls. | m2 | 641 |
| <b><u>Prescribed density tests on filling:</u></b>   |   |    |     |
| 8  | Modified AASHTO Density test.   | No | 6   |
| <b><u>THE FOLLOWING IN WALKWAYS</u></b>  |   |    |     |
| <b><u>Excavation not exceeding 2m deep</u></b>   |   |    |     |
| 9  | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 195 |
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b> |   |    |     |
| 10   | Off site to a dumping site to be found by the Contractor.   | m3 | 195 |
| <b><u>Filling supplied by the contractor under walkways</u></b>  |   |    |     |
| 11   | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 65  |
| 12   | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 65  |
| <b><u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u></b>   |   |    |     |
| 13   | Under floors,etc.   | m2 | 425 |
| Carried Forward  |   |    | R   |
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| <b><u>Prescribed density tests on filling:</u></b>   |  |        |
| 14   | In-situ dry density test.  | No 6   |
| <b><u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u></b>  |  |        |
| 15   | Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.   | m2 425 |
| <b><u>Concrete Paving Blocks</u></b>   |  |        |
| <b><u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u></b> |  |        |
| 16   | Paving to walkway areas, etc laid to falls.  | m2 425 |
| <b><u>Kerbing</u></b>  |  |        |
| <b><u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u></b>                           |  |        |
| 17   | Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course. | m 120  |
| 18   | Ditto but circular on plan.  | m 18   |
| <b><u>THE FOLLOWING IN ONE BRICK WALL (GARDEN WALL)</u></b>  |  |        |
| <b><u>Excavation in earth not exceeding 2m deep:</u></b>   |  |        |
| 19   | Trenches.  | m3 45  |

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| <b><u>Extra over all excavations for carting away:</u></b>   |   |    |      |
| 20   | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.   | m3 | 25   |
| <b><u>Risk of collapse of excavations:</u></b>   |   |    |      |
| 21   | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2 | 150  |
| <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b> |   |    |      |
| 22   | Backfilling to trenches, holes, etc.  | m3 | 22   |
| <b><u>Filling supplied by the contractor under strip footing</u></b>   |   |    |      |
| 23   | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 12   |
| 24   | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 12   |
| <b><u>Compaction of surfaces</u></b>   |   |    |      |
| 25   | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 350  |
| <b><u>25 Mpa/19mm Concrete</u></b>   |   |    |      |
| 26   | Strip footings.   | m3 | 15   |
| <b><u>Test blocks:</u></b>   |   |    |      |
| 27   | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No | 6    |
| <b><u>Reinforcement (Provisional)</u></b>  |   |    |      |
| 28   | High tensile steel reinforcement bars to structural concrete work.  | t  | 2,00 |
| Carried Forward  |   |    | R    |
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| Brought Forward  |   |    |     | R |
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| <b><u>BRICKWORK IN FOUNDATIONS.</u></b>  |   |    |     |   |
| <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>   |   |    |     |   |
| 29   | One brick walls.  | m2 | 37  |   |
| <b><u>Brickwork reinforcement:</u></b>   |   |    |     |   |
| 30   | 230mm Wide reinforcement built in horizontally.   | m  | 220 |   |
| 31   | Ditto but in foundations.   | m  | 85  |   |
| <b><u>FACE BRICK</u></b>   |   |    |     |   |
| <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u></b> |   |    |     |   |
| 32   | One brickwall faced on both sides.  | m2 | 40  |   |
| <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u></b>   |   |    |     |   |
| 33   | 230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described. | m  | 95  |   |
| <b><u>STORMWATER CHANNELS</u></b>  |   |    |     |   |
| <b><u>Excavation not exceeding 2m deep</u></b>   |   |    |     |   |
| 34   | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 33  |   |
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>   |   |    |     |   |
| 35   | Off site to a dumping site to be found by the Contractor.   | m3 | 33  |   |
| Carried Forward  |   |    |     | R |
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| Brought Forward   |   |    | R   |
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| <b><u>Filling supplied by the contractor under channels</u></b>   |   |    |     |
| 36  | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 34  |
| 37  | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 34  |
| <b><u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u></b> |   |    |     |
| 38  | 700 x 80mm thick V' channel 150mm deep in centre laid in position in ground in 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.  | m  | 220 |
| 39  | Extra for 700mm angle   | No | 6   |
| 40  | Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones. | No | 6   |
| <b><u>THE FOLLOWING IN DISABLED ACCESS</u></b>  |   |    |     |
| <b><u>SCREEN WALL</u></b>   |   |    |     |
| <b><u>Excavation in earth not exceeding 2m deep:</u></b>  |   |    |     |
| 41  | Trenches.   | m3 | 15  |
| <b><u>Extra over all excavations for carting away:</u></b>  |   |    |     |
| 42  | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.   | m3 | 12  |
| Carried Forward   |   |    | R   |
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| Brought Forward  |   |    | R     |
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| <b><u>Risk of collapse of excavations:</u></b>   |   |    |       |
| 43   | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2 | 18    |
| <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b> |   |    |       |
| 44   | Backfilling to trenches, holes, etc.  | m3 | 9     |
| <b><u>Filling supplied by the contractor under strip footing</u></b>   |   |    |       |
| 45   | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 13    |
| 46   | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 12    |
| <b><u>Compaction of surfaces</u></b>   |   |    |       |
| 47   | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 7     |
| <b><u>25 Mpa/19mm Concrete</u></b>   |   |    |       |
| 48   | Strip footings.   | m3 | 1     |
| <b><u>Test blocks:</u></b>   |   |    |       |
| 49   | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No | 6     |
| <b><u>Reinforcement (Provisional)</u></b>  |   |    |       |
| 50   | High tensile steel reinforcement bars to structural concrete work.  | t  | 20,00 |
| <b><u>BRICKWORK IN FOUNDATIONS.</u></b>  |   |    |       |
| Carried Forward  |   |    | R     |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |   |    |       |

| Brought Forward  |   |    |    | R |
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| <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>   |   |    |    |   |
| 51   | One brick walls.  | m2 | 65 |   |
| <b><u>BRICKWORK IN SUPERSTRUCTURE</u></b>  |   |    |    |   |
| <b><u>Brickwork reinforcement:</u></b>   |   |    |    |   |
| 52   | 230mm Wide reinforcement built in horizontally.   | m  | 55 |   |
| 53   | Ditto but in foundations.   | m  | 65 |   |
| <b><u>FACE BRICK</u></b>   |   |    |    |   |
| <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u></b> |   |    |    |   |
| 54   | One brickwall faced on both sides.  | m2 | 22 |   |
| <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u></b>   |   |    |    |   |
| 55   | 230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described. | m  | 55 |   |
| <b><u>ACCESS RAMPS</u></b>   |   |    |    |   |
| <b><u>Excavation not exceeding 2m deep</u></b>   |   |    |    |   |
| 56   | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 9  |   |
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>   |   |    |    |   |
| 57   | Off site to a dumping site to be found by the Contractor.   | m3 | 9  |   |
| Carried Forward  |   |    |    | R |
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| Brought Forward  |  |    | R  |
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| <b><u>Filling supplied by the contractor under floors, aprons, etc</u></b>                                     |  |    |    |
| 58   | G7 Base course material compacted to 98% Mod AASHTO density  | m3 | 4  |
| 59   | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.   | m3 | 4  |
| <b><u>Coarse river sand filling supplied by the contractor:</u></b>  |  |    |    |
| 60   | Under floors etc.  | m3 | 6  |
| <b><u>Compaction of surfaces:</u></b>  |  |    |    |
| 61   | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 80 |
| <b><u>Prescribed density tests on filling:</u></b>   |  |    |    |
| 62   | In-situ dry density test.  | No | 2  |
| <b><u>Reinforced 25Mpa/19mm Concrete:</u></b>  |  |    |    |
| 63   | Ramps, Landings, etc.  | m3 | 22 |
| <b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>                                     |  |    |    |
| 64   | Surface beds, slabs, etc to falls and currents.  | m2 | 80 |
| <b><u>Test blocks:</u></b>   |  |    |    |
| 65   | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).  | No | 6  |
| <b><u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u></b> |  |    |    |
| 66   | 12mm Joints not exceeding 300mm high.  | m  | 65 |
| Carried Forward  |  |    | R  |
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| <b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u></b>                                    |  |    |     |
| 67   | 10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.  | m  | 65  |
| <b><u>Fabric reinforcement:</u></b>  |  |    |     |
| 68   | REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.  | m2 | 85  |
| <b><u>Waterproofing under Surface beds</u></b>   |  |    |     |
| 69   | 350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).                          | m2 | 85  |
| <b><u>THE FOLLOWING IN ACCESS DRIVEWAY, ETC.</u></b>   |  |    |     |
| <b><u>Excavation not exceeding 2m deep</u></b>   |  |    |     |
| 70   | Reducing levels and depositing excavated material in prescribed stock piles on site.   | m3 | 190 |
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b> |  |    |     |
| 71   | Off site to a dumping site to be found by the Contractor.  | m3 | 190 |
| <b><u>Filling supplied by the contractor under driveways</u></b>   |  |    |     |
| 72   | G7 Base course material compacted to 98% Mod AASHTO density  | m3 | 90  |
| 73   | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density. | m3 | 90  |
| <b><u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u></b>   |  |    |     |
| 74   | Under floors,etc.  | m2 | 450 |
| Carried Forward  |  |    | R   |
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| Brought Forward   |   |      | R   |
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| <b><u>Prescribed density tests on filling:</u></b>  |   |      |     |
| 75  | In-situ dry density test.   | No   | 3   |
| <b><u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u></b>                                       |   |      |     |
| 76  | Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.                              | m2   | 450 |
| <b><u>150-175mm diameter bollards</u></b>   |   |      |     |
| 77  | 2100mm long tanalith treated gum pole planted 800mm deep including excavations, cartaways, concrete base etc. | No   | 67  |
| <b><u>THE FOLLOWING IN RETAINING WALLS, ETC.</u></b>  |   |      |     |
| <b><u>Excavation in earth not exceeding 2m deep</u></b>   |   |      |     |
| 78  | Trenches.   | m3   | 14  |
| <b><u>Risk of collapse of excavations:</u></b>  |   |      |     |
| 79  | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2   | 40  |
| <b><u>Keeping excavations free of water:</u></b>  |   |      |     |
| 80  | Keeping excavations free of all water other than subterranean water.  | Item |     |
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>  |   |      |     |
| 81  | Off site to a dumping site to be found by the Contractor.   | m3   | 14  |
| <b><u>Filling with approved clean, hard, dry decomposed dolerite filling supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density:</u></b> |   |      |     |
| 82  | Behind walls with selected backfilling supplied by the Contractor compacted to 98% Mod ASSHTO density         | m3   | 5   |
| Carried Forward   |   |      | R   |
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| Brought Forward  |   |    | R  |
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| <b><u>Compaction of surfaces</u></b>   |   |    |    |
| 83   | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 14 |
| <b><u>15Mpa/19mm unreinforced concrete</u></b>   |   |    |    |
| 84   | Surface blinding under footings and bases.  | m3 | 1  |
| <b><u>30Mpa/19mm reinforced concrete</u></b>   |   |    |    |
| 85   | Strip footings.   | m3 | 3  |
| 86   | Cavity walls.   | m3 | 2  |
| <b><u>Test blocks:</u></b>   |   |    |    |
| 87   | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No | 3  |
| <b><u>Fabric reinforcement:</u></b>  |   |    |    |
| 88   | REF. 395 fabric reinforcement in concrete infill, strip footings.   | m2 | 22 |
| <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b> |   |    |    |
| 89   | One brickwalls in foundations   | m2 | 10 |
| 90   | One brick walls   | m2 | 12 |
| <b><u>Brickwork reinforcement:</u></b>   |   |    |    |
| 91   | 230mm Wide reinforcement built in horizontally.   | m  | 85 |
| Carried Forward  |   |    | R  |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |   |    |    |

| Brought Forward |  |       |
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|                 | <u><b>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</b></u> |       |
| 92              | Extra over brickwork for face brickwork externally.  | m2 12 |
|                 | <u><b>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal Architect approved clay face brick size 222 x 106 x 73mm, pointed with recessed joints on all exposed faces:</b></u>   |       |
| 93              | 220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.  | m 20  |
|                 | <u><b>Openings in Walls etc.</b></u>   |       |
| 94              | Leave or form 32mm weephole through one brick wall   | No 30 |
|                 | <u><b>Membranes</b></u>  |       |
|                 | <u><b>Geofabric filter blanket wrapped around stone with 300mm side and 300mm end laps, including stitching.</b></u>   |       |
|                 | <u><b>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</b></u>  |       |
| 95              | 19mm Stone.  | m3 2  |
|                 | <u><b>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</b></u>  |       |
|                 | <u><b>STORMWATER APRONS</b></u>  |       |
|                 | <u><b>Excavation not exceeding 2m deep</b></u>   |       |
| 96              | Reducing levels and depositing excavated material in prescribed stock piles on site.   | m3 15 |

Carried Forward

Bill No. 1  
EXTERNAL WORKS  
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| Brought Forward  |  |    | R  |
|--|--|----|----|
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b> |  |    |    |
| 97   | Off site to a dumping site to be found by the Contractor.  | m3 | 15 |
| <b><u>Filling supplied by the contractor under floors, aprons, etc</u></b>   |  |    |    |
| 98   | G7 Base course material compacted to 98% Mod AASHTO density  | m3 | 4  |
| 99   | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.   | m3 | 4  |
| <b><u>Coarse river sand filling supplied by the contractor:</u></b>  |  |    |    |
| 100  | Under floors etc.  | m3 | 1  |
| <b><u>Compaction of surfaces:</u></b>  |  |    |    |
| 101  | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 28 |
| <b><u>Prescribed density tests on filling:</u></b>   |  |    |    |
| 102  | In-situ dry density test.  | No | 3  |
| <b><u>Reinforced 25Mpa/19mm Concrete:</u></b>  |  |    |    |
| 103  | Surface beds cast in panels on waterproofing.  | m3 | 3  |
| 104  | Edge thickening  | m3 | 2  |
| <b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>   |  |    |    |
| 105  | Surface beds, slabs, etc to falls and currents.  | m2 | 28 |
| Carried Forward  |  |    | R  |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |  |    |    |

| Brought Forward  |   |    | R  |
|--|---|----|----|
| <b><u>Test blocks:</u></b>   |   |    |    |
| 106  | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No | 6  |
| <b><u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u></b>                                 |   |    |    |
| 107  | 12mm Joints not exceeding 300mm high.   | m  | 18 |
| <b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u></b>                                    |   |    |    |
| 108  | 10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.                       | m  | 18 |
| <b><u>Fabric reinforcement:</u></b>  |   |    |    |
| 109  | REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.   | m2 | 28 |
| <b><u>Waterproofing under Surface beds</u></b>   |   |    |    |
| 110  | 350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured). | m2 | 28 |
| <b><u>STORMWATER CHANNELS</u></b>  |   |    |    |
| <b><u>Excavation not exceeding 2m deep</u></b>   |   |    |    |
| 111  | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 78 |
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b> |   |    |    |
| 112  | Off site to a dumping site to be found by the Contractor.   | m3 | 78 |
| <b><u>Filling supplied by the contractor under channels</u></b>  |   |    |    |
| 113  | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 25 |
| Carried Forward  |   |    | R  |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |   |    |    |

| Brought Forward  |   |    | R   |
|--|---|----|-----|
| 114  | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 25  |
|  | <b><u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u></b> |    |     |
| 115  | 700 x 80mm thick V' channel 150mm deep in centre laid in position in ground not exceeding 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.   | m  | 236 |
| 116  | Extra for 700mm angle   | No | 2   |
| 117  | Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.   | No | 2   |
|  | <b><u>Sundries:</u></b>   |    |     |
| 118  | Create earth berm for stormwater control with in situ material 1,5m wide at base x 500mm high   | m  | 50  |
|  | <b><u>THE FOLLOWING IN STORMWATER DISH DRAIN, ETC.</u></b>  |    |     |
|  | <b><u>Excavation not exceeding 2m deep</u></b>  |    |     |
| 119  | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 54  |
| Carried Forward  |   |    | R   |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ |   |    |     |



| Brought Forward  |  |    | R   |
|--|--|----|-----|
| <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b> |  |    |     |
| 120  | Off site to a dumping site to be found by the Contractor.  | m3 | 54  |
| <b><u>Filling supplied by the contractor under floors, aprons, channels etc</u></b>  |  |    |     |
| 121  | G7 Base course material compacted to 98% Mod AASHTO density  | m3 | 18  |
| 122  | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.   | m3 | 18  |
| <b><u>Coarse river sand filling supplied by the contractor:</u></b>  |  |    |     |
| 123  | Under floors etc.  | m3 | 6   |
| <b><u>Compaction of surfaces:</u></b>  |  |    |     |
| 124  | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 120 |
| <b><u>Prescribed density tests on filling:</u></b>   |  |    |     |
| 125  | In-situ dry density test.  | No | 3   |
| <b><u>Reinforced 25Mpa/19mm Concrete:</u></b>  |  |    |     |
| 126  | Surface beds cast in panels on waterproofing.  | m3 | 18  |
| <b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>   |  |    |     |
| 127  | Surface beds, slabs, etc to falls and currents.  | m2 | 120 |
| <b><u>Test blocks:</u></b>   |  |    |     |
| 128  | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).  | No | 6   |
| Carried Forward  |  |    | R   |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |  |    |     |

| Brought Forward  |  |    |     | R |
|--|--|----|-----|---|
|  | <b><u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u></b>                       |    |     |   |
| 129  | 12mm Joints not exceeding 300mm high.  | m  | 60  |   |
|  | <b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u></b>                          |    |     |   |
| 130  | 10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.                            | m  | 60  |   |
|  | <b><u>Fabric reinforcement:</u></b>  |    |     |   |
| 131  | REF. 617 fabric reinforcement in concrete surface beds, slabs, etc.  | m2 | 120 |   |
|  | <b><u>THE FOLLOWING IN SUB-SOIL DRAINAGE, ETC.</u></b>   |    |     |   |
|  | <b><u>Site Clearance, ETC</u></b>  |    |     |   |
| 132  | Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc                   | m2 | 60  |   |
|  | <b><u>Excavation in earth not exceeding 2m deep:</u></b>   |    |     |   |
| 133  | Trenches.  | m3 | 9   |   |
|  | <b><u>Extra over all excavations for carting away:</u></b>   |    |     |   |
| 134  | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.                      | m3 | 9   |   |
|  | <b><u>Risk of collapse of excavations:</u></b>   |    |     |   |
| 135  | Sides of trench and hole excavations not exceeding 1,5m deep.  | m2 | 36  |   |
|  | <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b> |    |     |   |
| 136  | Backfilling to trenches, holes, etc.   | m3 | 4   |   |
| Carried Forward  |  |    |     | R |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ |  |    |     |   |

| Brought Forward   |   |    |      | R |
|---|---|----|------|---|
| <b><u>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</u></b> |   |    |      |   |
| 137   | 19mm Stone.   | m3 | 3    |   |
| <b><u>Membrane</u></b>  |   |    |      |   |
| 138   | Geofabric filter blanket wrapped around stone with 150mm side and 300mm end laps, including stitching.  | m2 | 36   |   |
| <b><u>Keeping excavations free of water:</u></b>  |   |    |      |   |
| 139   | Keeping excavations free from mud and all water including subterranean sources.   |    | Item |   |
| <b><u>Compaction of surfaces</u></b>  |   |    |      |   |
| 140   | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 15   |   |
| <b><u>SOIL DRAINAGE</u></b>   |   |    |      |   |
| <b><u>110mm Diameter perforated uPVC pipe surrounded with 300 x 300mm section of 20mm stone wrapped in A3 geotextile material.</u></b>                                    |   |    |      |   |
| 141   | 110mm uPVC pipe.  | m  | 30   |   |
| <b><u>Extra for:</u></b>  |   |    |      |   |
| 142   | 110mm Tee.  | No | 3    |   |
| 143   | 110mm Y junction.   | No | 2    |   |
| <b><u>THE FOLLOWING IN SOAKAWAY</u></b>   |   |    |      |   |
| <b><u>Site Clearance, Etc</u></b>   |   |    |      |   |
| 144   | Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc  | m2 | 12   |   |
| Carried Forward   |   |    |      | R |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ  |   |    |      |   |

| Brought Forward   |  |      | R  |
|---|--|------|----|
| <b><u>Excavation in earth not exceeding 2m deep:</u></b>  |  |      |    |
| 145   | Holes  | m3   | 4  |
| <b><u>Extra over all excavations for carting away</u></b>   |  |      |    |
| 146   | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor within 5km from the building site | m3   | 4  |
| <b><u>Risk of collapse of excavations</u></b>   |  |      |    |
| 147   | Sides of trench and hole excavations exceeding 1,5m deep but not exceeding 3,0m deep   | m2   | 16 |
| <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</u></b> |  |      |    |
| 148   | Backfilling to holes   | m3   | 2  |
| <b><u>Earth filling with stone material supplied by the contractor:</u></b>   |  |      |    |
| 149   | Stone (>63mm).   | m3   | 2  |
| <b><u>Membranes</u></b>   |  |      |    |
| <b><u>BidimGeotextile or equal approved, lined on all sides including the top and bottom faces.</u></b>                             |  |      |    |
| <b><u>Keeping excavations free of water</u></b>   |  |      |    |
| 150   | Keeping excavations free of all water other than subterranean water  | Item |    |
| <b><u>THE FOLLOWING IN CULVERTS</u></b>   |  |      |    |
| <b><u>Class 50D concrete pipes:</u></b>   |  |      |    |
| 151   | 450mm Diameter Concrete pipe laid in trenches not exceeding 1m deep including excavation, backfill, bedding, cart away and compaction.           | m    | 10 |
| Carried Forward   |  |      | R  |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ  |  |      |    |

| Brought Forward   |   |    | R    |
|---|---|----|------|
| <b><u>Manholes:</u></b>   |   |    |      |
| 152   | Manhole size 600 x 600mm not exceeding 1m deep internally to invert level formed of hard burnt half brick sides in 1:3 cement mortar on and including 100mm thick mass concrete (25 MPa at 28 days in 19 mm stone) bottom reinforced with Y10 bars at 200c/c both directions and projecting 150mm beyond sides, cast on 50mm thick concrete Blinding (15Mpa) and mass concrete (15 MPa at 28 days in 12 mm stone) benching, rendered internally in 1:3 cement plaster with with C.I step irons staggered at 300c/c with 150mm thick grade 25 reinforced precast concrete manhole cover rebated for and fitted with and including cast iron double seal cover and frame type 14B in accordance with SABS 558, bedded in 1:3 cement mortar and sealed in to allow including all necessary vitrified clay channels and fittings, excavations, formwork, holes through sides for pipes, etc | No | 5    |
| <b><u>THE FOLLOWING IN HEADWALLS</u></b>                            |   |    |      |
| 153   | Excavation not exceeding 2m deep.   | m3 | 2    |
| 154   | Keeping excavations free from water   |    | Item |
| 155   | Carting away surplus excavated material   | m3 | 2    |
| 156   | 150mm layer of G7 material compacted to 95% MOD AASHTO under concrete slab.   | m3 | 1    |
| 157   | 150mm layer of G5 material compacted to 95% MOD AASHTO under concrete slab.   | m3 | 1    |
| 158   | 25Mpa/19mm Reinforced concrete in bottom slabs and footings.  | m3 | 1    |
| 159   | Formwork to edges, risers, ends and reveals not exceeding 300mm wide or high.   | m  | 19   |
| 160   | Mesh reinforcement Ref 193 in concrete bottom slab.   | m2 | 7    |
| 161   | One brick wall of 14 MPa NFX bricks.  | m2 | 4    |
| 162   | 230mm Wide reinforcement built in horizontally.   | m  | 17   |
| Carried Forward   |   |    | R    |
| Bill No. 1<br>EXTERNAL WORKS<br><b>MAGEMFANE EXTERNAL WORKS BOQ</b> |   |    |      |

| Brought Forward  |  |    | R  |
|--|--|----|----|
| 163  | Extra over brickwork for "Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints face brickwork externally. | m2 | 4  |
| 164  | 220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides.   | m  | 6  |
| 165  | Gabion mattress comprising of 20 to 30mm stones wrapped in A3 geotextile with voids filled with 1:3 cement/sand mortar.  | m2 | 5  |
| <b><u>THE FOLLOWING IN RAINWATER TANKS AND STANDS</u></b>  |  |    |    |
| <b><u>Excavation in earth not exceeding 2m deep:</u></b>   |  |    |    |
| 166  | Trenches.  | m3 | 20 |
| <b><u>Extra over all excavations for carting away:</u></b>   |  |    |    |
| 167  | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.  | m3 | 20 |
| <b><u>Risk of collapse of excavations:</u></b>   |  |    |    |
| 168  | Sides of trench and hole excavations not exceeding 1,5m deep.  | m2 | 7  |
| <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b> |  |    |    |
| 169  | Backfilling to trenches, holes, etc.   | m3 | 9  |
| <b><u>Filling supplied by the contractor under strip footing, floors etc.</u></b>  |  |    |    |
| 170  | G7 Base course material compacted to 98% Mod AASHTO density  | m3 | 7  |
| 171  | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.   | m3 | 7  |
| Carried Forward  |  |    | R  |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |  |    |    |

| Brought Forward  |   |    | R  |
|--|---|----|----|
| <b><u>Compaction of surfaces</u></b>   |   |    |    |
| 172  | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 20 |
| <b><u>25 Mpa/19mm Concrete</u></b>   |   |    |    |
| 173  | Strip footings.   | m3 | 6  |
| <b><u>25 MPa/19mm Concrete:</u></b>  |   |    |    |
| 174  | Tank concrete slab.   | m3 | 4  |
| <b><u>Test blocks:</u></b>   |   |    |    |
| 175  | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No | 6  |
| <b><u>Finishing top surfaces of concrete smooth with a steel trowel including adding additional cement while concrete is still green to attain a smooth, hard surface:</u></b> |   |    |    |
| 176  | Surface beds, slabs, etc.   | m2 | 20 |
| <b><u>Rough Formwork to Sides:</u></b>   |   |    |    |
| 177  | Edges, risers, ends and reveals not exceeding 300mm high.   | m  | 40 |
| <b><u>Allens Meshco Square Mesh Fabric reinforcement:</u></b>  |   |    |    |
| 178  | Type 617 fabric reinforcement in concrete slabs.  | m2 | 20 |
| <b><u>BRICKWORK IN FOUNDATIONS.</u></b>  |   |    |    |
| <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>   |   |    |    |
| 179  | One brick walls.  | m2 | 20 |
| <b><u>BRICKWORK IN SUPERSTRUCTURE</u></b>  |   |    |    |
| Carried Forward  |   |    | R  |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ   |   |    |    |

|     |   |    |     |   |
|-----|---|----|-----|---|
|     | <b>Brought Forward</b>  |    |     | R |
|     | <b><u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar (Cement to be 42.5N all-purpose cement):</u></b>   |    |     |   |
| 180 | One brick walls.  | m2 | 24  |   |
|     | <b><u>Brickwork reinforcement:</u></b>  |    |     |   |
| 181 | 230mm Wide reinforcement built in horizontally.   | m  | 111 |   |
| 182 | Ditto but in foundations.   | m  | 123 |   |
|     | <b><u>FACE BRICK</u></b>  |    |     |   |
|     | <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2(Cement to be 42.5N all-purpose cement):</u></b> |    |     |   |
| 183 | Extra over brickwork for face brickwork externally.   | m2 | 24  |   |
|     | <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u></b>  |    |     |   |
| 184 | 230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.   | m  | 40  |   |
|     | <b><u>Plastic water tanks etc:</u></b>  |    |     |   |
| 185 | 5000 Litre roto molded or equal approved plastic tank complete with lid, 15mm brass bibtap with handle suitable for locking and 4 No. galvanised stay wires 2.5m each long connected to tank, with and including 4 No. eye bolts cast into concrete.                                  | No | 5   |   |
| 186 | Hole top of tank for 100mm pipe.  | No | 5   |   |
|     | <b><u>THE FOLLOWING IN SECURITY FENCING, ETC</u></b>  |    |     |   |
|     | <b><u>SUPPLEMENTARY PREAMBLES</u></b>   |    |     |   |
|     | <b>Carried Forward</b>  |    |     | R |
|     | Bill No. 1<br>EXTERNAL WORKS<br><b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |    |     |   |



| Brought Forward   |   |    | R   |
|---|---|----|-----|
| <b><u>Corrosion protection and Rust control:</u></b>  |   |    |     |
| <b><u>Posts, mesh panels for the fence and gate material shall be hot-dip galvanised and then fusion-bond epoxy powder coated (or similar). Colour to Architect's approval.</u></b> |   |    |     |
| <b><u>Guarantees/Warranties:</u></b>  |   |    |     |
| <b><u>Ten (10) year anti-corrosion guarantee on all the fence and gate materials to be provided.</u></b>  |   |    |     |
| <b><u>Three (3) year anti-vandalism guarantee on all the fence and gate materials to be provided.</u></b>   |   |    |     |
| <b><u>Site clearance:</u></b>   |   |    |     |
| 187   | Clear site for a width 1000mm where new fencing is to be erected including removal of tree shrubs, etc not exceeding 200mm, grubbing up and roughly levelling.  | m  | 500 |
| <b><u>Fencing and posts:</u></b>  |   |    |     |
| 188   | 'Wirewall' ClearVU II or equal approved fencing to match existing, high density anti-climbing and anti-cut pressed wirewall securemax 3510 system comprising 3mm horizontal and 40mm vertical diameter finished with zincal and plascoat PPA 571 charcoal 3510mm wide panel with 75 x 12.5mm aperture size including reinforcing V-section ribs, bolted with vandal resistant bolts and clamping plates to 75 x 60 x 15 x 1.5mm Lip channel taper post 2,5m high at 3510mm centres with sealed end caps and 30 x 3mm x 250mm long angle section base anchors with posts bedded in 20 MPa/19mm concrete bases size 400 x 400 x 600mm deep. | m  | 350 |
| <b><u>Gates:</u></b>  |   |    |     |
| 189   | Security fence single gate, size 1 000 mm wide x 1 800 mm high.   | No | 1   |
| 190   | Two leafed vehicular swing gate. Size 5500mm x 1800mm high.   | No | 1   |
| Carried Forward   |   |    | R   |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ  |   |    |     |

| Brought Forward  |   |    | R   |
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| <b><u>Padlocks:</u></b>                                      |   |    |     |
| 191  | 63mm Brass five pin tumbler padlock with two keys.  | No | 1   |
| 192  | Locking chain 600mm long with 50mm links.   | No | 1   |
| <b><u>Fence toppings:</u></b>                                |   |    |     |
| 193  | 100mm high toughened steel spear spike shall be affixed to panel edge, internally at 150mm intervals using anti-vandal bolts. Spike finish shall be hot dipped galvanized and fusion-bond epoxy powder coated (or similar). | m  | 350 |
| <b><u>Contingency</u></b>                                    |   |    |     |
| 194  | Allow sum of R300 000.00 for contingencies  |    | SUM |
| Carried to Summary   |   |    | R   |
| Bill No. 1<br>EXTERNAL WORKS<br>MAGEMFANE EXTERNAL WORKS BOQ |   |    |     |

| Bill No | FINAL SUMMARY  | Page No |     | Amount |
|---------|--|---------|-----|--------|
|         | <b><u>SECTION No. 5</u></b>  |         |     |        |
| 1       | EXTERNAL WORKS   | 26      |     |        |
|         | <b><u>BILL No. 1</u></b>   |         |     |        |
|         | <b><u>EXTERNAL WORKS (PROVISIONAL)</u></b>   |         |     |        |
|         | <b><u>MODEL PREAMBLES</u></b>  |         |     |        |
|         | <p>The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates</p>                        |         |     |        |
|         | <b><u>THE FOLLOWING IN PLATFORMS, ETC.</u></b>   |         |     |        |
|         | <b><u>Site Clearance, ETC</u></b>  |         |     |        |
|         | <p>Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.</p> | m2      | 870 |        |
|         | <p>Stripping average 200mm thick layer of topsoil and stockpiling on site.</p>   | m2      | 700 |        |
|         | <b><u>Open face excavation not exceeding 2m deep:</u></b>  |         |     |        |
|         | <p>Excavate to cut in open face, not exceeding 2m deep to reduce levels and grade to fill and compact to 93% mod AASHTO density at optimum moisture content.</p>   | m3      | 60  |        |
|         | <b><u>Extra over all excavations for carting away:</u></b>   |         |     |        |
|         | <p>Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.</p>   | m3      | 135 |        |
|         | <b><u>Earth filling from excavated material</u></b>  |         |     |        |
|         | <p>Dig, load and remove filling selected from spoil heaps on site and deposit as filling in platforms including spreading and compacting to cambers and falls in layers not exceeding 150 mm thick to a minimum of 95% Modified AASHTO dry density.</p>    | m3      | 120 |        |
|         |  |         |     |        |
|         | Carried Forward  |         | R   |        |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |     |        |
|         |  |         |     |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | <b><u>Filling supplied by the contractor to form platforms</u></b>  |         |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 35   |        |
|         | <b><u>Surface Preparation:</u></b>  |         |        |
|         | Trim and level off surface of ground (excavated or filled under this Contract) including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 300mm to a density of at least 90% Mod. AASHTO maximum density, part to falls. | m2 641  |        |
|         | <b><u>Prescribed density tests on filling:</u></b>  |         |        |
|         | Modified AASHTO Density test.   | No 6    |        |
|         | <b><u>THE FOLLOWING IN WALKWAYS</u></b>   |         |        |
|         | <b><u>Excavation not exceeding 2m deep</u></b>  |         |        |
|         | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 195  |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>  |         |        |
|         | Off site to a dumping site to be found by the Contractor.   | m3 195  |        |
|         | <b><u>Filling supplied by the contractor under walkways</u></b>   |         |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 65   |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 65   |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |

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|            | <b>Brought Forward</b>   |            | R      |
|            | <b><u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u></b>   |            |        |
|            | Under floors,etc.  | m2 425     |        |
|            | <b><u>Prescribed density tests on filling:</u></b>   |            |        |
|            | In-situ dry density test.  | No 6       |        |
|            | <b><u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u></b>  |            |        |
|            | Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.   | m2 425     |        |
|            | <b><u>Concrete Paving Blocks</u></b>   |            |        |
|            | <b><u>Paving of 50mm thick 200x100mm 25MPa Bevel Bond paver blocks grey in colour in herringbone pattern on and including 20mm thick sand bed with dry filler sand swept and vibrated into joints all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I:</u></b> |            |        |
|            | Paving to walkway areas, etc laid to falls.  | m2 425     |        |
|            | <b><u>Kerbing</u></b>  |            |        |
|            | <b><u>Precast or in situ mass concrete (25 MPa - 19 mm stone) kerbs cast in convenient lengths with exposed faces finished smooth from the mould and all salient angles rounded, jointed and pointed in 1:3 cement mortar, including excavations, formwork, etc.</u></b>                           |            |        |
|            | Figure 8B (300 x 275 x 175mm) semi mountable kerb laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.   | m 120      |        |
|            | Ditto but circular on plan.  | m 18       |        |
|            | <b><u>THE FOLLOWING IN ONE BRICK WALL (GARDEN WALL)</u></b>  |            |        |
|            | <b>Carried Forward</b>   |            | R      |
|            | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |            |        |

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|         | <b>Brought Forward</b>  |    |         | R      |
|         | <b><u>Excavation in earth not exceeding 2m deep:</u></b>  |    |         |        |
|         | Trenches.   | m3 | 45      |        |
|         | <b><u>Extra over all excavations for carting away:</u></b>  |    |         |        |
|         | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.   | m3 | 25      |        |
|         | <b><u>Risk of collapse of excavations:</u></b>  |    |         |        |
|         | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2 | 150     |        |
|         | <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b>  |    |         |        |
|         | Backfilling to trenches, holes, etc.  | m3 | 22      |        |
|         | <b><u>Filling supplied by the contractor under strip footing</u></b>  |    |         |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 12      |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 12      |        |
|         | <b><u>Compaction of surfaces</u></b>  |    |         |        |
|         | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 350     |        |
|         | <b><u>25 Mpa/19mm Concrete</u></b>  |    |         |        |
|         | Strip footings.   | m3 | 15      |        |
|         | <b><u>Test blocks:</u></b>  |    |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No | 6       |        |
|         | <b>Carried Forward</b>  |    |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |    |         |        |

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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Reinforcement (Provisional)</u></b>  |         |        |
|         | High tensile steel reinforcement bars to structural concrete work.   | t 2,00  |        |
|         | <b><u>BRICKWORK IN FOUNDATIONS.</u></b>  |         |        |
|         | <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>   |         |        |
|         | One brick walls.   | m2 37   |        |
|         | <b><u>Brickwork reinforcement:</u></b>   |         |        |
|         | 230mm Wide reinforcement built in horizontally.  | m 220   |        |
|         | Ditto but in foundations.  | m 85    |        |
|         | <b><u>FACE BRICK</u></b>   |         |        |
|         | <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u></b> |         |        |
|         | One brickwall faced on both sides.   | m2 40   |        |
|         | <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u></b>   |         |        |
|         | 230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.  | m 95    |        |
|         | <b><u>STORMWATER CHANNELS</u></b>  |         |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

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|         | <b>Brought Forward</b>  |    |         | R |        |
|         | <b><u>Excavation not exceeding 2m deep</u></b>  |    |         |   |        |
|         | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 33      |   |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>  |    |         |   |        |
|         | Off site to a dumping site to be found by the Contractor.   | m3 | 33      |   |        |
|         | <b><u>Filling supplied by the contractor under channels</u></b>   |    |         |   |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 34      |   |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 34      |   |        |
|         | <b><u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u></b> |    |         |   |        |
|         | 700 x 80mm thick V' channel 150mm deep in centre laid in position in ground in 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.  | m  | 220     |   |        |
|         | Extra for 700mm angle   | No | 6       |   |        |
|         | Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones.   | No | 6       |   |        |
|         | <b>Carried Forward</b>  |    |         | R |        |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |    |         |   |        |



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|         | <b>Brought Forward</b>  |    |         | R |        |
|         | <b><u>THE FOLLOWING IN DISABLED ACCESS</u></b>  |    |         |   |        |
|         | <b><u>SCREEN WALL</u></b>   |    |         |   |        |
|         | <b><u>Excavation in earth not exceeding 2m deep:</u></b>  |    |         |   |        |
|         | Trenches.   | m3 | 15      |   |        |
|         | <b><u>Extra over all excavations for carting away:</u></b>  |    |         |   |        |
|         | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.   | m3 | 12      |   |        |
|         | <b><u>Risk of collapse of excavations:</u></b>  |    |         |   |        |
|         | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2 | 18      |   |        |
|         | <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b>  |    |         |   |        |
|         | Backfilling to trenches, holes, etc.  | m3 | 9       |   |        |
|         | <b><u>Filling supplied by the contractor under strip footing</u></b>  |    |         |   |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 13      |   |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 | 12      |   |        |
|         | <b><u>Compaction of surfaces</u></b>  |    |         |   |        |
|         | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 | 7       |   |        |
|         | <b><u>25 Mpa/19mm Concrete</u></b>  |    |         |   |        |
|         | Strip footings.   | m3 | 1       |   |        |
|         | <b>Carried Forward</b>  |    |         | R |        |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |    |         |   |        |

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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Test blocks:</u></b>   |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).  | No 6    |        |
|         | <b><u>Reinforcement (Provisional)</u></b>  |         |        |
|         | High tensile steel reinforcement bars to structural concrete work.   | t 20,00 |        |
|         | <b><u>BRICKWORK IN FOUNDATIONS.</u></b>  |         |        |
|         | <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>   |         |        |
|         | One brick walls.   | m2 65   |        |
|         | <b><u>BRICKWORK IN SUPERSTRUCTURE</u></b>  |         |        |
|         | <b><u>Brickwork reinforcement:</u></b>   |         |        |
|         | 230mm Wide reinforcement built in horizontally.  | m 55    |        |
|         | Ditto but in foundations.  | m 65    |        |
|         | <b><u>FACE BRICK</u></b>   |         |        |
|         | <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u></b> |         |        |
|         | One brickwall faced on both sides.   | m2 22   |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u></b> |         |        |
|         | 230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.  | m 55    |        |
|         | <b><u>ACCESS RAMPS</u></b>   |         |        |
|         | <b><u>Excavation not exceeding 2m deep</u></b>   |         |        |
|         | Reducing levels and depositing excavated material in prescribed stock piles on site.   | m3 9    |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>   |         |        |
|         | Off site to a dumping site to be found by the Contractor.  | m3 9    |        |
|         | <b><u>Filling supplied by the contractor under floors, aprons, etc</u></b>   |         |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density  | m3 4    |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.   | m3 4    |        |
|         | <b><u>Coarse river sand filling supplied by the contractor:</u></b>  |         |        |
|         | Under floors etc.  | m3 6    |        |
|         | <b><u>Compaction of surfaces:</u></b>  |         |        |
|         | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.                           | m2 80   |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | <b><u>Prescribed density tests on filling:</u></b>  |         |        |
|         | In-situ dry density test.   | No 2    |        |
|         | <b><u>Reinforced 25Mpa/19mm Concrete:</u></b>   |         |        |
|         | Ramps, Landings, etc.   | m3 22   |        |
|         | <b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>  |         |        |
|         | Surface beds, slabs, etc to falls and currents.   | m2 80   |        |
|         | <b><u>Test blocks:</u></b>  |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No 6    |        |
|         | <b><u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u></b>                  |         |        |
|         | 12mm Joints not exceeding 300mm high.   | m 65    |        |
|         | <b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u></b>                     |         |        |
|         | 10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.                       | m 65    |        |
|         | <b><u>Fabric reinforcement:</u></b>   |         |        |
|         | REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.   | m2 85   |        |
|         | <b><u>Waterproofing under Surface beds</u></b>  |         |        |
|         | 350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured). | m2 85   |        |
|         | <b><u>THE FOLLOWING IN ACCESS DRIVEWAY, ETC.</u></b>  |         |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |

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|         | <b>Brought Forward</b>  |    |         | R |        |
|         | <b><u>Excavation not exceeding 2m deep</u></b>  |    |         |   |        |
|         | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 | 190     |   |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>                  |    |         |   |        |
|         | Off site to a dumping site to be found by the Contractor.   | m3 | 190     |   |        |
|         | <b><u>Filling supplied by the contractor under driveways</u></b>  |    |         |   |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 | 90      |   |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.        | m3 | 90      |   |        |
|         | <b><u>Rip and Re - compact insitu material on site compacted to 93% Mod. AASHTO density:</u></b>  |    |         |   |        |
|         | Under floors,etc.   | m2 | 450     |   |        |
|         | <b><u>Prescribed density tests on filling:</u></b>  |    |         |   |        |
|         | In-situ dry density test.   | No | 3       |   |        |
|         | <b><u>Approved brand of anti-termite soil poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:</u></b> |    |         |   |        |
|         | Treat filling under paving with 'Chlordane Heptachlor Aldrin' or equal approved.  | m2 | 450     |   |        |
|         | <b><u>150-175mm diameter bollards</u></b>   |    |         |   |        |
|         | 2100mm long tanalith treated gum pole planted 800mm deep including excavations, cartaways, concrete base etc.   | No | 67      |   |        |
|         | <b><u>THE FOLLOWING IN RETAINING WALLS, ETC.</u></b>  |    |         |   |        |
|         | <b>Carried Forward</b>  |    |         | R |        |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |    |         |   |        |

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|         | Brought Forward   |      |         | R      |
|         | <b><u>Excavation in earth not exceeding 2m deep</u></b>   |      |         |        |
|         | Trenches.   | m3   | 14      |        |
|         | <b><u>Risk of collapse of excavations:</u></b>  |      |         |        |
|         | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2   | 40      |        |
|         | <b><u>Keeping excavations free of water:</u></b>  |      |         |        |
|         | Keeping excavations free of all water other than subterranean water.  | Item |         |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>  |      |         |        |
|         | Off site to a dumping site to be found by the Contractor.   | m3   | 14      |        |
|         | <b><u>Filling with approved clean, hard, dry decomposed dolerite filling supplied and carted onto site by the Contractor, compacted to a density of at least 95% Mod. AASHTO maximum density:</u></b>         |      |         |        |
|         | Behind walls with selected backfilling supplied by the Contractor compacted to 98% Mod ASSHTO density   | m3   | 5       |        |
|         | <b><u>Compaction of surfaces</u></b>  |      |         |        |
|         | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2   | 14      |        |
|         | <b><u>15Mpa/19mm unreinforced concrete</u></b>  |      |         |        |
|         | Surface blinding under footings and bases.  | m3   | 1       |        |
|         | <b><u>30Mpa/19mm reinforced concrete</u></b>  |      |         |        |
|         | Strip footings.   | m3   | 3       |        |
|         | Cavity walls.   | m3   | 2       |        |
|         | Carried Forward   |      |         | R      |
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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Test blocks:</u></b>   |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).  | No 3    |        |
|         | <b><u>Fabric reinforcement:</u></b>  |         |        |
|         | REF. 395 fabric reinforcement in concrete infill, strip footings.  | m2 22   |        |
|         | <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>   |         |        |
|         | One brickwalls in foundations  | m2 10   |        |
|         | One brick walls  | m2 12   |        |
|         | <b><u>Brickwork reinforcement:</u></b>   |         |        |
|         | 230mm Wide reinforcement built in horizontally.  | m 85    |        |
|         | <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2 (Cement to be 42.5N all-purpose cement):</u></b> |         |        |
|         | Extra over brickwork for face brickwork externally.  | m2 12   |        |
|         | <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal Architect approved clay face brick size 222 x 106 x 73mm, pointed with recessed joints on all exposed faces:</u></b>   |         |        |
|         | 220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.  | m 20    |        |
|         | <b><u>Openings in Walls etc.</u></b>   |         |        |
|         | Leave or form 32mm weephole through one brick wall   | No 30   |        |
|         | <b><u>Membranes</u></b>  |         |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

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|------------|--|------------|--------|
|            | Brought Forward  |            | R      |
|            | <u>Geofabric filter blanket wrapped around stone with 300mm side and 300mm end laps, including stitching.</u><br>[m2 24 65.00 1 560.00  14/12/2022 12:30:44        |            |        |
|            | <u>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</u> |            |        |
|            | 19mm Stone.  | m3         | 2      |
|            | <u>THE FOLLOWING IN STORMWATER DRAINAGE, APRONS ETC.</u>   |            |        |
|            | <u>STORMWATER APRONS</u>   |            |        |
|            | <u>Excavation not exceeding 2m deep</u>  |            |        |
|            | Reducing levels and depositing excavated material in prescribed stock piles on site.   | m3         | 15     |
|            | <u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u>                            |            |        |
|            | Off site to a dumping site to be found by the Contractor.  | m3         | 15     |
|            | <u>Filling supplied by the contractor under floors, aprons, etc</u>  |            |        |
|            | G7 Base course material compacted to 98% Mod AASHTO density  | m3         | 4      |
|            | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.           | m3         | 4      |
|            | <u>Coarse river sand filling supplied by the contractor:</u>   |            |        |
|            | Under floors etc.  | m3         | 1      |
|            | Carried Forward  |            | R      |
|            | MAGEMFANE EXTERNAL WORKS BOQ   |            |        |



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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Compaction of surfaces:</u></b>  |         |        |
|         | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 28   |        |
|         | <b><u>Prescribed density tests on filling:</u></b>   |         |        |
|         | In-situ dry density test.  | No 3    |        |
|         | <b><u>Reinforced 25Mpa/19mm Concrete:</u></b>  |         |        |
|         | Surface beds cast in panels on waterproofing.  | m3 3    |        |
|         | Edge thickening  | m3 2    |        |
|         | <b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>   |         |        |
|         | Surface beds, slabs, etc to falls and currents.  | m2 28   |        |
|         | <b><u>Test blocks:</u></b>   |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).  | No 6    |        |
|         | <b><u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u></b>   |         |        |
|         | 12mm Joints not exceeding 300mm high.  | m 18    |        |
|         | <b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u></b>  |         |        |
|         | 10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.  | m 18    |        |
|         | <b><u>Fabric reinforcement:</u></b>  |         |        |
|         | REF. 395 fabric reinforcement in concrete surface beds, slabs, etc.  | m2 28   |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | <b><u>Waterproofing under Surface beds</u></b>  |         |        |
|         | 350 Micron USB orange polyethylene dampproof membrane in accordance with SABS 952 Type C laid on sand bed (elsewhere measured).   | m2 28   |        |
|         | <b><u>STORMWATER CHANNELS</u></b>   |         |        |
|         | <b><u>Excavation not exceeding 2m deep</u></b>  |         |        |
|         | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 78   |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>  |         |        |
|         | Off site to a dumping site to be found by the Contractor.   | m3 78   |        |
|         | <b><u>Filling supplied by the contractor under channels</u></b>   |         |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 25   |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 25   |        |
|         | <b><u>Cast in-situ Ref 395 mesh reinforced concrete (25MPa) open stormwater channels having V-shaped waterway formed in top, finished smooth on all exposed surfaces in 3:1 cement plaster trowelled smooth and with angles rounded, cast in suitable lengths not exceeding 2m, including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in 3:1 cement mortar. Concrete apron to be tinted, colour to be specified by the Engineer.</u></b> |         |        |
|         | 700 x 80mm thick V' channel 150mm deep in centre laid in position in ground not exceeding 2000mm sections including all formwork, reinforcement, expansion joints, smooth finishing to top of concrete surface etc.   | m 236   |        |
|         | Extra for 700mm angle   | No 2    |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | Extra for forming 200mm thick 700mm wide spreader with 200mm high edges fanning out to 1 960mm width at furthest end with hard burnt bricks pitching cast in ass diffusers including working off concrete to a smooth finish and draining onto natural ground with 150 - 200mm diameter loose stones. | No 2    |        |
|         | <b><u>Sundries:</u></b>   |         |        |
|         | Create earth berm for stormwater control with in situ material 1,5m wide at base x 500mm high   | m 50    |        |
|         | <b><u>THE FOLLOWING IN STORMWATER DISH DRAIN, ETC.</u></b>  |         |        |
|         | <b><u>Excavation not exceeding 2m deep</u></b>  |         |        |
|         | Reducing levels and depositing excavated material in prescribed stock piles on site.  | m3 54   |        |
|         | <b><u>Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk):</u></b>  |         |        |
|         | Off site to a dumping site to be found by the Contractor.   | m3 54   |        |
|         | <b><u>Filling supplied by the contractor under floors, aprons, channels etc</u></b>   |         |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density   | m3 18   |        |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 18   |        |
|         | <b><u>Coarse river sand filling supplied by the contractor:</u></b>   |         |        |
|         | Under floors etc.   | m3 6    |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |

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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Compaction of surfaces:</u></b>  |         |        |
|         | Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 120  |        |
|         | <b><u>Prescribed density tests on filling:</u></b>   |         |        |
|         | In-situ dry density test.  | No 3    |        |
|         | <b><u>Reinforced 25Mpa/19mm Concrete:</u></b>  |         |        |
|         | Surface beds cast in panels on waterproofing.  | m3 18   |        |
|         | <b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>   |         |        |
|         | Surface beds, slabs, etc to falls and currents.  | m2 120  |        |
|         | <b><u>Test blocks:</u></b>   |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).  | No 6    |        |
|         | <b><u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u></b>   |         |        |
|         | 12mm Joints not exceeding 300mm high.  | m 60    |        |
|         | <b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u></b>  |         |        |
|         | 10 x 12mm In movement joints in floors or walls including raking out expansion joint filler as necessary.  | m 60    |        |
|         | <b><u>Fabric reinforcement:</u></b>  |         |        |
|         | REF. 617 fabric reinforcement in concrete surface beds, slabs, etc.  | m2 120  |        |
|         | <b><u>THE FOLLOWING IN SUB-SOIL DRAINAGE, ETC.</u></b>   |         |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

| Bill<br>No | FINAL SUMMARY   | Page<br>No | Amount |
|------------|---|------------|--------|
|            | Brought Forward   |            | R      |
|            | <b><u>Site Clearance, ETC</u></b>   |            |        |
|            | Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc  | m2         | 60     |
|            | <b><u>Excavation in earth not exceeding 2m deep:</u></b>  |            |        |
|            | Trenches.   | m3         | 9      |
|            | <b><u>Extra over all excavations for carting away:</u></b>  |            |        |
|            | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.   | m3         | 9      |
|            | <b><u>Risk of collapse of excavations:</u></b>  |            |        |
|            | Sides of trench and hole excavations not exceeding 1,5m deep.   | m2         | 36     |
|            | <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b>                                      |            |        |
|            | Backfilling to trenches, holes, etc.  | m3         | 4      |
|            | <b><u>Earth filling 300 x 300mm section of 19mm thick stone material surrounding 110mm uPVC pipe, supplied by the contractor compacted to 98% Mod AASHTO density:</u></b> |            |        |
|            | 19mm Stone.   | m3         | 3      |
|            | <b><u>Membrane</u></b>  |            |        |
|            | Geofabric filter blanket wrapped around stone with 150mm side and 300mm end laps, including stitching.  | m2         | 36     |
|            | <b><u>Keeping excavations free of water:</u></b>  |            |        |
|            | Keeping excavations free from mud and all water including subterranean sources.   | Item       |        |
|            | Carried Forward   |            | R      |
|            | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |            |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | <b><u>Compaction of surfaces</u></b>  |         |        |
|         | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 15   |        |
|         | <b><u>SOIL DRAINAGE</u></b>   |         |        |
|         | <b><u>110mm Diameter perforated uPVC pipe surrounded with 300 x 300mm section of 20mm stone wrapped in A3 geotextile material.</u></b>  |         |        |
|         | 110mm uPVC pipe.  | m 30    |        |
|         | <b><u>Extra for:</u></b>  |         |        |
|         | 110mm Tee.  | No 3    |        |
|         | 110mm Y junction.   | No 2    |        |
|         | <b><u>THE FOLLOWING IN SOAKAWAY</u></b>   |         |        |
|         | <b><u>Site Clearance, Etc</u></b>   |         |        |
|         | Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc  | m2 12   |        |
|         | <b><u>Excavation in earth not exceeding 2m deep:</u></b>  |         |        |
|         | Holes   | m3 4    |        |
|         | <b><u>Extra over all excavations for carting away</u></b>   |         |        |
|         | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor within 5km from the building site  | m3 4    |        |
|         | <b><u>Risk of collapse of excavations</u></b>   |         |        |
|         | Sides of trench and hole excavations exceeding 1,5m deep but not exceeding 3,0m deep  | m2 16   |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |

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|         | <b>Brought Forward</b>   |    |         | R |        |
|         | <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</u></b>    |    |         |   |        |
|         | Backfilling to holes   | m3 | 2       |   |        |
|         | <b><u>Earth filling with stone material supplied by the contractor:</u></b>  |    |         |   |        |
|         | Stone (>63mm).   | m3 | 2       |   |        |
|         | <b><u>Membranes</u></b>  |    |         |   |        |
|         | <b><u>BidimGeotextile or equal approved, lined on all sides including the top and bottom faces.</u></b>                                |    |         |   |        |
|         | <b><u>Keeping excavations free of water</u></b>  |    |         |   |        |
|         | Keeping excavations free of all water other than subterranean water  |    | Item    |   |        |
|         | <b><u>THE FOLLOWING IN CULVERTS</u></b>  |    |         |   |        |
|         | <b><u>Class 50D concrete pipes:</u></b>  |    |         |   |        |
|         | 450mm Diameter Concrete pipe laid in trenches not exceeding 1m deep including excavation, backfill, bedding, cart away and compaction. | m  | 10      |   |        |
|         | <b>Carried Forward</b>   |    |         | R |        |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |    |         |   |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | <b><u>Manholes:</u></b>   |         |        |
|         | Manhole size 600 x 600mm not exceeding 1m deep internally to invert level formed of hard burnt half brick sides in 1:3 cement mortar on and including 100mm thick mass concrete (25 MPa at 28 days in 19 mm stone) bottom reinforced with Y10 bars at 200c/c both directions and projecting 150mm beyond sides, cast on 50mm thick concrete Blinding (15Mpa) and mass concrete (15 MPa at 28 days in 12 mm stone) benching, rendered internally in 1:3 cement plaster with with C.I step irons staggered at 300c/c with 150mm thick grade 25 reinforced precast concrete manhole cover rebated for and fitted with and including cast iron double seal cover and frame type 14B in accordance with SABS 558, bedded in 1:3 cement mortar and sealed in to allow including all necessary vitrified clay channels and fittings, excavations, formwork, holes through sides for pipes, etc | No 5    |        |
|         | <b><u>THE FOLLOWING IN HEADWALLS</u></b>  |         |        |
|         | Excavation not exceeding 2m deep.   | m3 2    |        |
|         | Keeping excavations free from water   | Item    |        |
|         | Carting away surplus excavated material   | m3 2    |        |
|         | 150mm layer of G7 material compacted to 95% MOD AASHTO under concrete slab.   | m3 1    |        |
|         | 150mm layer of G5 material compacted to 95% MOD AASHTO under concrete slab.   | m3 1    |        |
|         | 25Mpa/19mm Reinforced concrete in bottom slabs and footings.  | m3 1    |        |
|         | Formwork to edges, risers, ends and reveals not exceeding 300mm wide or high.   | m 19    |        |
|         | Mesh reinforcement Ref 193 in concrete bottom slab.   | m2 7    |        |
|         | One brick wall of 14 MPa NFX bricks.  | m2 4    |        |
|         | 230mm Wide reinforcement built in horizontally.   | m 17    |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |



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|         | <b>Brought Forward</b>   |         | R      |
|         | Extra over brickwork for "Rustgold FBS/Qunu Travertine" clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints face brickwork externally. | m2 4    |        |
|         | 220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on both sides.   | m 6     |        |
|         | Gabion mattress comprising of 20 to 30mm stones wrapped in A3 geotextile with voids filled with 1:3 cement/sand mortar.  | m2 5    |        |
|         | <b><u>THE FOLLOWING IN RAINWATER TANKS AND STANDS</u></b>  |         |        |
|         | <b><u>Excavation in earth not exceeding 2m deep:</u></b>   |         |        |
|         | Trenches.  | m3 20   |        |
|         | <b><u>Extra over all excavations for carting away:</u></b>   |         |        |
|         | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor.  | m3 20   |        |
|         | <b><u>Risk of collapse of excavations:</u></b>   |         |        |
|         | Sides of trench and hole excavations not exceeding 1,5m deep.  | m2 7    |        |
|         | <b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% MOD AASHTO density:</u></b>   |         |        |
|         | Backfilling to trenches, holes, etc.   | m3 9    |        |
|         | <b><u>Filling supplied by the contractor under strip footing, floors etc.</u></b>  |         |        |
|         | G7 Base course material compacted to 98% Mod AASHTO density  | m3 7    |        |
|         | <b>Carried Forward</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |

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|         | <b>Brought Forward</b>  |         | R      |
|         | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density.  | m3 7    |        |
|         | <b><u>Compaction of surfaces</u></b>  |         |        |
|         | Compaction of ground surface under floors, etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density. | m2 20   |        |
|         | <b><u>25 Mpa/19mm Concrete</u></b>  |         |        |
|         | Strip footings.   | m3 6    |        |
|         | <b><u>25 MPa/19mm Concrete:</u></b>   |         |        |
|         | Tank concrete slab.   | m3 4    |        |
|         | <b><u>Test blocks:</u></b>  |         |        |
|         | Making and testing of 150x150x150mm concrete strength test cubes (Provisional).   | No 6    |        |
|         | <b><u>Finishing top surfaces of concrete smooth with a steel trowel including adding additional cement while concrete is still green to attain a smooth, hard surface:</u></b>                                |         |        |
|         | Surface beds, slabs, etc.   | m2 20   |        |
|         | <b><u>Rough Formwork to Sides:</u></b>  |         |        |
|         | Edges, risers, ends and reveals not exceeding 300mm high.   | m 40    |        |
|         | <b><u>Allens Meshco Square Mesh Fabric reinforcement:</u></b>   |         |        |
|         | Type 617 fabric reinforcement in concrete slabs.  | m2 20   |        |
|         | <b><u>BRICKWORK IN FOUNDATIONS.</u></b>   |         |        |
|         | <b>Carried Forward</b>  |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |         |        |

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|         | <b>Brought Forward</b>  |    |         | R |        |
|         | <b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar (Cement to be 42.5N all-purpose cement):</u></b>  |    |         |   |        |
|         | One brick walls.  | m2 | 20      |   |        |
|         | <b><u>BRICKWORK IN SUPERSTRUCTURE</u></b>   |    |         |   |        |
|         | <b><u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar (Cement to be 42.5N all-purpose cement):</u></b>   |    |         |   |        |
|         | One brick walls.  | m2 | 24      |   |        |
|         | <b><u>Brickwork reinforcement:</u></b>  |    |         |   |        |
|         | 230mm Wide reinforcement built in horizontally.   | m  | 111     |   |        |
|         | Ditto but in foundations.   | m  | 123     |   |        |
|         | <b><u>FACE BRICK</u></b>  |    |         |   |        |
|         | <b><u>Rustgold FBS/Qunu Travertine clay face brick or equal approved, size 222 x 106 x 73mm, bedded and jointed in Class II mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zones 1-2(Cement to be 42.5N all-purpose cement):</u></b> |    |         |   |        |
|         | Extra over brickwork for face brickwork externally.   | m2 | 24      |   |        |
|         | <b><u>Brick-on-edge header course copings, sills, etc, of "Rustgold FBS/Qunu Travertine" or equal approved face bricks pointed with recessed joints on all exposed faces, 220mm wide sill set sloping and slightly projecting:</u></b>  |    |         |   |        |
|         | 230mm wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.   | m  | 40      |   |        |
|         | <b>Carried Forward</b>  |    |         | R |        |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>   |    |         |   |        |

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|            | <b>Brought Forward</b>   |            | R      |
|            | <b><u>Plastic water tanks etc:</u></b>   |            |        |
|            | 5000 Litre roto molded or equal approved plastic tank complete with lid, 15mm brass bibtap with handle suitable for locking and 4 No. galvanised stay wires 2.5m each long connected to tank, with and including 4 No. eye bolts cast into concrete. | No 5       |        |
|            | Hole top of tank for 100mm pipe.   | No 5       |        |
|            | <b><u>THE FOLLOWING IN SECURITY FENCING, ETC</u></b>   |            |        |
|            | <b><u>SUPPLEMENTARY PREAMBLES</u></b>  |            |        |
|            | <b><u>Corrosion protection and Rust control:</u></b>   |            |        |
|            | <b><u>Posts, mesh panels for the fence and gate material shall be hot-dip galvanised and then fusion-bond epoxy powder coated (or similar). Colour to Architect's approval.</u></b>  |            |        |
|            | <b><u>Guarantees/Warranties:</u></b>   |            |        |
|            | <b><u>Ten (10) year anti-corrosion guarantee on all the fence and gate materials to be provided.</u></b>   |            |        |
|            | <b><u>Three (3) year anti-vandalism guarantee on all the fence and gate materials to be provided.</u></b>  |            |        |
|            | <b><u>Site clearance:</u></b>  |            |        |
|            | Clear site for a width 1000mm where new fencing is to be erected including removal of tree shrubs, etc not exceeding 200mm, grubbing up and roughly levelling.   | m 500      |        |
|            | <b>Carried Forward</b>   |            | R      |
|            | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |            |        |

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|         | <b>Brought Forward</b>   |         | R      |
|         | <b><u>Fencing and posts:</u></b>   |         |        |
|         | 'Wirewall' ClearVU II or equal approved fencing to match existing, high density anti-climbing and anti-cut pressed wirewall securemax 3510 system comprising 3mm horizontal and 40mm vertical diameter finished with zinal and plascoat PPA 571 charcoal 3510mm wide panel with 75 x 12.5mm aperture size including reinforcing V-section ribs, bolted with vandal resistant bolts and clamping plates to 75 x 60 x 15 x 1.5mm Lip channel taper post 2,5m high at 3510mm centres with sealed end caps and 30 x 3mm x 250mm long angle section base anchors with posts bedded in 20 MPa/19mm concrete bases size 400 x 400 x 600mm deep. | m 350   |        |
|         | <b><u>Gates:</u></b>   |         |        |
|         | Security fence single gate, size 1 000 mm wide x 1 800 mm high.  | No 1    |        |
|         | Two leafed vehicular swing gate. Size 5500mm x 1800mm high.  | No 1    |        |
|         | <b><u>Padlocks:</u></b>  |         |        |
|         | 63mm Brass five pin tumbler padlock with two keys.   | No 1    |        |
|         | Locking chain 600mm long with 50mm links.  | No 1    |        |
|         | <b><u>Fence toppings:</u></b>  |         |        |
|         | 100mm high toughened steel spear spike shall be affixed to panel edge, internally at 150mm intervals using anti-vandal bolts. Spike finish shall be hot dipped galvanized and fusion-bond epoxy powder coated (or similar).  | m 350   |        |
|         | <b><u>Contingency</u></b>  |         |        |
|         | Allow sum of R300 000.00 for contingencies   |         | SUM    |
|         | <b>Carried to Form of Tender</b>   |         | R      |
|         | <b>MAGEMFANE EXTERNAL WORKS BOQ</b>  |         |        |