

SECTION A - A  
SCALE 1 : 25

| BENDING SCHEDULE TO SABS 82    |             |                 |                   |               |      |   |   |   |     |
|--------------------------------|-------------|-----------------|-------------------|---------------|------|---|---|---|-----|
| TOTAL<br>No. OFF               | No. IN EACH | BAR DIA<br>MARK | CUTTING<br>LENGTH | SHAPE<br>CODE | A    | B | C | D | E/R |
| GROUND BEAM NO. A1 - 2 NO. OFF |             |                 |                   |               |      |   |   |   |     |
| 24                             | 12          | Y12-01          | 7350              | 20            | 7350 |   |   |   |     |
| 160                            | 80          | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A2 - 2 NO. OFF |             |                 |                   |               |      |   |   |   |     |
| 16                             | 8           | Y12-02          | 5700              | 20            | 5700 |   |   |   |     |
| 60                             | 30          | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A3             |             |                 |                   |               |      |   |   |   |     |
| 3                              | 3           | Y12-03          | 4950              | 20            | 4950 |   |   |   |     |
| 12                             | 12          | Y10-200         | 800               | 35            | 500  |   |   |   |     |
| GROUND BEAM NO. A4 - 5 NO. OFF |             |                 |                   |               |      |   |   |   |     |
| 15                             | 3           | Y12-04          | 3650              | 20            | 3650 |   |   |   |     |
| 45                             | 9           | Y10-200         | 800               | 35            | 500  |   |   |   |     |
| GROUND BEAM NO. A5             |             |                 |                   |               |      |   |   |   |     |
| 3                              | 3           | Y12-05          | 5150              | 20            | 5150 |   |   |   |     |
| 13                             | 13          | Y10-200         | 800               | 35            | 500  |   |   |   |     |
| GROUND BEAM NO. A6             |             |                 |                   |               |      |   |   |   |     |
| 4                              | 4           | Y12-06          | 5800              | 20            | 5800 |   |   |   |     |
| 14                             | 14          | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A7             |             |                 |                   |               |      |   |   |   |     |
| 4                              | 4           | Y12-07          | 3000              | 20            | 3000 |   |   |   |     |
| 7                              | 7           | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A8             |             |                 |                   |               |      |   |   |   |     |
| 4                              | 4           | Y12-06          | 5800              | 20            | 5800 |   |   |   |     |
| 14                             | 14          | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A9             |             |                 |                   |               |      |   |   |   |     |
| 5                              | 5           | Y12-09          | 5200              | 20            | 5200 |   |   |   |     |
| 15                             | 15          | Y10-300         | 1100              | 35            | 800  |   |   |   |     |
| GROUND BEAM NO. A10            |             |                 |                   |               |      |   |   |   |     |
| 9                              | 9           | Y12-10          | 5700              | 20            | 5700 |   |   |   |     |
| 40                             | 40          | Y10-200         | 800               | 35            | 500  |   |   |   |     |
| GROUND BEAM NO. A11            |             |                 |                   |               |      |   |   |   |     |
| 5                              | 5           | Y12-11          | 2300              | 20            | 2300 |   |   |   |     |
| 7                              | 7           | Y10-300         | 1100              | 35            | 800  |   |   |   |     |
| GROUND BEAM NO. A12            |             |                 |                   |               |      |   |   |   |     |
| 5                              | 5           | Y12-12          | 4100              | 20            | 4100 |   |   |   |     |
| 8                              | 8           | Y10-300         | 1100              | 35            | 800  |   |   |   |     |
| GROUND BEAM NO. A13            |             |                 |                   |               |      |   |   |   |     |
| 4                              | 4           | Y12-13          | 4650              | 20            | 4650 |   |   |   |     |
| 11                             | 11          | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A14            |             |                 |                   |               |      |   |   |   |     |
| 3                              | 3           | Y12-14          | 2850              | 20            | 2850 |   |   |   |     |
| 7                              | 7           | Y10-200         | 800               | 35            | 500  |   |   |   |     |
| GROUND BEAM NO. A15            |             |                 |                   |               |      |   |   |   |     |
| 3                              | 3           | Y12-15          | 3050              | 20            | 3050 |   |   |   |     |
| 6                              | 6           | Y10-200         | 800               | 35            | 500  |   |   |   |     |
| GROUND BEAM NO. A16            |             |                 |                   |               |      |   |   |   |     |
| 4                              | 4           | Y12-16          | 4750              | 20            | 4750 |   |   |   |     |
| 8                              | 8           | Y10-100         | 950               | 35            | 650  |   |   |   |     |
| GROUND BEAM NO. A17            |             |                 |                   |               |      |   |   |   |     |
| 3                              | 3           | Y12-17          | 4700              | 20            | 4700 |   |   |   |     |
| 13                             | 13          | Y10-200         | 800               | 35            | 500  |   |   |   |     |

1. The implementing agent will give direction, otherwise the pit will be sealed or un-sealed depending on the outcome of the ground water level monitoring.
2. The contractor will be responsible for excavation for the pit, whatever the ground conditions, feasible cost.
3. The contractor will be responsible for the whole substructure.
4. Section 4-a shows the arrangement for an un-sealed pit, for sealed pits, the contractor will be responsible for the whole substructure.
5. The bottom of the pit will include a 500mm thick concrete base to prevent any further settlement.
6. Central dividing walls must be constructed with fully mortared joints for the full depth.
7. The outer walls of the pit must have a minimum thickness of 200mm
8. The pit must be 1 course of bricks above the natural ground level.
9. The slabs will be designed and approved by thempleringham
10. The rain water harvesting tank must be equipped with a float valve to prevent the tank from overflowing and a main water supply within the school yard, where it is available.
11. Taps in all wash hand basins must be charcoal pop Pro.
12. The contractor will be responsible for the whole substructure, which must be able to close at minimum 10kpa pressure.
13. Vent pipes to secured to the walls of the substructure, with a 150mm hole in the 100mm g vent pipe (black u/uv faced) with a 310mm hose barbs
14. 100mm g vent pipe used at vent end Charlock VAP 200 toilet pipes to be complete with seal lid, Grade R: Char Barbs
15. (frop (kiddie pan)
16. pipes from sinks & urinal outlets to soakaway pit (500mm pipe)
17. pipes from gutters to fill tank (75mm pipe)
18. pipe from tank to 150mm polypropylene 3 fittings to 150mm polypropylene to be done internally.

## A. FOUNDATIONS

1. Foundation to be 700mm wide x 250 thick, 25 mpa concrete strip footing.

2. They are to sit on firm compacted ground (excavated trenches) with a minimum of 700mm below ground level and to engineers approval upon inspection.

## B. BACKFILL

1. Fill & imported fill to be approved clean earth, well watered & rammed down and not allowed to form upon inspection, thoroughly consolidated to a density of 95% std. ashto.

## C. FLOORS

1. All to Engineers detail and specification.

## D. WALLS

1. All walls are to comply with Part K of the National Building Regulations.

2. COROBORCK COMMONS to be used where to receive plaster, COROBORCK ENGINEERING Bricks to be used below ground level in foundation walls.

3. Bricks to be every 3rd course up to wall height 7' high (height measured at all corners).

4. External face of brickwork to have a lead to drainage of waterproofed. Galvanised strip wire wall ties (7 per square metre - lead staggered).

5. External face of inner skin to be painted bitumen paint, 375 micron embedded damp-proof membrane stepped below all window cills.

6. Where plaster is required internally (13 - 16mm thick) ratio must be 1:5 cement sand mix. Beam filling with ratio of plaster to foams.

7. Concrete walls to be provided in accordance with engineers specifications & must be sealed with 12mm deep polysulphide sealant with backing strip and impregnated solution.

8. All internal brickwork to have brickface at every third course of brickwork.

9. All founding and / or retaining wall to Structural Engineers walls.

10. P.C. Inlets to be installed over all new openings where walls are to be plastered and finish.

11. All Coroborck on edge to be strictly to eng. detail.

## E. ROOF

1. Scaffolding 10m span, A2152Nucal Roofdeck profile roof rafters, fixed to intermediate steel purlins at 1600mm centres and to ridge and eaves purlins at 1350mm centres, 1200mm deep x 63mm thick. Roof drilling to be done at 1st & 2nd cut nail at intermediate purlins and every crest at eaves purlins in all accordance with the manufacturer's recommendations.

2. The sheathing shall be Roofdek trapezoidal type profile as manufactured by Saffinia Roofdek.

3. The profile shall be roll-formed with 5 trapezoidal ribs at 191mm centres with a net cover of 760mm.

4. The rib height shall be 28mm and shall be fixed in accordance with the manufacturers instructions.

5. Widthes exceeding the recommended minimum pitch for Saffinia of 15mm is 10° and for slopes less than 15m is 7.5°.

6. Roof sheathing can be used on longer lengths requiring special installations up to 13.2m. Longer lengths require special transport arrangements.

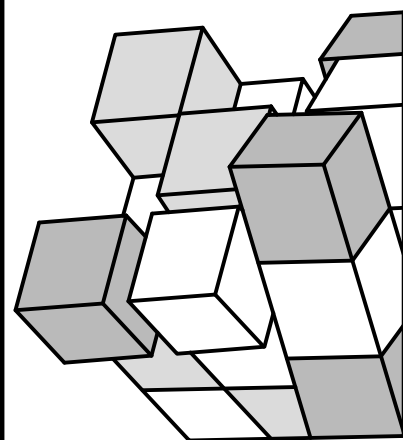
7. Part of the sheathing can be used on both downwind loading and negative suction loading caused by wind. The engineer should be consulted to calculate the load (N/m<sup>2</sup>) for the particular application.

| CONCRETE MIX RATIO'S |          |           |            |
|----------------------|----------|-----------|------------|
| STRENGTH             | UNIT.CEM | UNIT SAND | UNIT STONE |
| 10MPa                | 2        | 3.5       | 3.5        |
| 15MPa                | 2        | 3         | 3          |
| 25MPa                | 2        | 2.5       | 2.5        |
| 30MPa                | 2        | 2         | 2          |

|  |          |              |       |
|--|----------|--------------|-------|
|  | DATE     | REVISION     | DRAWN |
|  | 10/07/13 | FOR APPROVAL | S.Z   |
|  | 11/02/14 | FOR APPROVAL | S.Z   |
|  | 28/02/14 | FOR APPROVAL | S.Z   |

CLIENT  
DEPARTMENT  
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PROVINCE OF KWAZULU-NATAL

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|                    |             |           |          |   |
|--------------------|-------------|-----------|----------|---|
|                    | NAME        | SIGNATURE | DATE     | SHEET SIZE  |
| DESIGNED           | NSH SINDANE |           | 13/09/22 | A0  |
| DRAWN              | NSH SINDANE |           | 13/09/22 | SCALE   |
| VERIFIED           |             |           |          | 1:2000 1:2500 1:3000 1:4000   |
| VALIDATED          |             |           |          | STATUS LEGEND<br>I = Information<br>T = Transfer<br>C = Construction<br>A = |
| IMPLEMENTING AGENT |             |           |          |   |



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**PROJECT:**  
DBSA KWAZULU NATAL SCHOOLS  
SCHOOL IMPROVEMENT PROJECT

**TITLE:**  
HLUTHANKUNGU PRIMARY SCHOOL

|  |  |
|--|--|
| EIMS NO: 500137910<br><b>DESCRIPTION:</b><br>ADMIN BLOCK FOUNDATION AND STRUCTURAL DETAILS |  |
| 19/04/01 GL 1526   |  |