

UPSCALING BASIC SANITATION FOR THE URBAN POOR

STRUCTURAL AND ENGINEERING DRAWINGS

Funding Agency:



Employer:

Wote Water and Sanitation Company Ltd

Apr 2024

SETTING OUT POINTS

VERTICAL FLOW CONSTRUCTED WETLAND

- POINT 1 - 351656.25, 9795452.23
- POINT 2 - 351662.05, 9795457.41
- POINT 3 - 351651.71, 9795469.00
- POINT 4 - 351645.33, 9795463.38

ANAEROBIC REACTOR

- POINT 1 - 351655.81, 9795468.84
- POINT 2 - 351669.14, 9795480.62
- POINT 3 - 351673.31, 9795475.94
- POINT 4 - 351659.98, 9795464.12

RECEIVING BAY BALANCING TANK

- POINT 1 - 351663.93, 9795492.47
- POINT 2 - 351671.83, 9795499.44
- POINT 3 - 351692.28, 9795476.44
- POINT 4 - 351684.35, 9795469.39

OPERATORS STORE

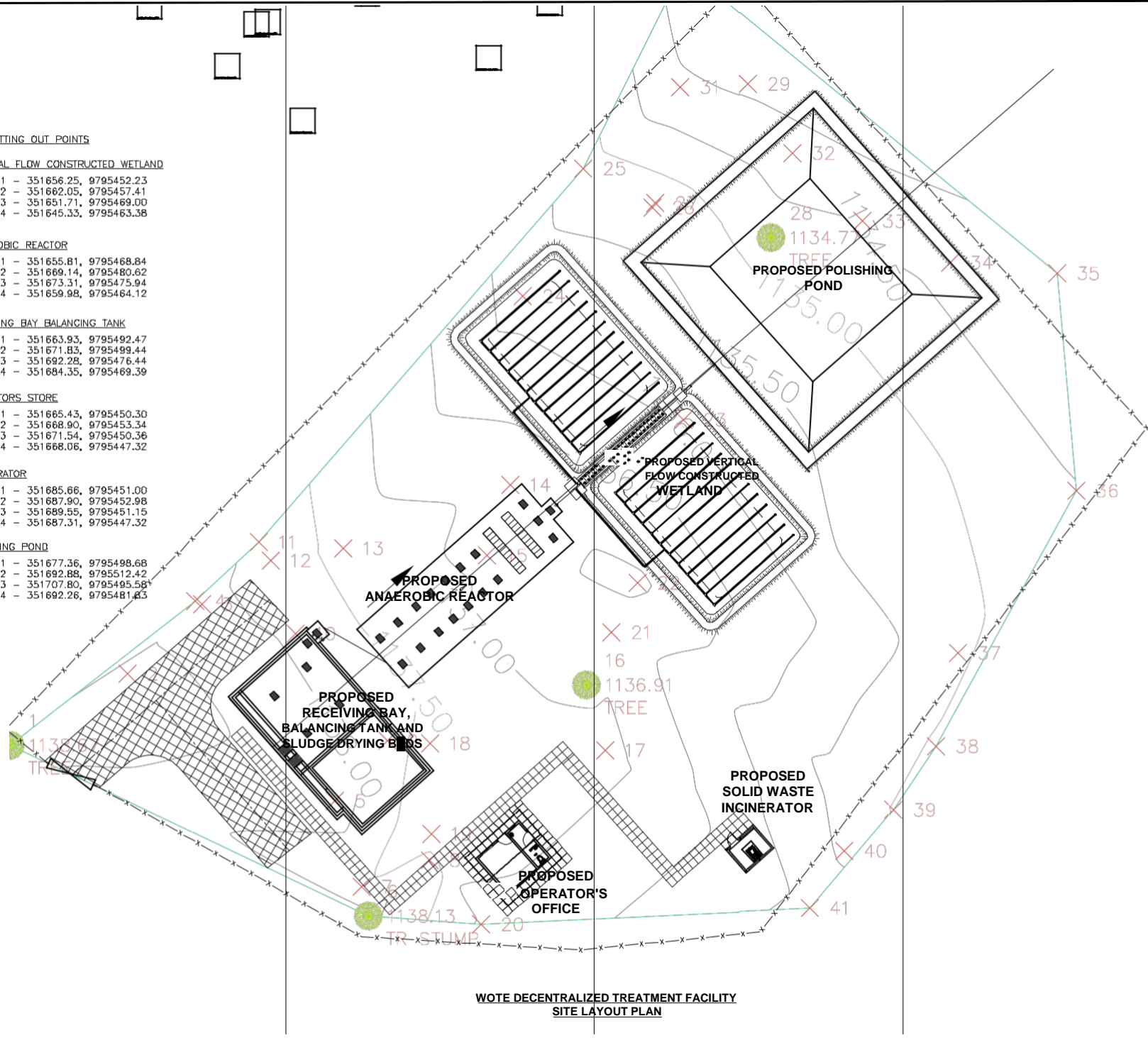
- POINT 1 - 351665.43, 9795450.30
- POINT 2 - 351668.90, 9795453.34
- POINT 3 - 351671.54, 9795450.36
- POINT 4 - 351668.06, 9795447.32

INCINERATOR

- POINT 1 - 351685.66, 9795451.00
- POINT 2 - 351687.90, 9795452.98
- POINT 3 - 351689.55, 9795451.15
- POINT 4 - 351687.31, 9795447.32

POLISHING POND

- POINT 1 - 351677.36, 9795498.68
- POINT 2 - 351692.88, 9795512.42
- POINT 3 - 351707.80, 9795495.58
- POINT 4 - 351692.26, 9795481.63



**WOTE DECENTRALIZED TREATMENT FACILITY
SITE LAYOUT PLAN**

NOTES:
 1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 200 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY

LEGEND:

- ROAD (TARMAC)
- ROAD / TRACK (EARTH / MURRAM)
- FENCE / HEDGE
- CONTOURS
- ELECTRIC POST
- CULVERT
- GATE
- TEMPORARY STRUCTURES
- BUILDINGS
- KATHA / KARRA ROAD BEACON
- TP10
- TRAVEL POINT # No.
- TRIAL HOLE
- HORIZONTAL BEND (H) OR VERTICAL BEND (V) WITH ANGLE INDICATED
- PIPER / STREAM
- V.J.
- GV
- SECTIONAL VALVE # No.
- WO-01
- WASHOUT VALVE # No.
- SAV-01
- AIR VALVE # No.
- WM
- PROPOSED MASONRY CHAMBER
- PROPOSED VALVE BOX
- PIPELINE, GRADIENT WITH SLOPE, DIRECTION (SLOPE MIN. OR 1 IN n)

ISSUED FOR CONSTRUCTION

NO.	BY	DATE	APPROVED

FINANCING: WaterFund
 WATER SECTOR TRUST FUND
 1ST FLOOR, CIC PLAZA, MARA ROAD,
 UPPER HILL,
 NAIROBI, KENYA
 PO BOX 49699 - 00100,
 NAIROBI, KENYA

EMPLOYER:
 THE MANAGING DIRECTOR
 WOTE WATER AND SANITATION COMPANY
 P.O. BOX 132 - 90300
 MAKUENI, KENYA

PROJECT TITLE:
 PROPOSED DTF CONSTRUCTION SITE

DRAWING TITLE:
 WORKING DRAWING
 PROPOSED LAYOUT PLAN OF
 WOTE DTF
 SHEET 1

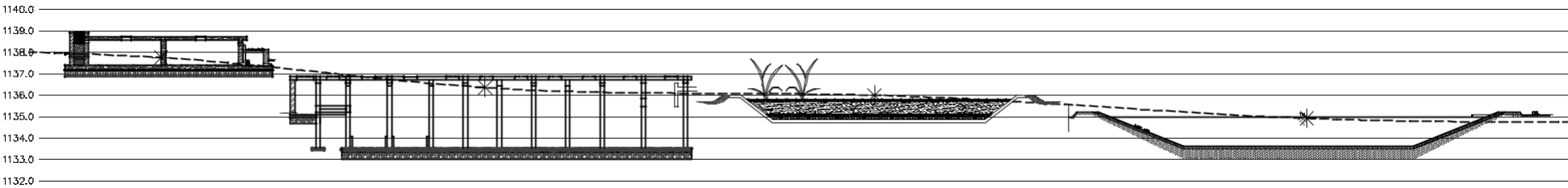
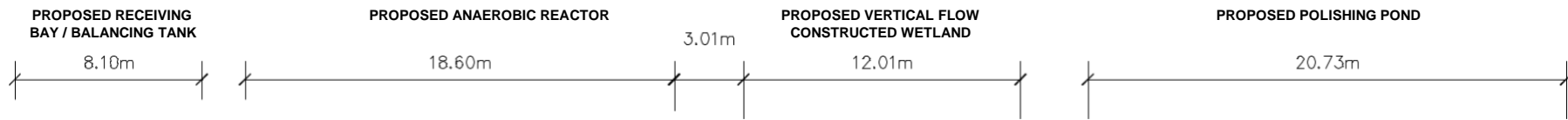
Designed and drawn by: PK	Surveyed by: B.G.M
Checked by: PK	Approved by: TN
Scale: H: 1:4000, V: 1:400	Date: APR 2024
DRG No.: WOTE/OP/001	

NOTES:

- 1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
- 2. GRID VALUES ARE IN METERS AT 200 METER INTERVALS
- 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY

LEGEND:

	ROAD (TAR/MADE)
	ROAD / TRACK (EARTH / MURRAM)
	FENCE / HEDGE
	CONTOURS
	ELECTRIC POST
	CULVERT
	GATE
	TEMPORARY STRUCTURES
	BUILDINGS
	Kehaha / KεPORA ROAD BEACON
	PROPOSED TREATED WATER GRAVITY MAIN
	TRAVERSE POINT # No.
	TRIAL HOLE
	HORIZONTAL BEND (H) OR VERTICAL BEND (V) WITH ANGLE INDICATED
	RIVER/STREAM
	VIKING JOHNSON
	GATE VALVE
	SECTIONAL VALVE # No.
	WASHOUT VALVE # No.
	AIR VALVE # No.
	WATER METER
	PROPOSED MASONRY CHAMBER
	PROPOSED VALVE BOX
	PIPELINE GRADIENT WITH SLOPE DIRECTION (SLOPE MIN. OR 1 IN 1)



**SECTION THROUGH THE DECENTRALIZED TREATMENT FACILITY
TREATMENT PROCESS**

ISSUED FOR CONSTRUCTION

BY	DATE	APPROVED
CHECKED		
BY		
CHECKED		
BY		
CHECKED		
BY		
CHECKED		

CLIENT: THE MANAGING DIRECTOR
WOTE WATER AND
SANITATION COMPANY
P.O BOX 132 - 80300,
MAKUENI, KENYA

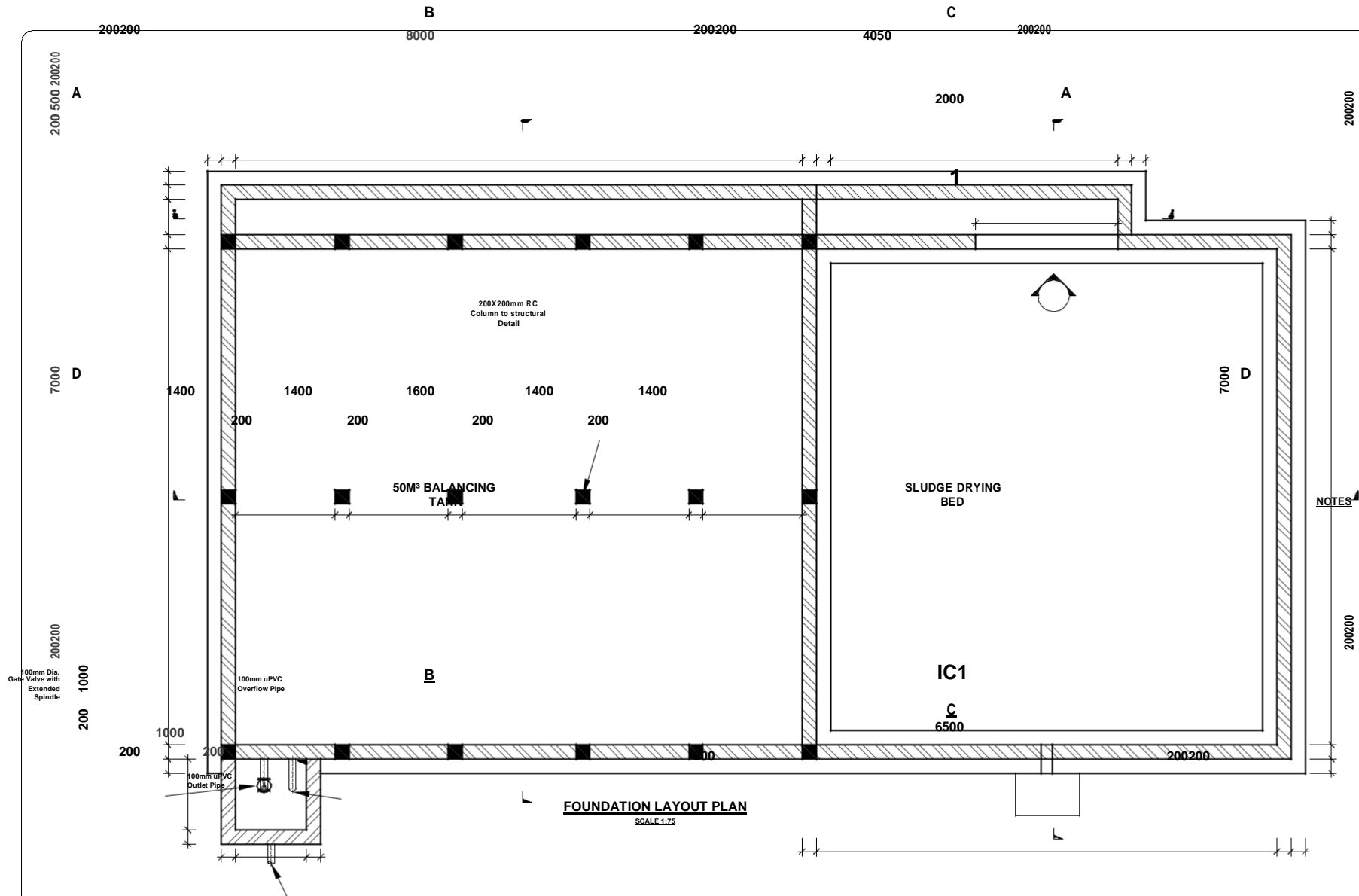
ENGINEER:

PROJECT TITLE:
PROPOSED DTF CONSTRUCTION SITE

DRAWING TITLE:
TOPOGRAPHICAL MAP OF THE
PROPOSED DTF SITE

SHEET 1

Designed and drawn by: PK Surveyed by: E.G.M
Checked by: PK Approved by: TN



FOUNDATION LAYOUT PLAN
SCALE 1:75

50M³ BALANCING TANK

NOTES

1. CONCRETE:
 - (a) CEMENT TO BE ORDINARY PORTLAND CEMENT
 - (b) CONCRETE AGGREGATE TO COMPLY WITH B.S.
 - (c) WATER IN CONCRETE MIXES TO B.S. 3148
 - (d) CONCRETE CLASSES TO BE AS FOLLOWS-
MASS CONCRETE FILL AND BUILDING MIX, CLASS 25/20
REINFORCED CONCRETE, CLASS 25/20
 - (e) MINIMUM COVER TO ALL REINFORCEMENT TO BE AS SPECIFIED BELOW FOR BUILDINGS
 - MEMBERS OF BUILDINGS:
 - SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm
 - (f) WALLS/COLUMNS SHOULD BE POURED, IF PRACTICABLE, IN ONE RISE AS FAR AS POSSIBLE AFTER CONCRETING (2 TO 3 DAYS)
2. REINFORCEMENT:
 - (a) REINFORCEMENT TO BE HIGH YIELD SQUARE BARS
 - (b) BENDING DIMENSIONS TO B.S. 4486
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BLOCKS, CHAIRS AND TYING WIRE
 - (d) EXAMPLE: 18 T12 - 07 - 150 SIGNIFIES 18 12mm DIA. BARS IDENTIFICATION MARK 07 AT 150 TO CENTRE SPACING
3. JOINTS:
 - (a) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWING
 - BEFORE PLACING FRESH CONCRETE THE OLD CONCRETE SHOULD BE THOROUGHLY WETTED AND THE SURFACE SHALL BE THOROUGHLY WETTED AND SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINT IS IN A SATURATED BUT SURFACE DRY CONDITION
 - (b) ALL WALL/COLUMN/BASE CONNECTIONS SHOULD BE PROTECTED UNLESS OTHERWISE SPECIFIED
 - (c) THE uPVC WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - (d) JOINT FILLER TO B.S. 5292 AND TO BE APPROVED BY THE ENGINEER
4. ABBREVIATIONS:

T - TOP	B - BOTTOM
N.F. - NORTH FACE	F.F. - FAR FACE
E.F. - EACH FACE	E.W. - EACH
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT REPORT.

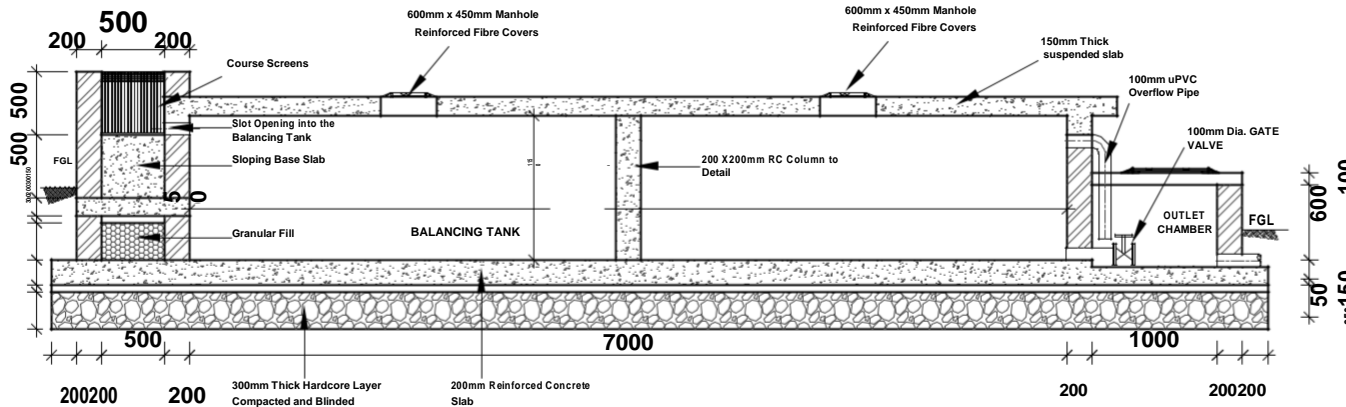
Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

Funding Agency:

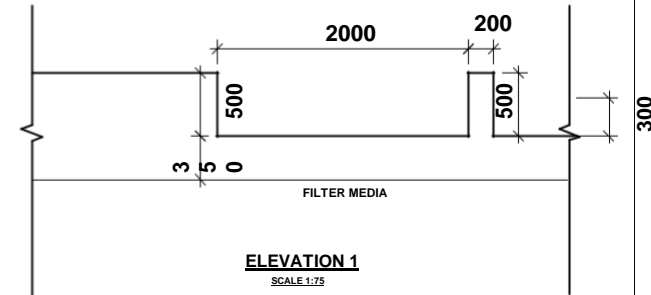
Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

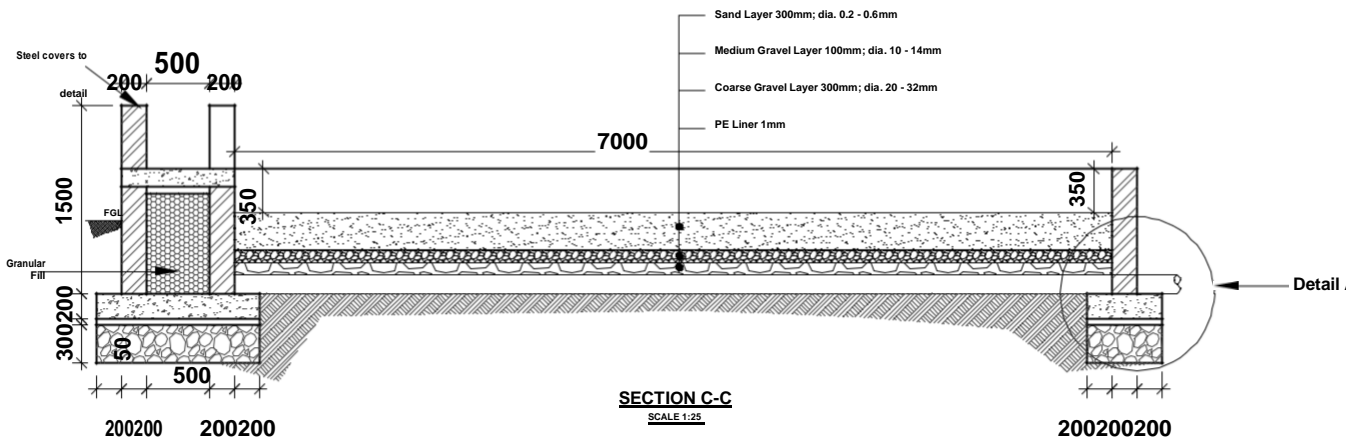
Index-No.: **Description:**



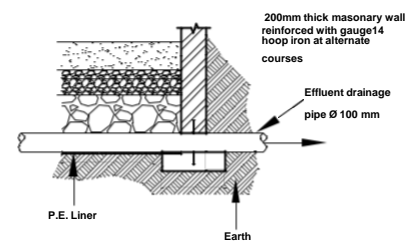
SECTION B-B
SCALE 1:25



ELEVATION 1
SCALE 1:75

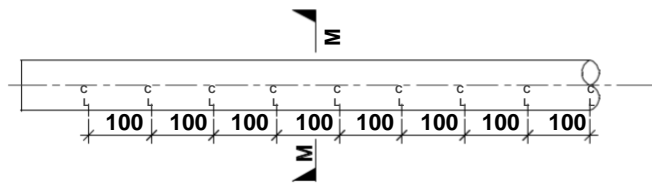


SECTION C-C
SCALE 1:25



COUPLING DETAIL A
SCALE 1:50

- NOTES**
- CONCRETE:**
 - (a) CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - (b) CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
 - (c) WATER IN CONCRETE MIXES TO B.S. 3148
 - (d) CONCRETE CLASSES TO BE AS FOLLOWS:
 - BASE CONCRETE FILL AND BUILDING MIX, CLASS 15/40
 - REINFORCED CONCRETE, CLASS 25/20
 - (e) MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
 - MEMBERS OF BUILDINGS:
 - SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm
 - (f) WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
 - REINFORCEMENT:**
 - (a) REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4449
 - (b) BENDING DIMENSIONS TO B.S. 4486
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER BLOCKS, CHAIRS AND TYING WIRE
 - (d) EXAMPLE: # 12 - 82 = 150 SQUARES 18 NO. HIGH TENSILE 10mm DIA. BARS IDENTIFICATION MARK (I) AT 150mm CENTRE TO CENTRE SPACING
 - JOINTS:**
 - (a) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE ROUGHENED AND ALL LANTHAE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATURATED BUT SURFACE DRY CONDITION
 - (b) ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm RIGID UNLESS OTHERWISE SPECIFIED
 - (c) THE JUNE WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - (d) JOINT FILLER TO B.S. S292 AND TO BE APPROVED BY THE ENGINEER
 - ABBREVIATIONS:**
 - T - TOP
 - B - BOTTOM
 - R.F. - REAR FACE
 - F.F. - FAR FACE
 - E.F. - EACH FACE
 - E.W. - EACH WAY
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. RBSP/01



100mm Dia. UNDERDRAIN PIPES
SCALE 1:100



SECTION M-M
SCALE 1:10

50M³ BALANCING TANK

Project Title:
Up-scaling Basic Sanitation for Urban Poor
(UBSUP)



Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

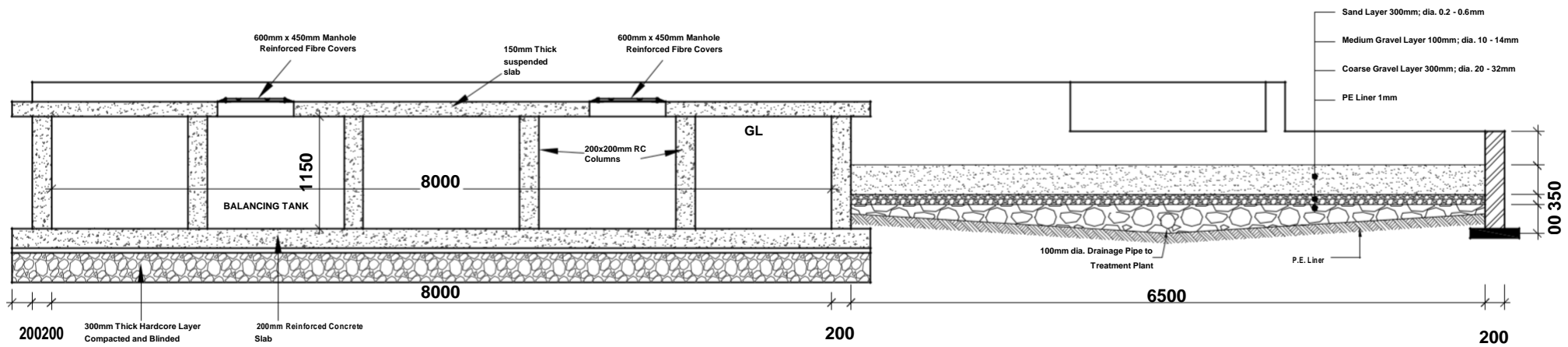
Notes:
See Above

Index-No.: Description:

Date:

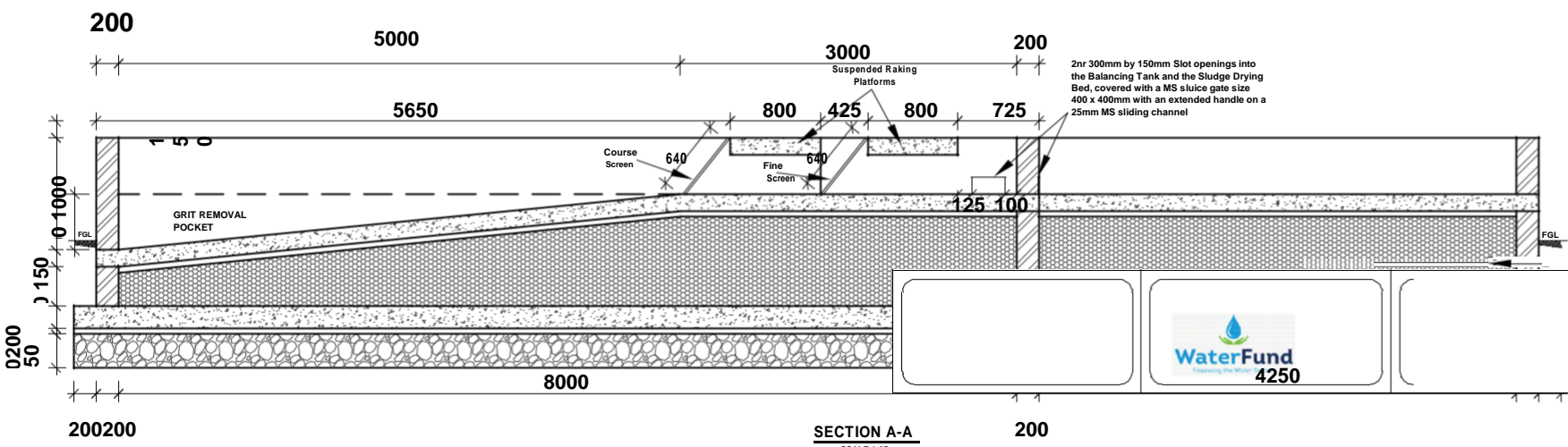
Scale: As shown

page:



SECTION D-D

SCALE 1:25



SECTION A-A

SCALE 1:25

50m³ BALANCING TANK

- NOTES**
- CONCRETE:
 - CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - CONCRETE AGGREGATE TO COMPLY WITH B.S. 682
 - WATER IN CONCRETE MIXES TO B.S. 3148
 - CONCRETE CLASSES TO BE AS FOLLOWS:-
 MASS CONCRETE FILL AND BLINDING MIX, CLASS 15/40
 REINFORCED CONCRETE, CLASS 25/20
 - MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
 MEMBERS OF BUILDINGS:
 - SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm
 - WALLS/COLUMNS SHOULD BE POLURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
 - REINFORCEMENT:
 - REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4466
 - BENDING DIMENSIONS TO B.S. 4466
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER BLOCKS, CHAIRS AND TYING WIRE.

- UNLESS OTHERWISE SPECIFIED
- THE JWC WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - JOINT FILLER TO B.S. 5292 AND TO BE APPROVED BY THE ENGINEER
- 4 ABBREVIATIONS:**
- | | |
|------------------|-----------------|
| T - TOP | B - BOTTOM |
| N.F. - NEAR FACE | F.F. - FAR FACE |
| E.F. - EACH FACE | E.W. - EACH WAY |
- 5 THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No. RB/01

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

Funding Agency:

Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

200200

Index-No.: Description:

Date:

S
c
a
l
e:
A
s
h
o
w
n

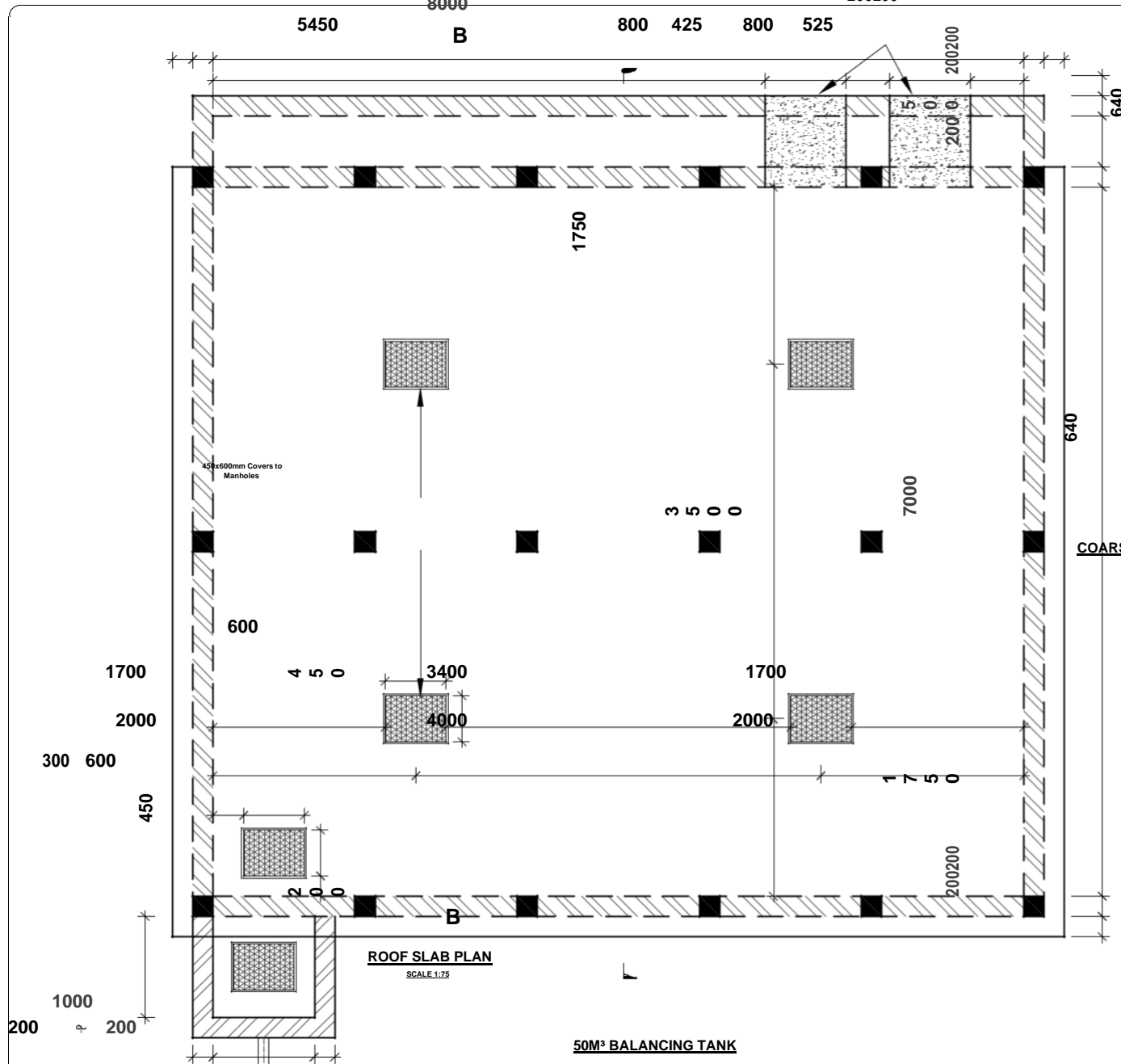
D
a
t
e:
:

200200

Suspended Raking Platforms

200200

500



ROOF SLAB PLAN
SCALE 1:75

50M³ BALANCING TANK

COARSE SCREEN DETAILS
SCALE 1:25

500

COARSE SCREEN DETAILS
SCALE 1:25

NOTES

- 1 CONCRETE:
 - (a) CEMENT TO BE ORDINARY
 - (b) CONCRETE AGGREGATE TO BE
 - (c) WATER IN CONCRETE MIX
 - (d) CONCRETE CLASS TO BE
 - (e) MINIMUM COVER TO ALL REINFORCEMENT AS SPECIFIED BELOW FOR MEMBERS OF BUILDINGS:
 - SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & TD
 - (f) WALLS/COLUMNS SHOULD BE CONCRETED (2 TO 3 DAY
- 2 REINFORCEMENT:
 - (a) REINFORCEMENT TO BE H
 - (b) BENDING DIMENSIONS TO
 - (c) THE CONTRACTOR'S RES
 - (d) EXAMPLE: 18 T12 @ 97
- 3 JOINTS:
 - (a) THE POSITION AND NUMB
 - (b) BEFORE PLACING FRESH
 - (c) THE SURFACE SHALL BE
 - (d) ALL WALL/COLUMN JOINTS
- 4 ASSUMPTIONS:
 - T - TOP
 - N.F. - NEAR FACE
 - E.F. - EACH FACE

50mm WIDE x5mm THICK GMS PLATE FIXED TO RC WALLS WITH FISH TAIL LUGS (BOTTOM PLATE SIMILAR)

GMS FINE SCREEN MADE OF 5mm x 50mm FLAT BARS AT 30mm c/c SPACING

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

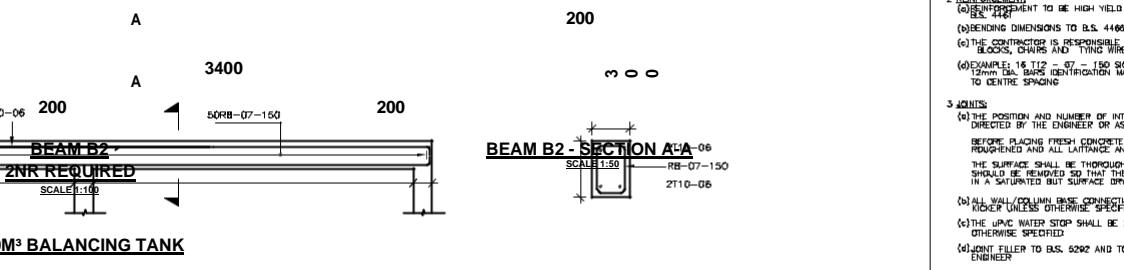
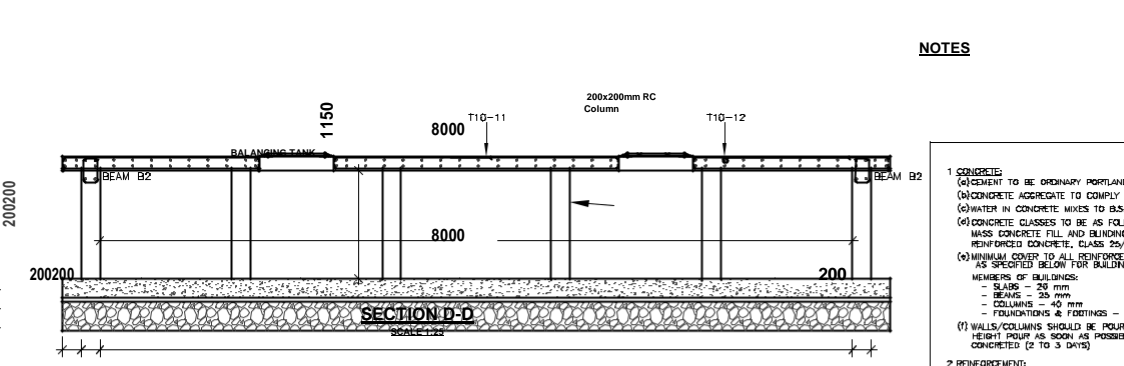
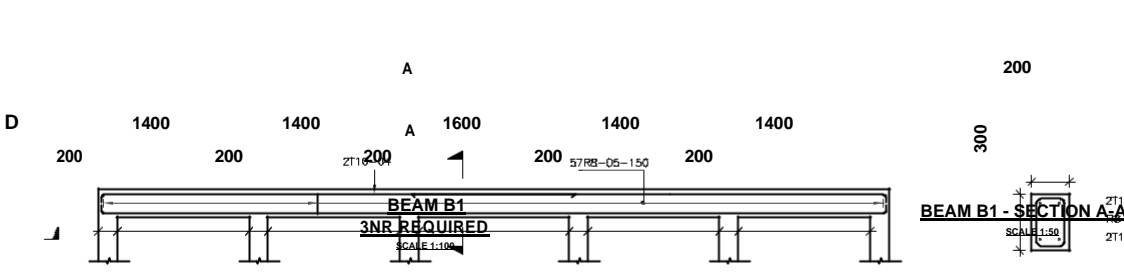
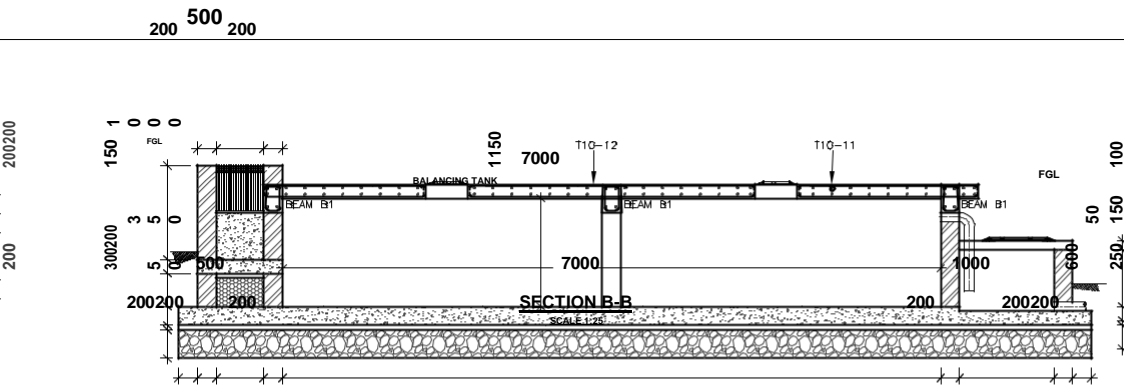
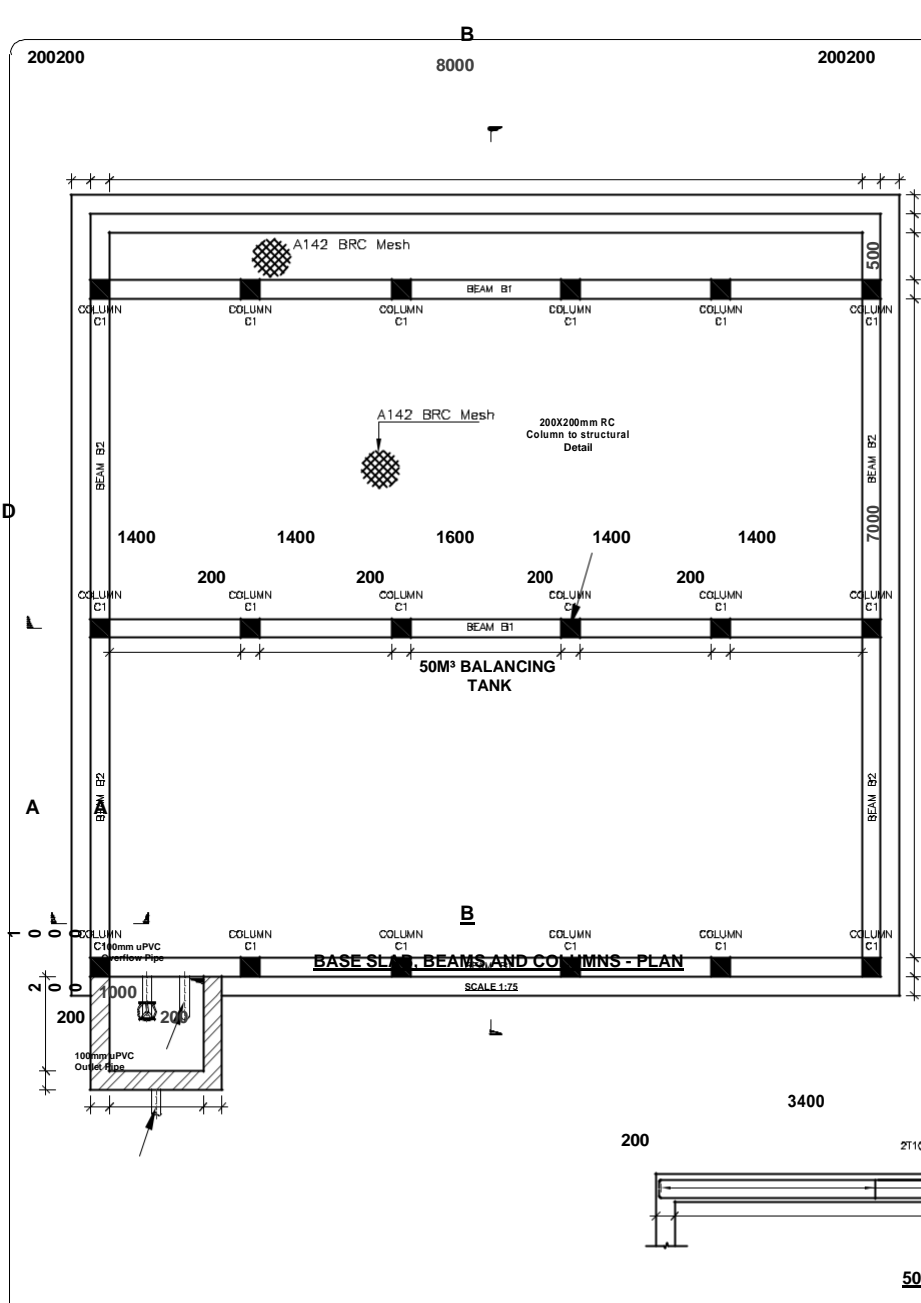
Funding Agency
WaterFund
Financing the Water Sector

Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index-No.:	Description:

Date: _____
GMS FINE SCREEN MADE OF 5mm x 50mm FLAT BARS AT 30mm c/c SPACING
Scale: A1:1000
page: _____



- NOTES**
- CONCRETE:**
 - (a) CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - (b) CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
 - (c) WATER IN CONCRETE MIXES TO B.S. 3148
 - (d) CONCRETE CLASSES TO BE AS FOLLOWS:-
MASS CONCRETE FILL AND BLINDING MIX, CLASS 15/40
REINFORCED CONCRETE, CLASS 25/30
 - (e) MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
MEMBERS OF BUILDINGS:
- SLABS - 20 mm
- BEAMS - 25 mm
- COLUMNS - 40 mm
- FOUNDATIONS & FOOTINGS - 50 mm
 - (f) WALLS/COLUMNS SHOULD BE POURER, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
 - REINFORCEMENT:**
 - (a) REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4469
 - (b) BENDING DIMENSIONS TO B.S. 4469
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER BLOCKS, CHAIRS AND TYPING WIRE
 - (d) EXAMPLE: 16 T12 - 07 - 150 SIGNIFIES 16 Nos. HIGH TENSILE 12mm dia. BARS IDENTIFICATION MARK BY AT 150mm CENTRE TO CENTRE SPACING
 - JOINTS:**
 - (a) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE REINFORCED AND ALL LAFTICE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATURATED BUT SURFACE DRY CONDITION.
 - (b) ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm KICKER UNLESS OTHERWISE SPECIFIED
 - (c) THE UPVC WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - (d) JOINT FILLER TO B.S. 6292 AND TO BE APPROVED BY THE ENGINEER

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

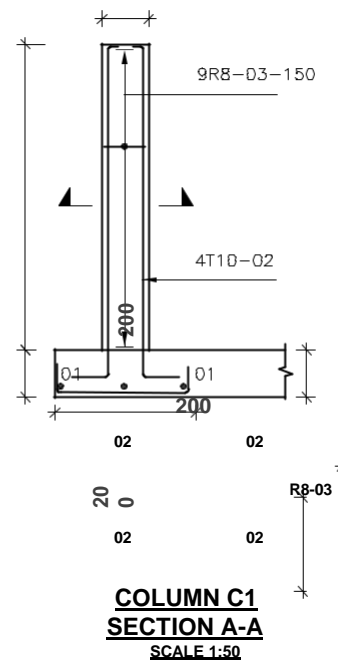
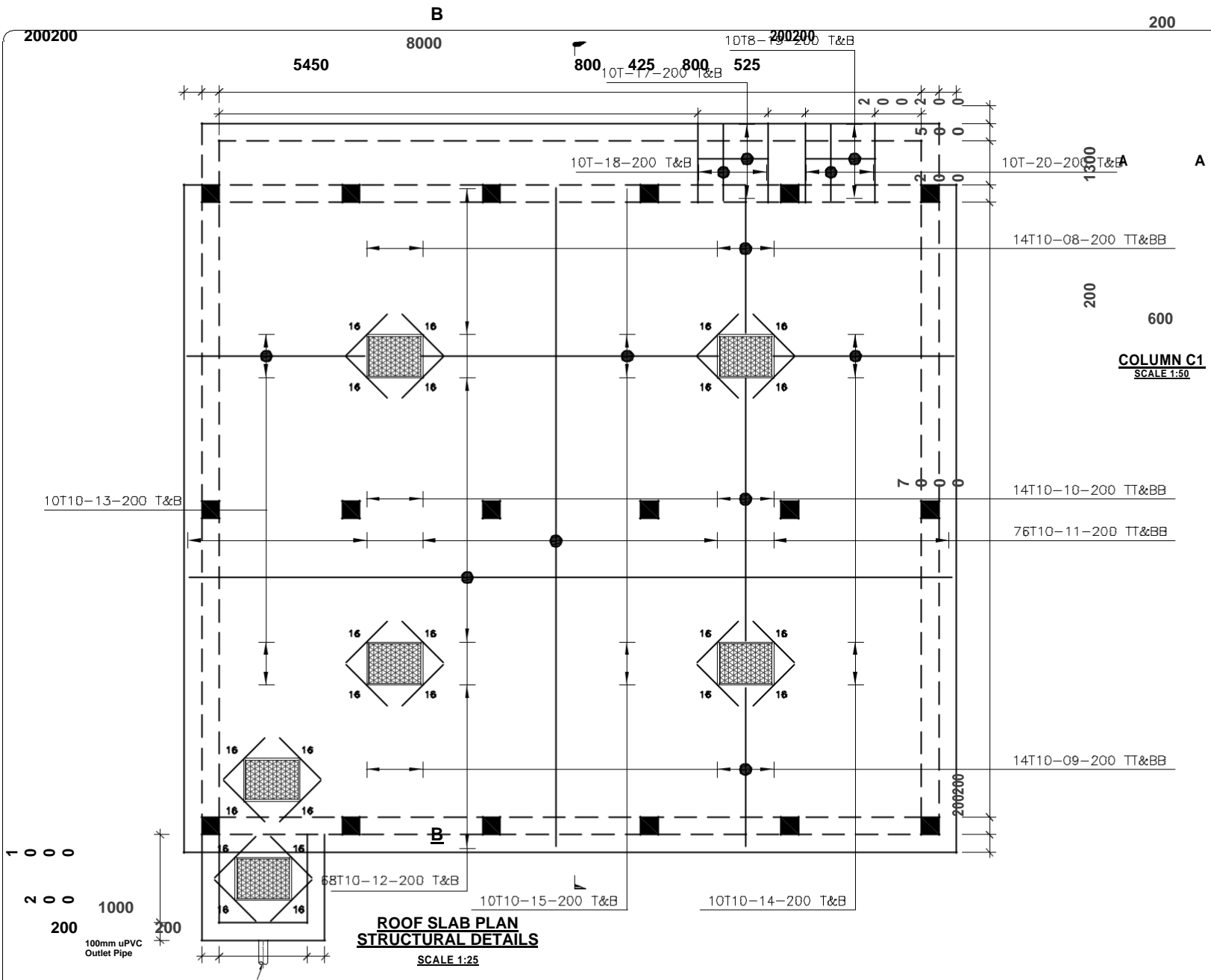


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index-No.	Description:

Date:
Scale: As shown
page:



NOTES

- 1 CONCRETES
 - (a) CEMENT TO BE ORDINARY PORTLAND CEMENT
 - (b) CONCRETE AGGREGATE TO CONFORM TO S.S. 748
 - (c) WATER IN CONCRETE MIXES TO BE AS SPECIFIED
 - (d) CONCRETE CLASSES TO BE AS SPECIFIED
 - (e) MASS CONCRETE FILL AND ALL REINFORCED CONCRETE, CLASS AS SPECIFIED
 - (f) MINIMUM COVER TO ALL REINFORCEMENT AS SPECIFIED BELOW FOR ALL MEMBERS OF BUILDINGS:
 - SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 75 mm
 - (g) WALLS/COLUMNS SHOULD BE CONCRETED IN HEIGHT AS SOON AS POSSIBLE AFTER FOUNDATION IS COMPLETED (2 TO 3 DAYS)
- 2 REINFORCEMENTS
 - (a) REINFORCEMENT TO BE HIGH TENSILE STEEL
 - (b) REINFORCING DIMENSIONS TO BE AS SPECIFIED
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BLOCKS, CHAIRS AND TYING
 - (d) EXAMPLES: 16 T12 - 67 - 150mm BAL. BARS IDENTIFICATE TO CENTRE SPACING
- 3 JOINTS
 - (a) THE POSITION AND NUMBER OF JOINTS TO BE DIRECTED BY THE ENGINEER
 - (b) BEFORE PLACING FRESH CONCRETE, THE SURFACE OF PREVIOUS CONCRETE SHOULD BE THOROUGHLY CLEANED AND ALL LOOSE MATERIAL SHOULD BE REMOVED SO THAT THE SURFACE IS SATISFACTORY
 - (c) ALL WALL/COLUMN JOINTS SHOULD BE PROVIDED WITH KICKER UNLESS OTHERWISE SPECIFIED
 - (d) THE UPVC WATER STOP SHALL BE PROVIDED AS SPECIFIED
 - (e) JOINT FILLER TO BE S.S. 6292 AS SPECIFIED BY THE ENGINEER
- 4 ABBREVIATIONS:
 - T - TOP
 - N.F. - NEAR FACE
 - E.F. - EACH FACE

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

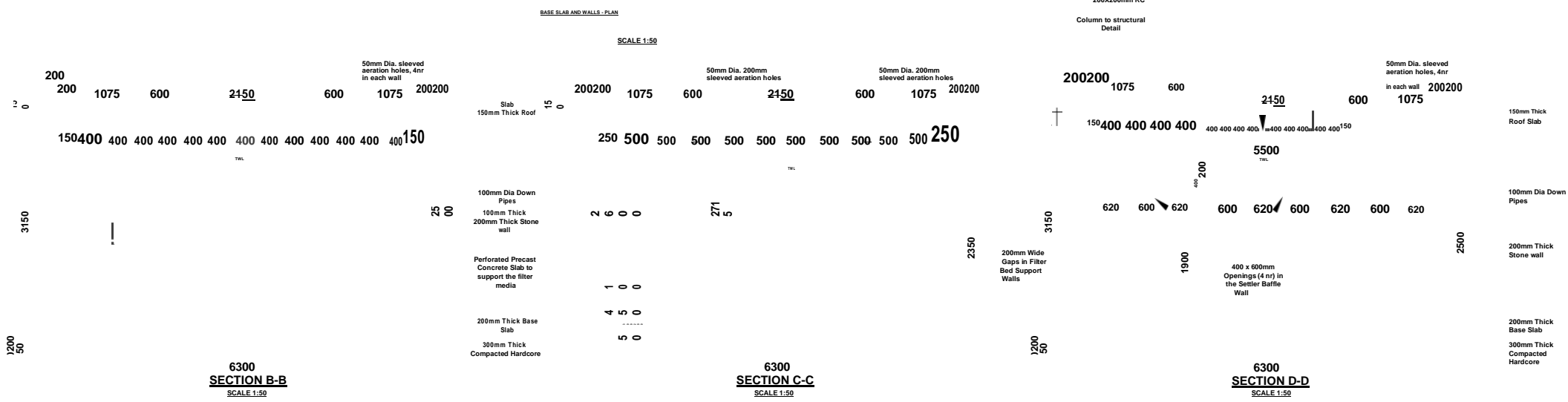


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index-No.:	Description:

Date: _____
Scale: As shown
Page: _____



Project Title:

Up-scaling Basic Sanitation for Urban Poor (UBSUP)

ANAEROBIC REACTOR

Funding Agency

Designed and drawn by:

UBSUP technical team

Checked by: Programme Manager
Urban Investments

Notes:
See Above

Index-No.:

Description:

Date:

Scale: As
shown

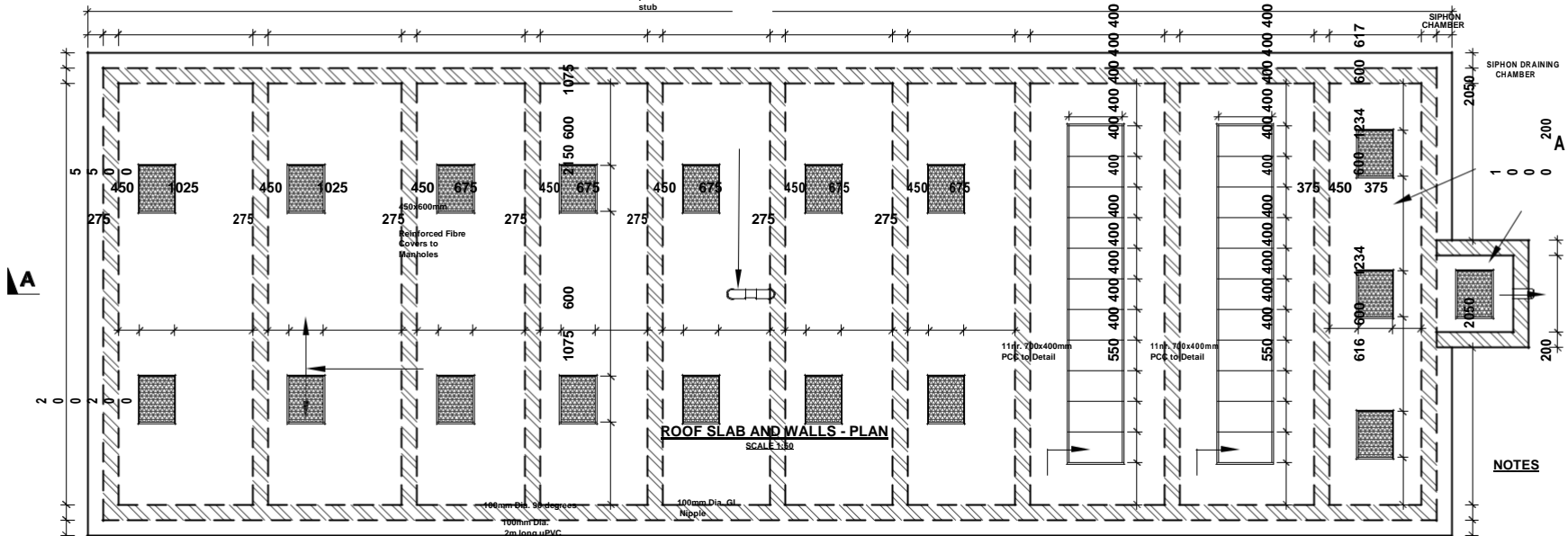
page:

Approved by: CEO WSTF

200200 1750 200 1750 200 1400 200 1400 200 1400 200 1400 200 1400 200 1400 200 1400 200 1400 200 1750 200 1750 200 1400 200200

2000200

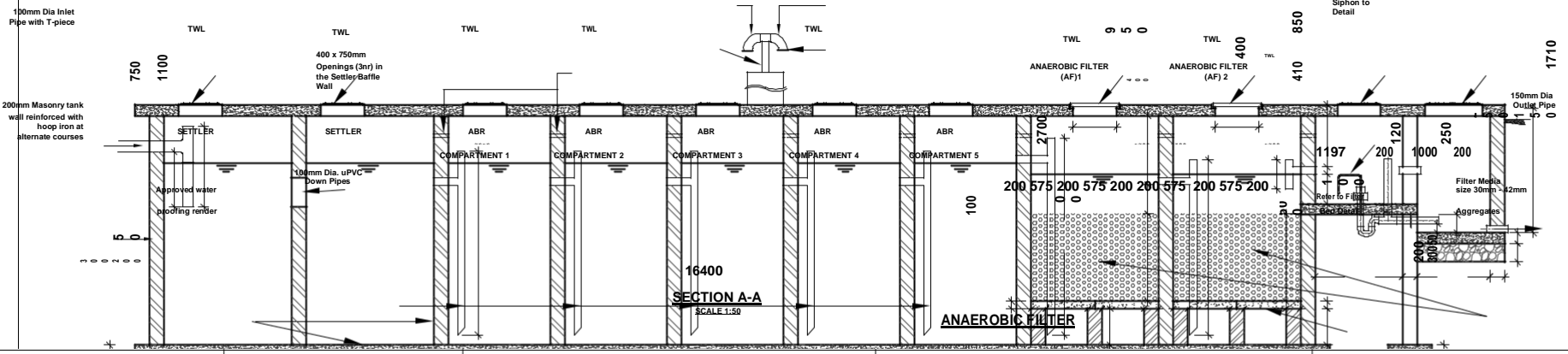
100mm Dia 2000mm long Vent Pipe with 1000mm high protective concrete stub



ROOF SLAB AND WALLS - PLAN
SCALE 1:50

NOTES

450x600mm Reinforced Fibre Covers to Manholes
450x600mm Reinforced Fibre Covers to Manholes
50mm Dia. 200mm sleeved aeration holes
100mm Dia. 2m long uPVC Pipe with 1m high concrete stub
Mosquito Wire Gauze
11mm Pre-cast concrete slabs size 700mm x 400mm x 50mm
11mm Pre-cast concrete slabs size 700mm x 400mm x 50mm
600mm x 450mm Manhole Reinforced Fibre Covers
600mm x 450mm Manhole Reinforced Fibre Covers



SECTION A-A
SCALE 1:50

- 1 CONCRETE:
 - (a) CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - (b) CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
 - (c) WATER IN CONCRETE MIXES TO B.S. 3148
 - (d) CONCRETE CLASSES TO BE AS FOLLOWS:-
MASS CONCRETE FILL AND BELONGING MIX, CLASS 15/40
REINFORCED CONCRETE, CLASS 25/30
 - (e) MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS.
 - MEMBERS OF BUILDINGS:-
- SLABS - 20 mm
- BEAMS - 20 mm
- COLUMNS - 40 mm
- FOUNDATIONS & FOOTINGS - 50 mm
 - (f) WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUP AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
- 2 REINFORCEMENT:
 - (a) REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4468
 - (b) BENDING DIMENSIONS TO B.S. 4468
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER BLOCKS, CHAIRS AND TYING WIRE
 - (d) EXAMPLE: 16 T12 @ 87 - 150 SPACERS 16 No. HIGH TENSILE 12mm BAR. BAR IDENTIFICATION MARK 07 AT 150mm CENTRE TO CENTRE SPACING
- 3 JOINTS:
 - (a) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE REINFORCED AND ALL LAFTANCE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATURATED BUT SURFACE DRY CONDITION
 - (b) ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm KICKER UNLESS OTHERWISE SPECIFIED
 - (c) THE uPVC WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

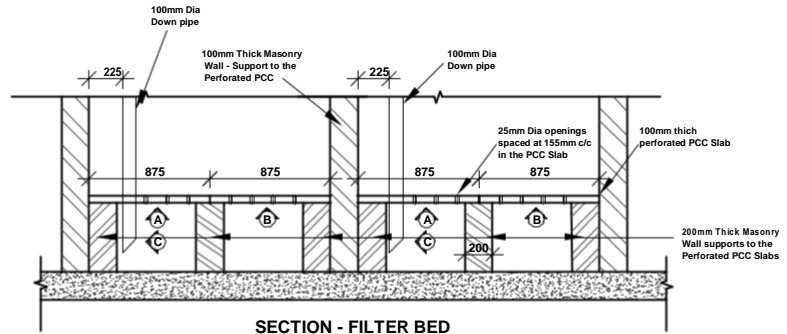


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

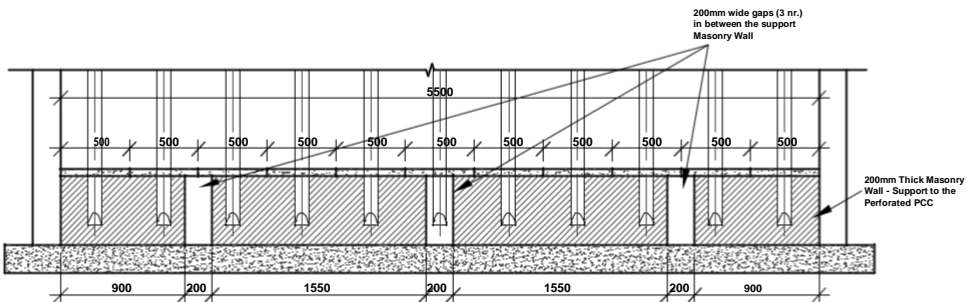
Notes:
See Above

Index-No.	Description:

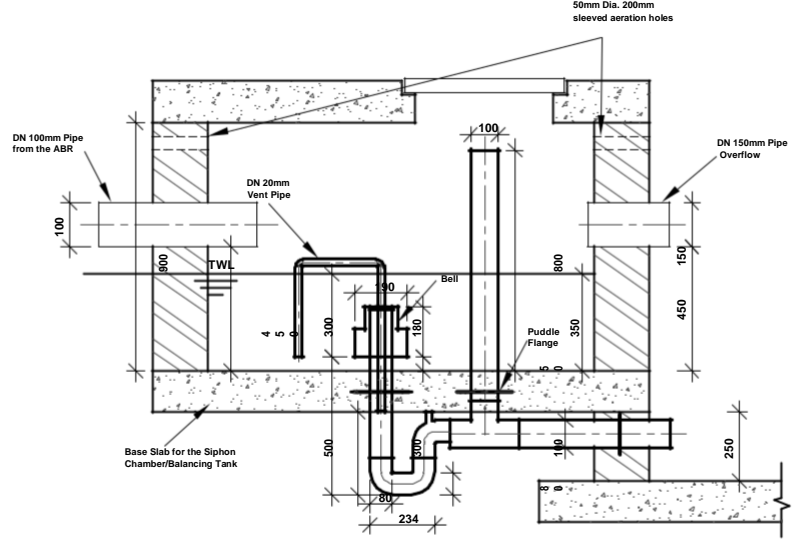
Date:
Scale: As shown
page:



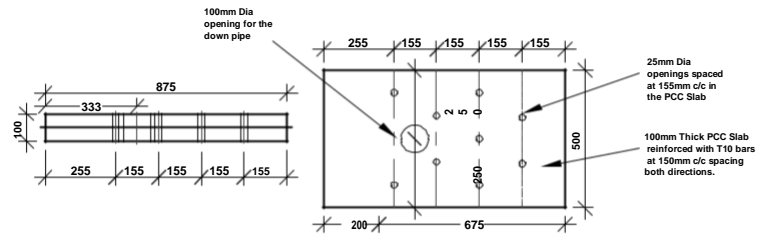
SECTION - FILTER BED
SCALE 1:50



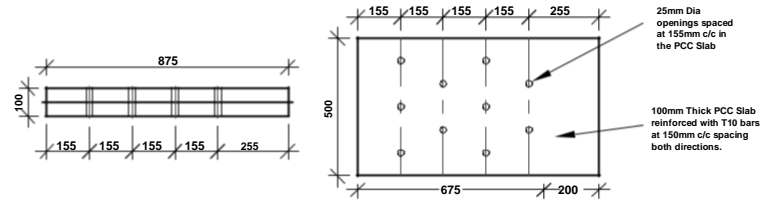
ELEVATION C
SCALE 1:50



SIPHON DETAILS
SCALE 1:50



DETAIL AT ELEVATION A
PLAN AND SECTION OF FILTER BED
(PERFORATED PCC) - 22NR REQUIRED
SCALE 1:50



DETAIL AT ELEVATION B
PLAN AND SECTION OF FILTER BED
(PERFORATED PCC) - 22NR REQUIRED
SCALE 1:50

- NOTES**
- CONCRETE:**
 - CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - CONCRETE AGGREGATE TO COMPLY WITH B.S. 682
 - WATER IN CONCRETE MIXES TO B.S. 3148
 - CONCRETE CLASSES TO BE AS FOLLOWS:-
MASS CONCRETE FILL AND BLINDING MIX, CLASS 15/40
REINFORCED CONCRETE, CLASS 25/20
 - MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
MEMBERS OF BUILDINGS:-
- SLABS - 20 mm
- BEAMS - 25 mm
- COLUMNS - 40 mm
- FOUNDATIONS & FOOTINGS - 50 mm
 - REINFORCEMENT:**
 - REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4466
 - BENDING DIMENSIONS TO B.S. 4466
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER BLOCKS, CHAIRS AND TYING WIRE
 - EXAMPLE: 4 T12 @ 87 - 150 REQUIRES 18 No. HIGH TENSILE 12mm DIA. BARS IDENTIFICATION MARK (O) AT 180mm CENTRE TO CENTRE SPACING
 - JOINTS:**
 - THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE ROUGHENED AND ALL LANTANCE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATURATED BUT SURFACE DRY CONDITION
 - ALL WALL/COLUMN/BASE CONNECTIONS SHOULD HAVE 100mm REINFORCER UNLESS OTHERWISE SPECIFIED
 - THE JWC WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - JOINT FILLER TO B.S. 5292 AND TO BE APPROVED BY THE ENGINEER
 - ABBREVIATIONS:**

T - TOP	B - BOTTOM
N.F. - NEAR FACE	F.F. - FAR FACE
E.F. - EACH FACE	E.W. - EACH WAY
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING No. RBFF/01

ANAEROBIC FILTER

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

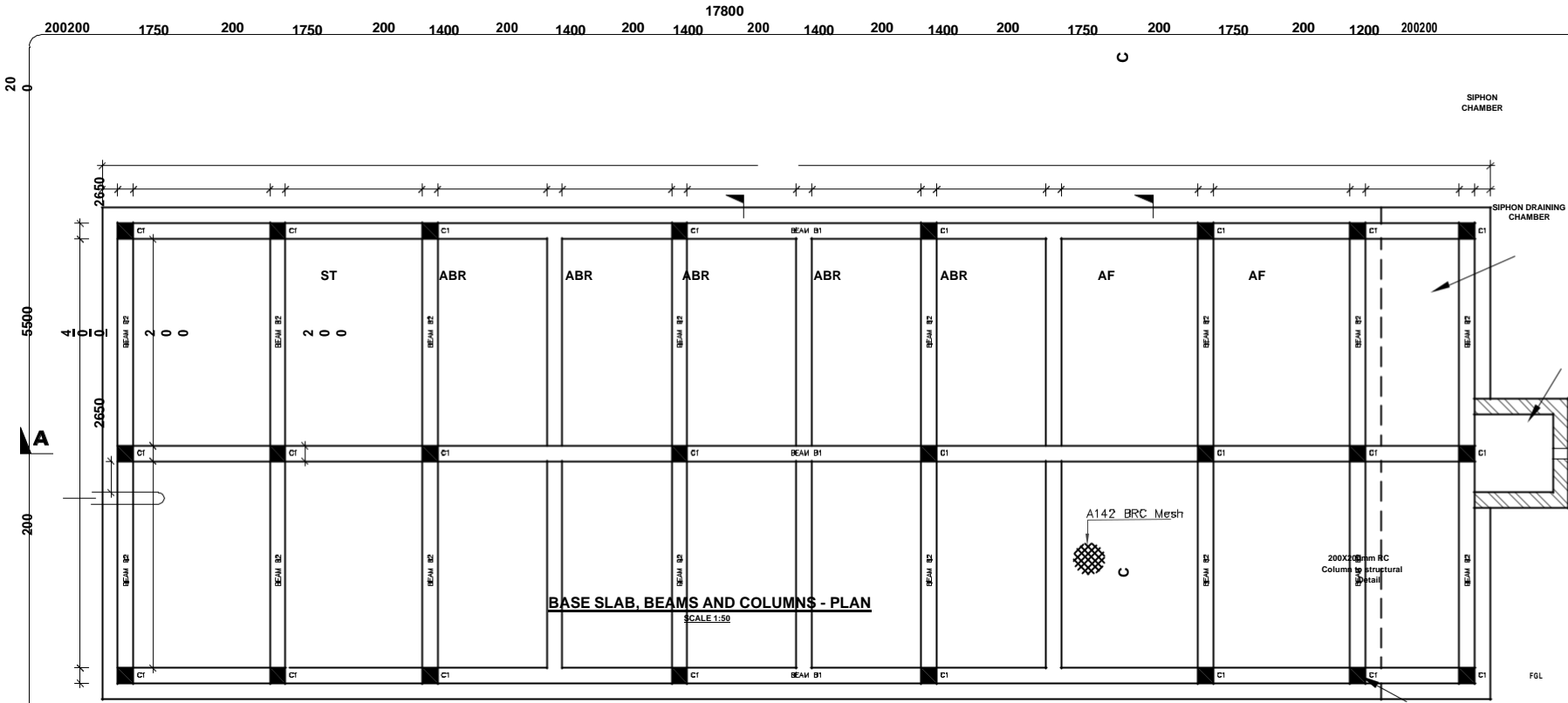


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index No.	Description

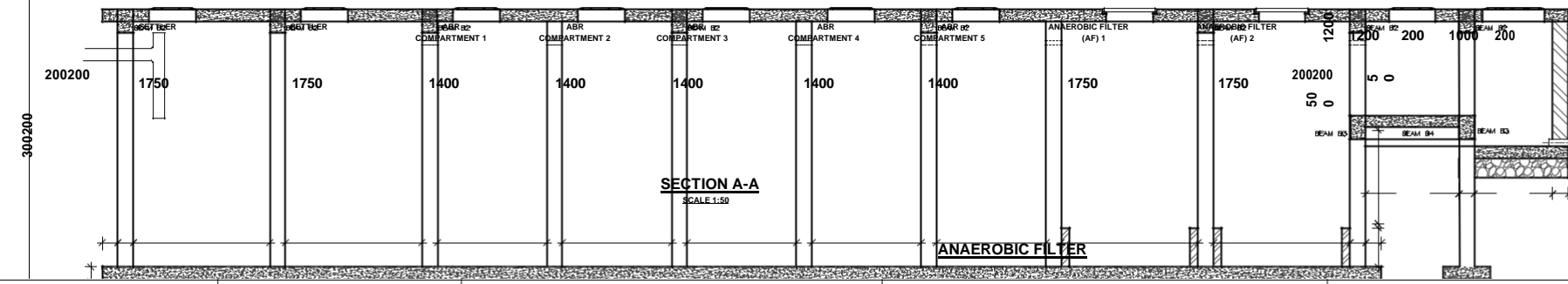
Date:
Scale: As shown
page:



BASE SLAB, BEAMS AND COLUMNS - PLAN
SCALE 1:50

NOTES

1. CONCRETE:
 - (a) CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - (b) CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
 - (c) WATER IN CONCRETE MIXES TO B.S. 3148
 - (d) CONCRETE CLASSES TO BE AS FOLLOWS:-
MASS CONCRETE FILL AND BLINDING MIX, CLASS 15/40
REINFORCED CONCRETE, CLASS 25/20
 - (e) MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
MEMBERS OF BUILDINGS:-
- SLABS - 20 mm
- COLUMNS - 40 mm
- FOUNDATIONS & FOOTINGS - 50 mm
 - (f) WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BE CONCRETED (2 TO 3 DAYS)
2. REINFORCEMENT:
 - (a) REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4466
 - (b) BENDING DIMENSIONS TO B.S. 4466
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER BLOCKS, CHAIRS AND TYPING WIRE
 - (d) EXAMPLE: 16 T12 - C7 - 150 SIGNIFIES 16 Nos. HIGH TENSILE 12mm DIA. BARS IDENTIFICATION MARK '07' AT 150mm CENTRE TO CENTRE SPACING
3. JOINTS:
 - (a) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE ROUGHENED AND ALL LANTHANE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATURATED BUT SURFACE DRY CONDITION
 - (b) ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm DEEP LANTHANE OTHERWISE SPECIFIED



SECTION A-A
SCALE 1:50

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

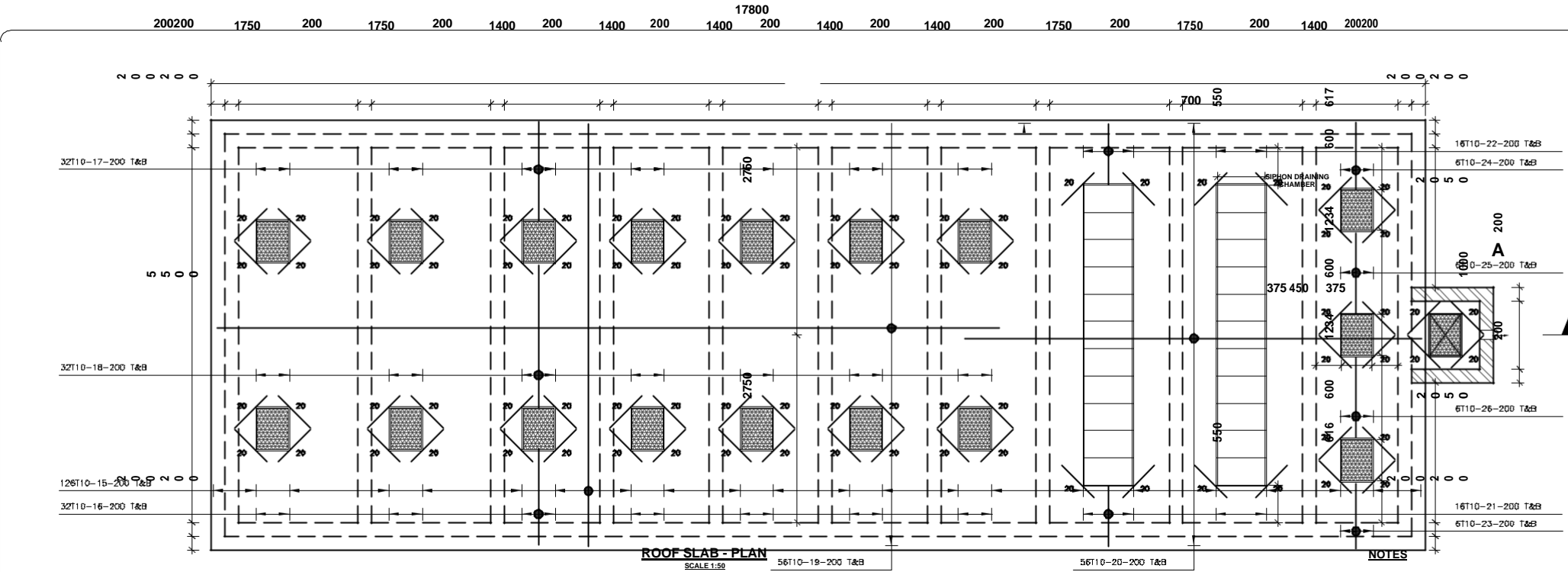


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

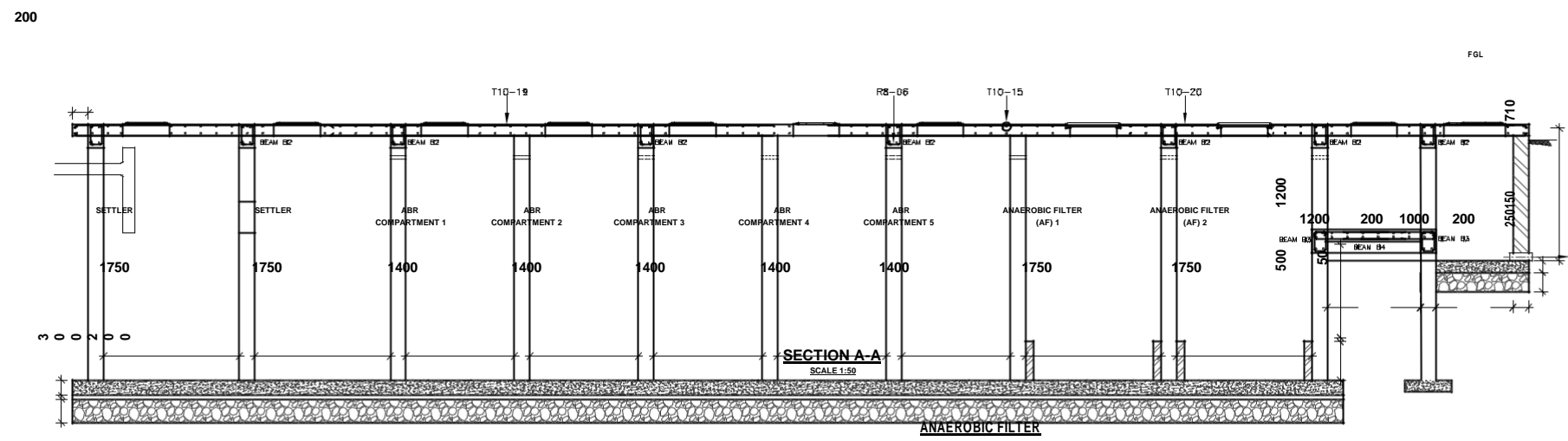
Index No.	Description

Date: _____
Scale: As shown
page: _____



ROOF SLAB - PLAN
SCALE 1:50

NOTES



SECTION A-A
SCALE 1:50

- 1 CONCRETE:**
- (a) CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - (b) CONCRETE AGGREGATE TO CONFORM WITH B.S. 882
 - (c) WATER IN CONCRETE MIXES TO B.S. 3148
 - (d) CONCRETE CLASSES TO BE AS FOLLOWS-
MASS CONCRETE FILL AND BINDING MIX, CLASS 15/40
REINFORCED CONCRETE, CLASS 25/30
 - (e) MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS
- MEMBERS OF BUILDINGS:**
- SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm
- (f) WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS CONCRETED (2 TO 3 DAYS)
- 2 REINFORCEMENT:**
- (a) REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4466
 - (b) BENDING DIMENSIONS TO B.S. 4466
 - (c) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACING BLOCKS, CHAIRS AND TYING WIRE
 - (d) EXAMPLE: 16 T12 - 07 - 150 SIGNIFIES 16 No. HIGH YIELD 12mm dia. BARS IDENTIFICATION MARK 07 AT 150mm CENTRE TO CENTRE SPACING
- 3 JOINTS:**
- (a) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWING
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE REINFORCED AND ALL LAITANCE AND LOOSE MATERIAL FROM THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATURATED BUT SURFACE DRY CONDITION
 - (b) ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm RACKER UNLESS OTHERWISE SPECIFIED
 - (c) THE JWC WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - (d) GENT FILLER TO B.S. 5292 AND TO BE APPROVED BY THE ENGINEER
- 4 OBSERVATIONS:**

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

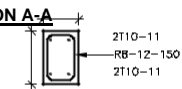
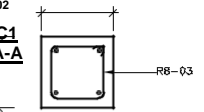
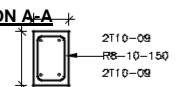
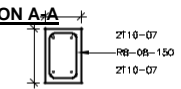
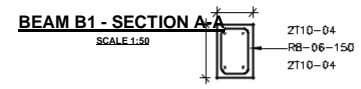
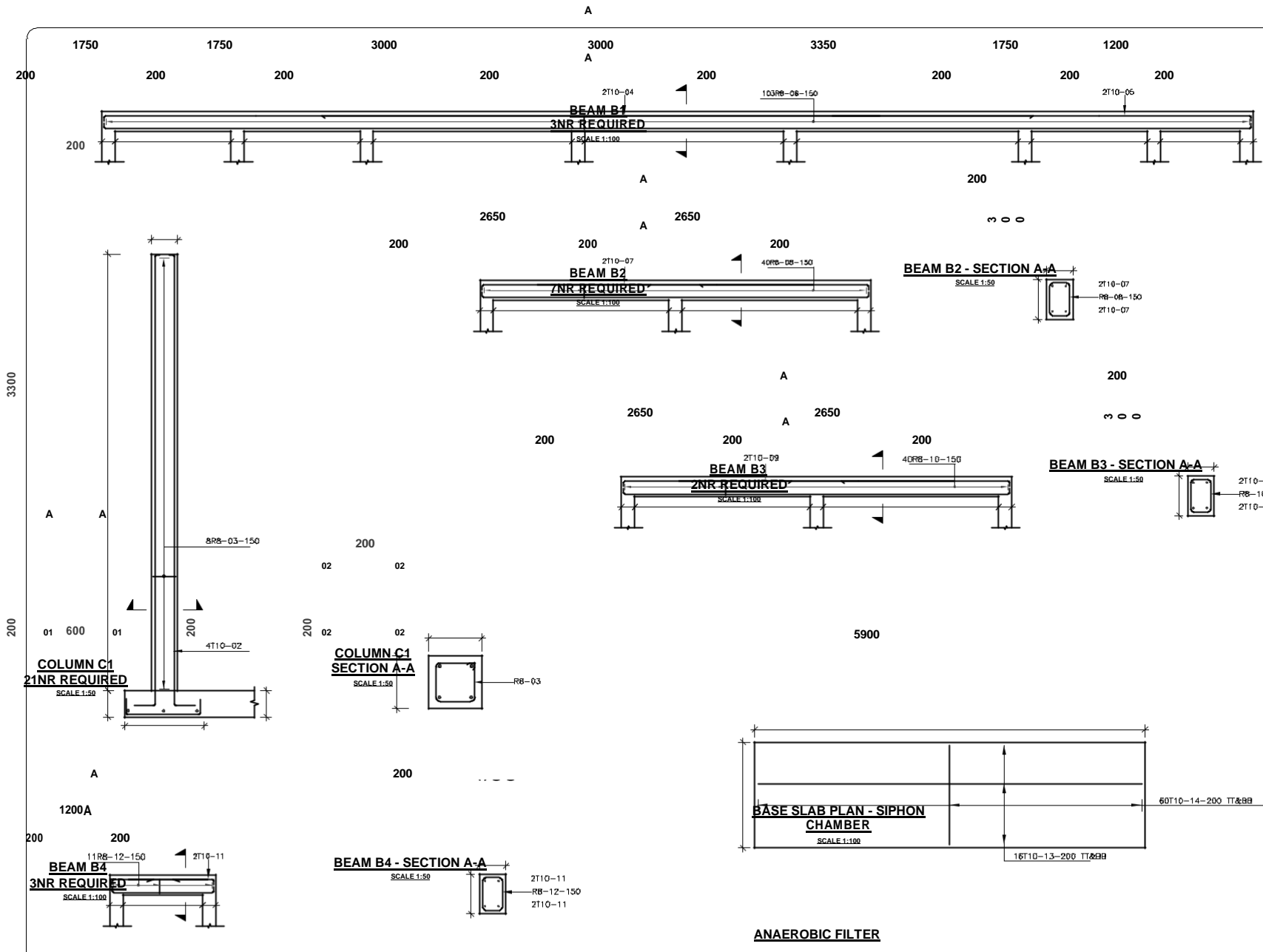


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index No.	Description

Date: _____
Scale: As shown
page: _____



NOTES

- 1 CONCRETE:
 - (1) CEMENT TO BE ORDINARY PORTLAND CEMENT TO BS 125
 - (2) CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
 - (3) WATER IN CONCRETE MIXES TO B.S. 3148
 - (4) CONCRETE CLASSES TO BE AS FOLLOWS-
MASS CONCRETE FILL AND BUILDING MIX, CLASS REINFORCED CONCRETE, CLASS 25/30
 - (5) MINIMUM COVER TO ALL REINFORCEMENT TO BE AS SPECIFIED BELOW FOR BUILDINGS:
MEMBERS OF BUILDINGS:
- SLABS - 20 mm
- BEAMS - 20 mm
- COLUMNS - 40 mm
 - (6) FOUNDATIONS & FOOTINGS - 50 mm
 - (7) WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, HEIGHT 1100 AS SOON AS POSSIBLE AFTER THE CONCRETED (2 TO 3 DAYS)
- 2 REINFORCEMENT:
 - (1) REINFORCEMENT TO BE HIGH YIELD SQUARE TWIST (B.S. 4466)
 - (2) BENDING DIMENSIONS TO B.S. 4466
 - (3) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING BLOCKS, CHAIRS AND TYING WIRE
 - (4) EXAMPLE: 16 T12 - 07 - 150 SIGNIFIES 16 No. 12mm T12 BARS IDENTIFICATION MARK OF AT 150 TO CENTRE SPACING
- 3 JOINTS:
 - (1) THE POSITION AND NUMBER OF INTERMEDIATE JOINTS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS
 - (2) BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHOULD BE THOROUGHLY WETTED AND ALL LAFTAGE AND LOOSE MATERIAL SHOULD BE REMOVED SO THAT THE CONSTRUCTION IS IN A SATISFACTORY SURFACE CONDITION
 - (3) ALL WALL/COLUMN BASE CONNECTIONS SHOULD BE FULLY WETTED UNLESS OTHERWISE SPECIFIED
 - (4) THE J.M.C. WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - (5) JOINT FILLER TO B.S. 6292 AND TO BE APPROVED BY THE ENGINEER

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)



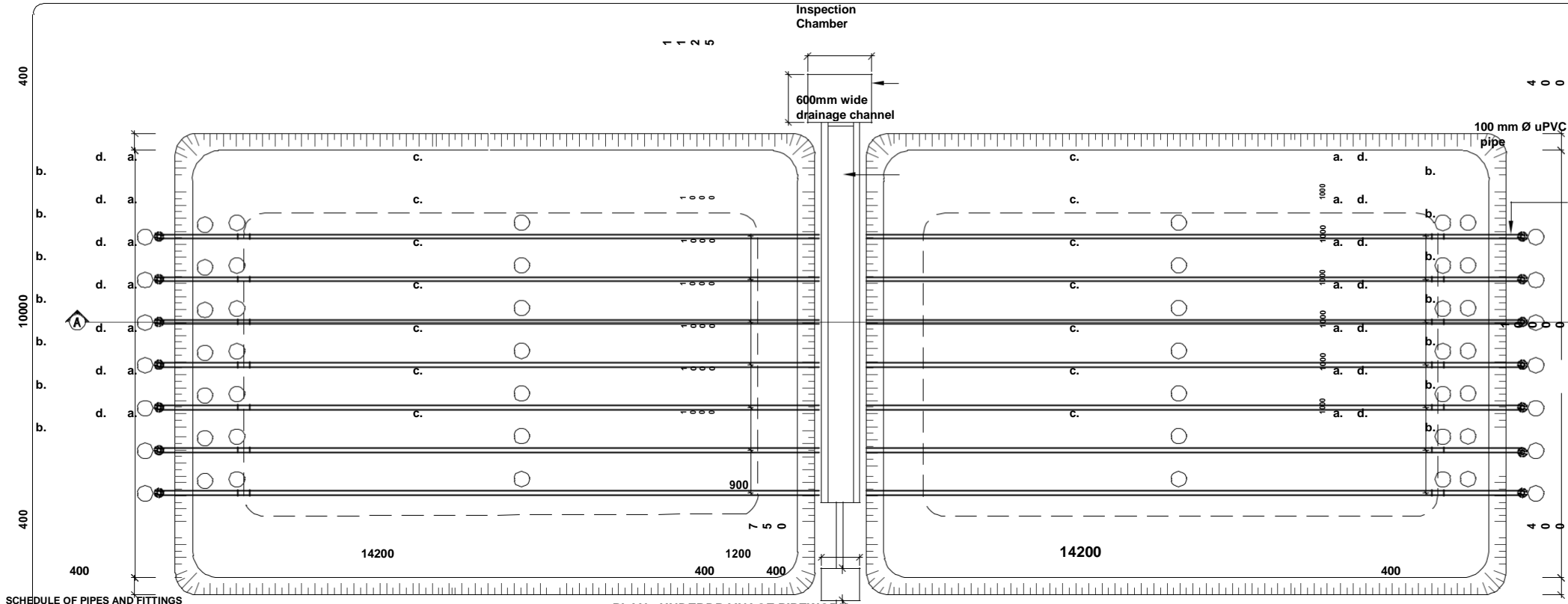
Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index-No.:	Description:

Date:	
Scale: As shown	
page:	

FACE
WAY
WITH

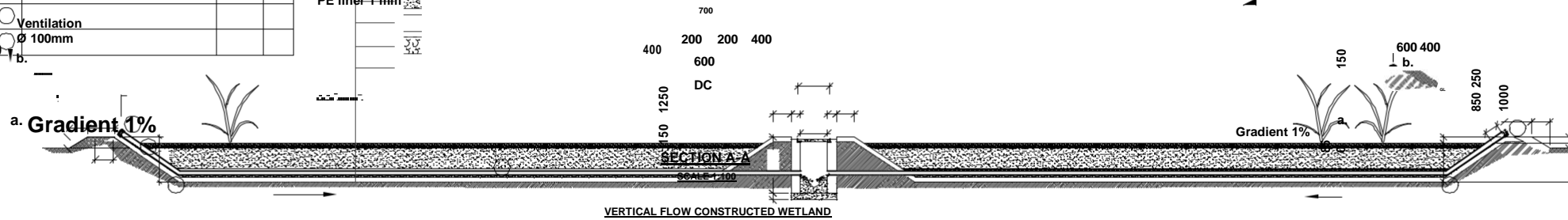
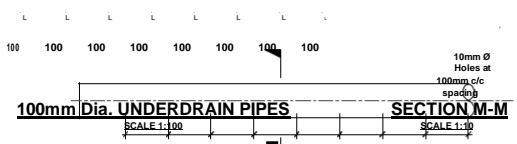


PLAN - UNDERDRAIN PIPEWORK
SCALE 1:100

SCHEDULE OF PIPES AND FITTINGS

Description	Length	Qty
b. 100mm Dia. uPVC Vent Cowl	-	14
c. 100mm Dia. uPVC Pipe	13.5m	14
d. 100mm Dia. uPVC Pipe	1.7m	14

- KEY**
- 100mm Distribution Layer - Medium Gravel; dia. 10 - 14mm
 - 450mm Filter Layer - Sand; dia. 0.1 - 0.4mm
 - 100mm Transition Layer - Medium Gravel; dia. 10 - 14mm
 - 100mm Drainage Layer - Course Gravel; dia. 20 - 32mm
 - PE liner 1 mm



VERTICAL FLOW CONSTRUCTED WETLAND
SCALE 1:100

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

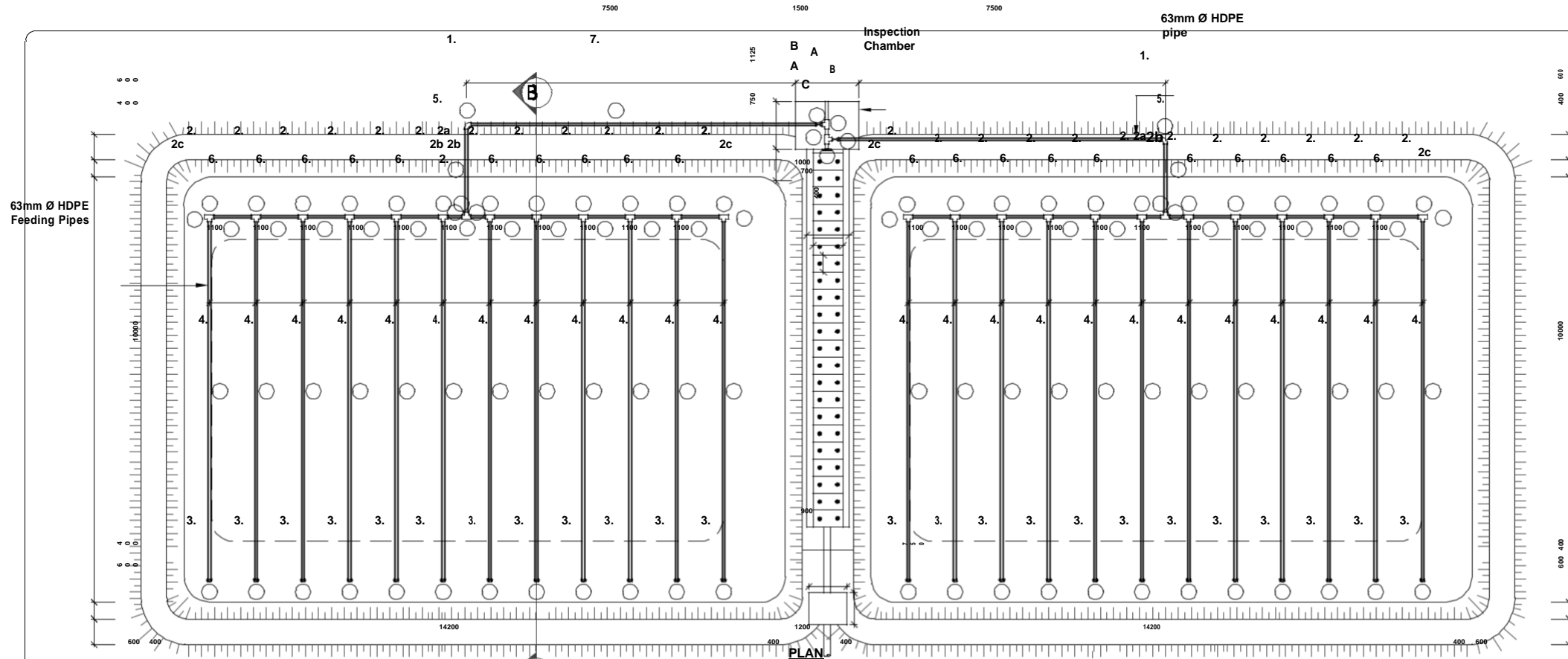


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

Index-No.:	Description:

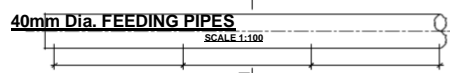
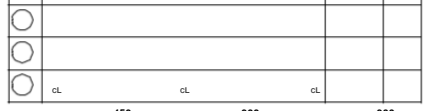
Date:
Scale: As shown
page:



SCHEDULE OF PIPES AND FITTINGS

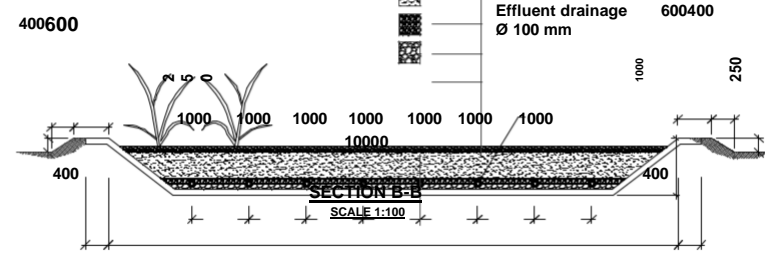
Description	Length	Qty
1. 150mm Dia. uPVC 90° Bends	-	6
2. 100x40mm Dia. uPVC reducing Tee	-	24
2a) 150mm Dia. uPVC Equal Tee	-	2
2b) 150x100mm Dia. uPVC Reducer	-	4
2c) 100mm Dia. uPVC End Caps	-	4
3. 40mm Dia. uPVC End Caps	-	24
4. 40mm Dia. uPVC Pipe	8.5m	24
5. 150mm Dia. uPVC Pipe	2.0m	2
6. 100mm Dia. uPVC Pipe	1.1m	22
7. 150mm Dia. uPVC Pipe	8.3m	2

Description	Length	Qty
A 150mm Dia. uPVC Equal Tee	-	2
B 150mm Dia. uPVC Ball Cock valve	-	2
C 150mm Dia. uPVC end cap	-	1




VERTICAL FLOW CONSTRUCTED WETLAND

- KEY**
- 100mm Distribution Layer - Medium Gravel; dia. 10 - 14mm
 - 450mm Filter Layer - Sand; dia. 0.1 - 0.4mm
 - 100mm Transition Layer - Medium Gravel; dia. 10 - 14mm
 - 100mm Drainage Layer - Course Gravel; dia. 20 - 32mm
 - PE liner 1 mm



Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

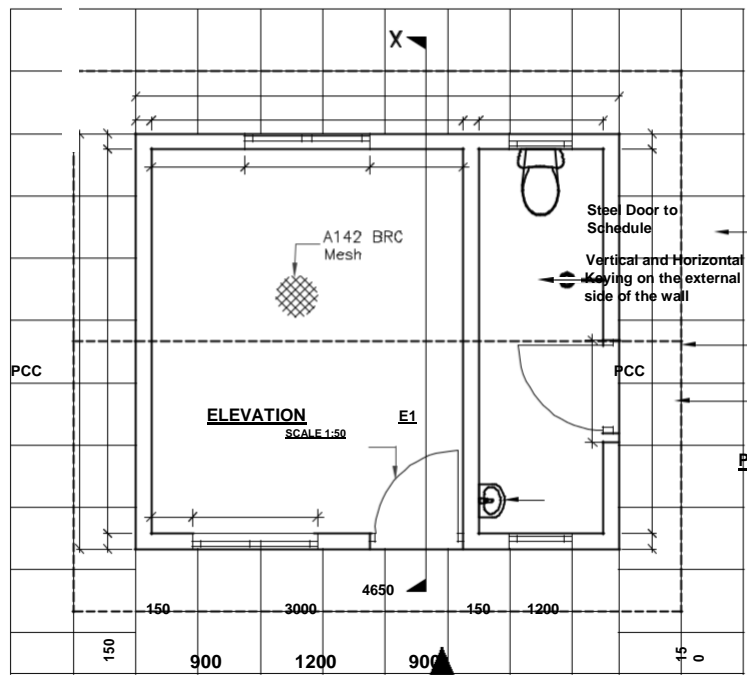
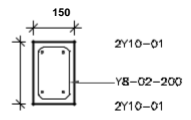
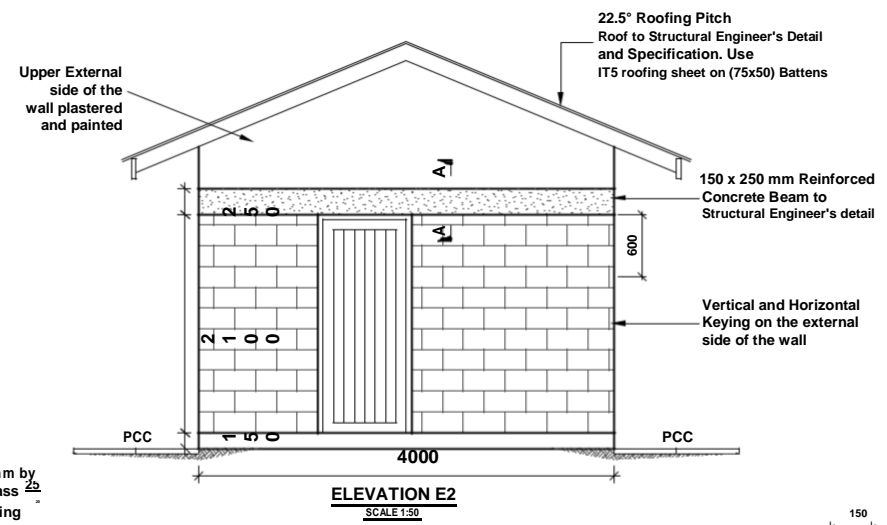
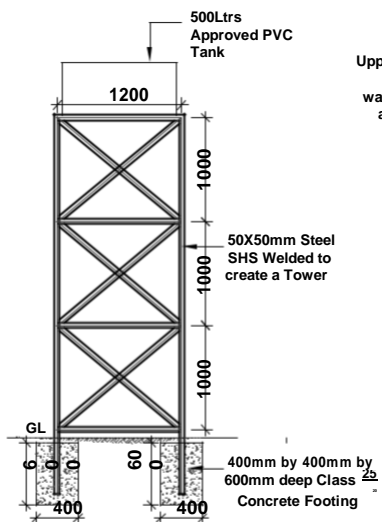
Funding Agency:


Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

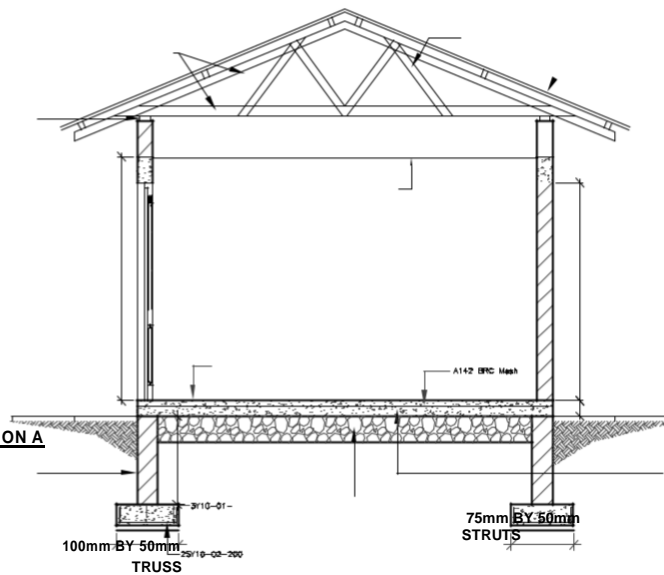
Notes:
See Above

Index-No.	Description:

Date:
Scale: As shown
page:



PVC TANK ELEVATED ON A STEEL TOWER
SCALE 1:50



22.5° Roofing Pitch
Roof to Structural Engineer's Detail and Specification. Use IT5 roofing sheet on (75x50) Battens

WC

PCC Slabs

Shower

2

Line of Roof Over

9mm Chipboard ceilinging on a 600mm x 600mm branning made of 50mm by 50mm Timber

150 x 250 mm Reinforced Concrete Beam to Structural Engineer's Detail

OFFICE

4000

3700

3700

23

50

30

0

150 mm thick Masonry Wall
Plastered on the inside and

Steel Door
to Schedule

400 1200

150

X

PLAN
SCALE:1:50

1

OPERATORS OFFICE

PCC

Hand
Wash
Basin

200m foundation wall on
(600x200) strip footing
to Eng's details. foundation
to be determined on site

800

600

SECTION X - X
SCALE:1:50

300mm Thick Hand Packed
Hardcore and Compacted
with a 50mm Layer of
Murrum Blinding.

600

keyed on the outside to approval

150

250

SECTION A-A
SCALE:1:50
PCC

Dpc to be provided under all floor walls. Anti-
termite treatment to be applied before laying of the
Floor Slab

Doors and Windows Schedule

Type	Width	Height
Door D1	900	2100
Window W1	1200	1200
Window W2	600	600

Project Title:
Up-scaling Basic
Sanitation for Urban Poor
(UBSUP)



Designed and drawn by:UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by:CEO WSTF

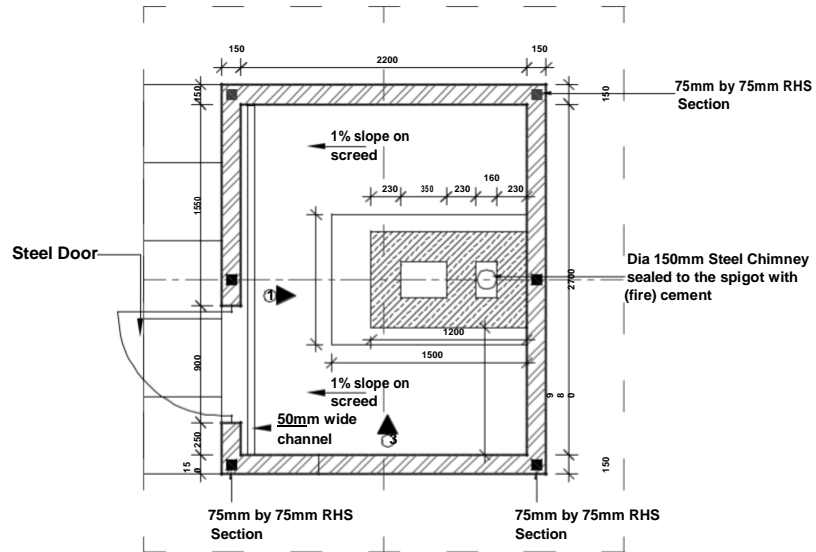
Notes:
See Above

Index-No.:	Description:

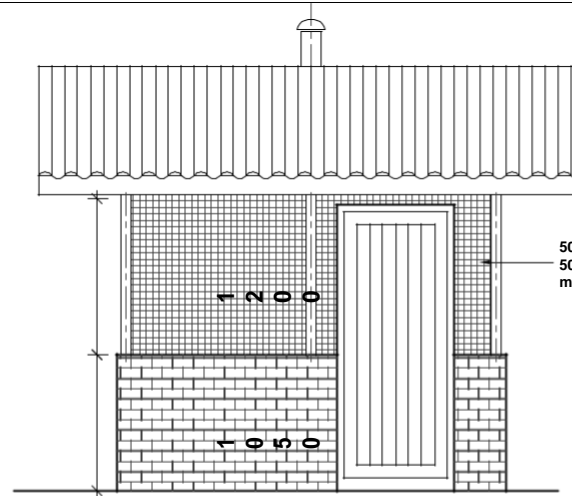
Date:

Scale: As shown

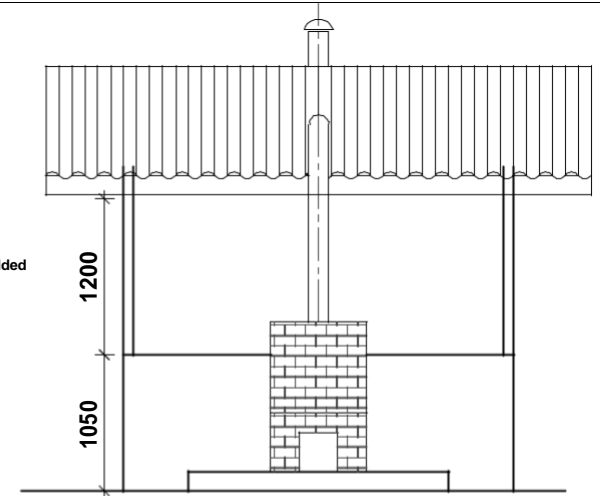
page:



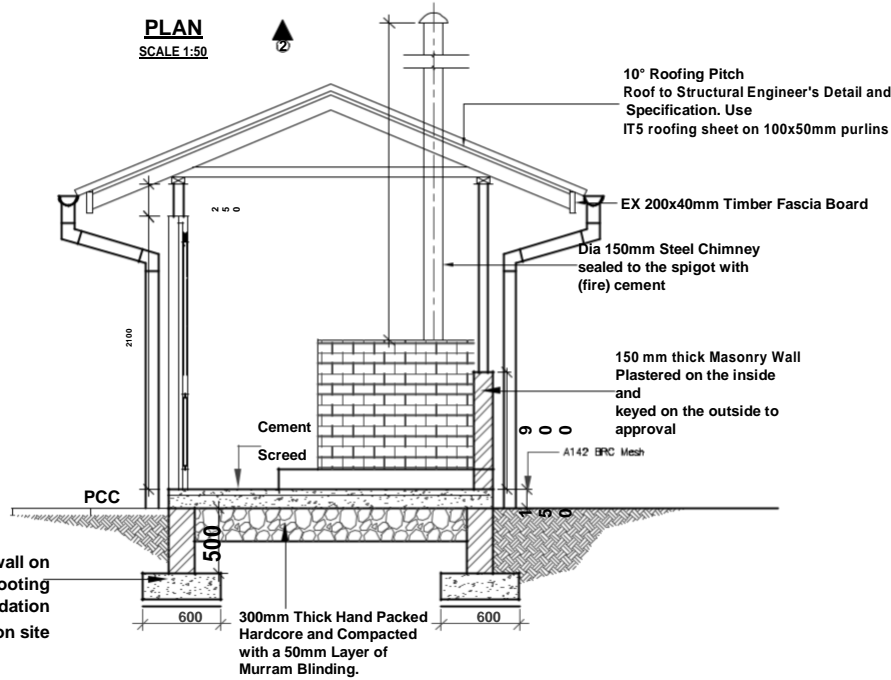
PLAN
SCALE 1:50



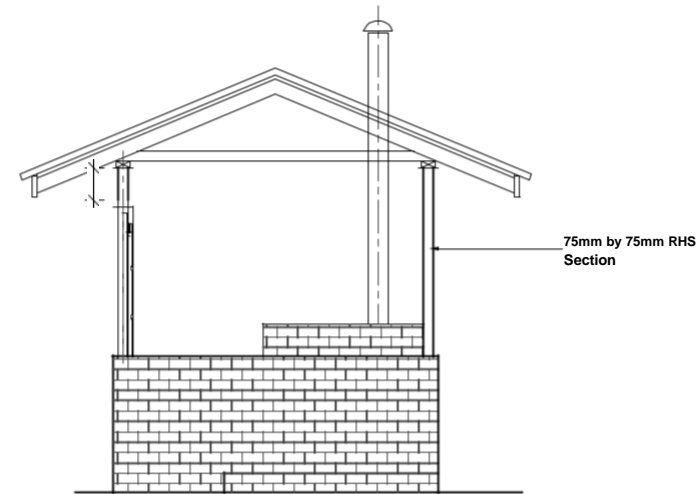
FRONT ELEVATION
SCALE 1:50



ELEVATION 1
SCALE 1:50



ELEVATION 3
SCALE 1:50



ELEVATION 2
SCALE 1:50

INCINERATOR SHED

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

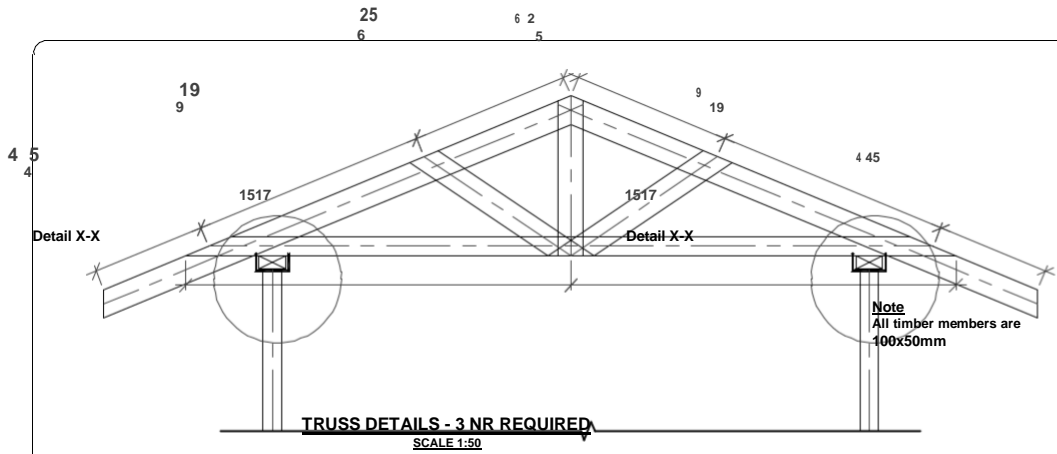
Funding Agency:


Designed and drawn by:UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by:CEO WSTF

Notes:
See Above

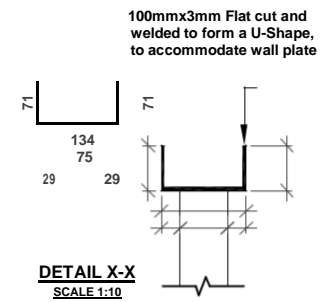
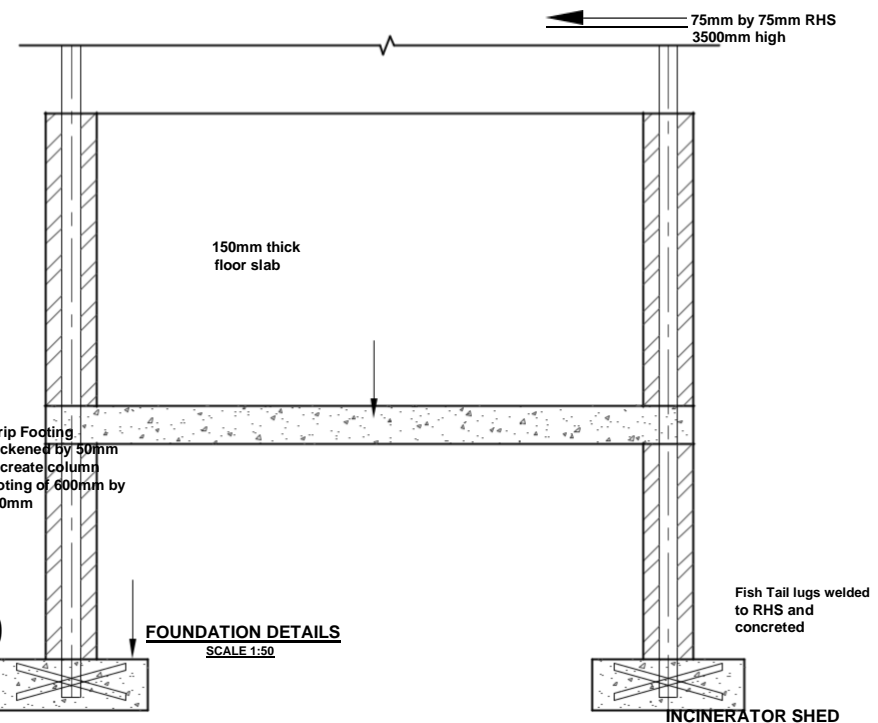
Index-No.:	Description:

Date:
Scale: As shown
page:



LIST OF MATERIALS FOR THE INCINERATOR UNIT

Item	Dimensions	Quantity
Fire Bricks	230mm by 115mm by 80mm	200 approx
Sand		200Kg
Fire Cement (High Alumina)	50Kg bag	2 bags
Steel Angle	30mm by 30mm by 3mm	12m
Steel Channel	100mm by 40mm by 5mm	4m
Flat sheet for loading door	600mm by 750mm by 3mm	1 sheet
Flat sheet for ash door	250mm by 250mm by 3mm	1 sheet
Flat sheet for chimney spigot support	250mm by 150mm by 3mm	1 sheet
Steel pipe	150mm Dia by 3mm thickness	4m long
Hinges for Ash Door		
Pipe for loading door		
hinge	1 inch	1nr
Rod for loading door		
hinge	3/4 inch	1nr
Masonry plugs	no 10	16nr
Steel cable	no 10	40m



Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)



Designed and drawn by:UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by:CEO WSTF

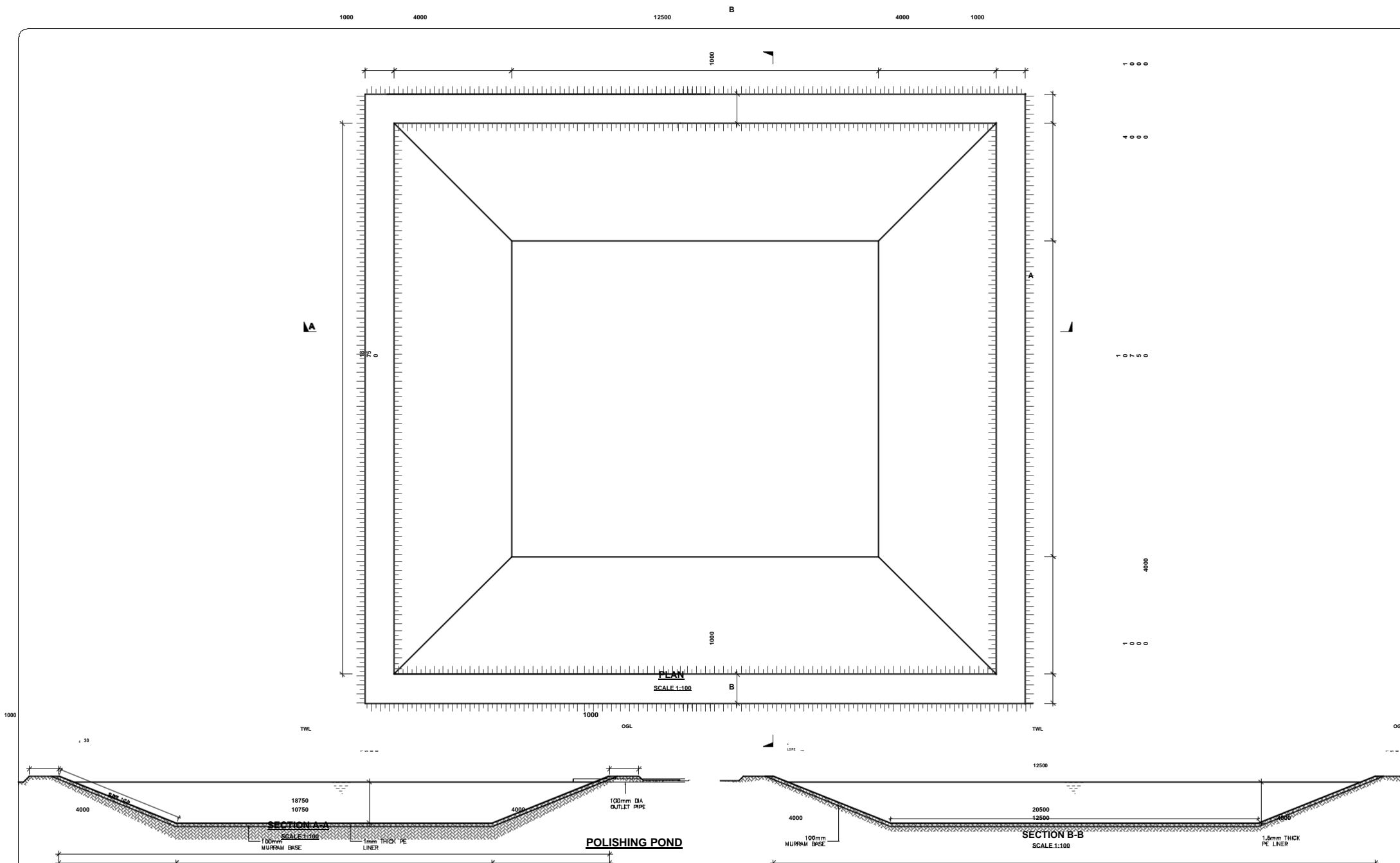
Notes:
See Above

Index-No.: Description:

Date:

Scale: As shown

page:



Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)

Funding Agency:

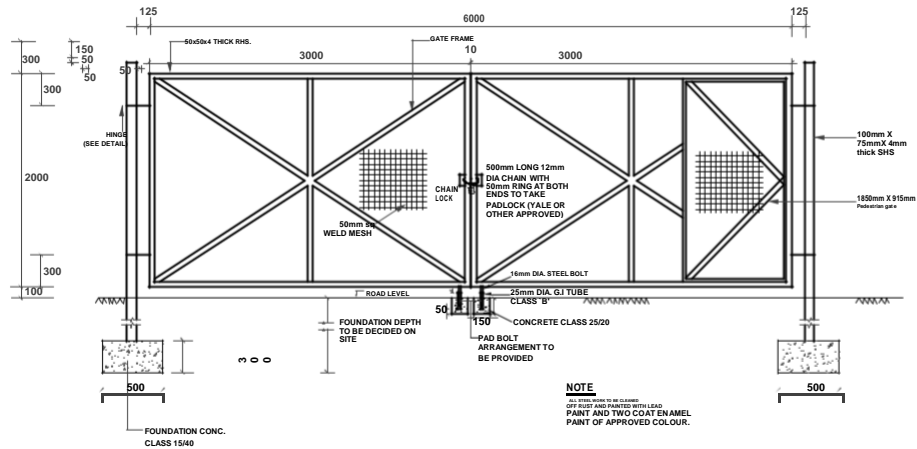
Empowering the Water Sector

Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

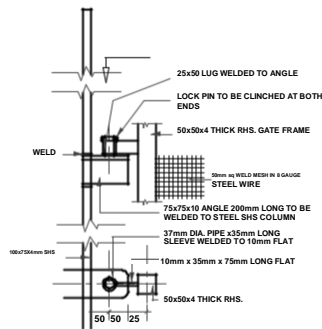
Index-No.:	Description:

Date:
Scale: As shown
page:

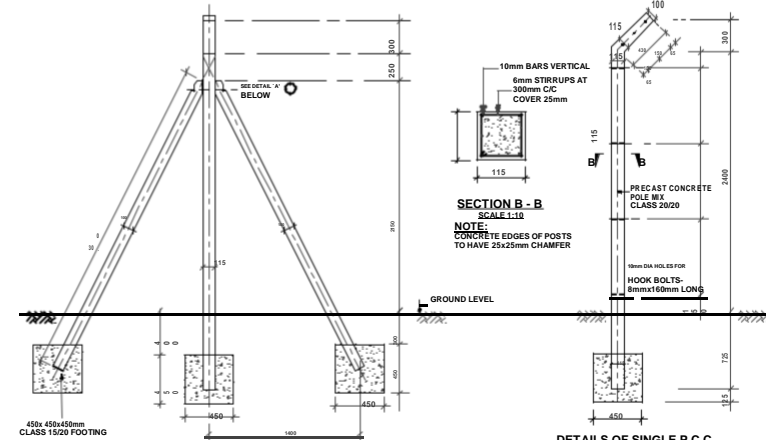


ELEVATION
SCALE 1:20

DETAILS OF 6M WIDE GATE

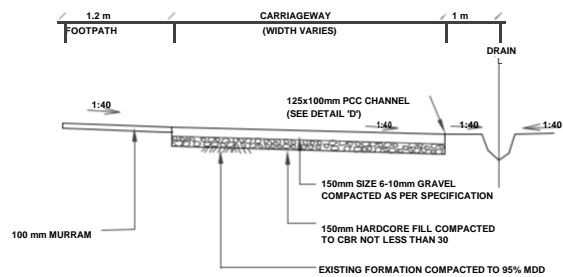


DETAILS OF HINGE
(VIEW AT Y - Y)
SCALE 1:5



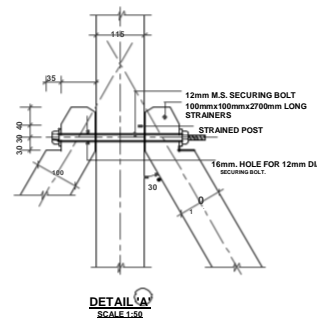
DETAILS OF STRAINING POST FOR
CHAIN LINK FENCE AT 33.3m Cts.
SCALE 1:50

DETAILS OF SINGLE P.C.C.
POST AT 3.30m Cts.
SCALE 1:50

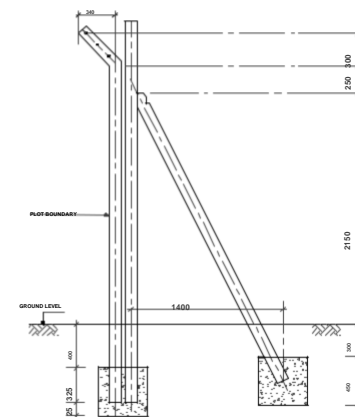


TYPICAL SECTION OF GRAVEL ROAD

SCALE 1:50



DETAIL 'A'
SCALE 1:50



DETAILS OF CORNER POSTS
SCALE 1:50

- NOTES**
- a. ALL CORNER POSTS AND EVERY 10th SINGLE POST TO HAVE 2No. STAYS
 - b. POSTS TO BE AT 3000mm CENTRES
 - c. TOP OF ALL POSTS TO BE KEPT IN UNIFORM LIN
 - d. EXTENT OF FENCING IS SHOWN ON THE LAYOUT PLAN
 - e. CHAINING TO BE GAUGE IS GALVANIZED STEEL WIRE
 - f. EXTENT OF FENCING IS SHOWN ON THE LAYOUT PLAN

FENCE, GATE AND ROAD

Project Title:
Up-scaling Basic Sanitation
for Urban Poor
(UBSUP)

Funding Agency:

Empowering Urban Water Services

Designed and drawn by: UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by: CEO WSTF

Notes:
See Above

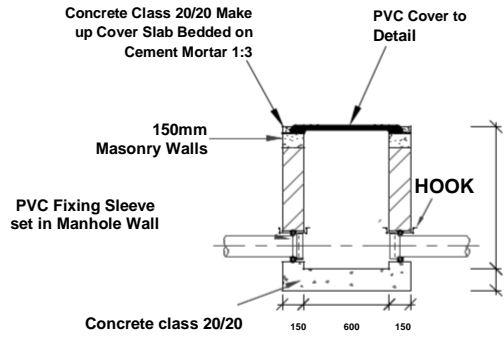
CHAIN LINK FENCE

Index-No.: **Description:**

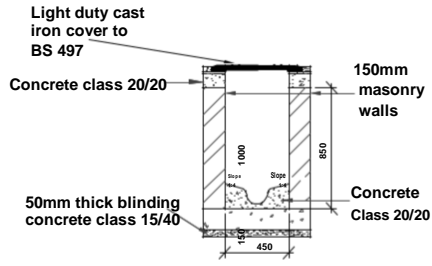
Date:

Scale: As shown

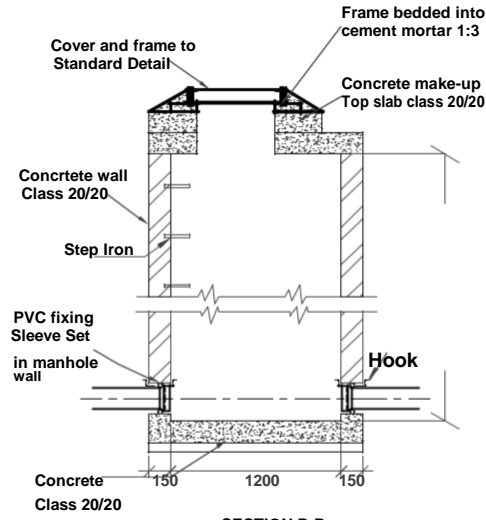
page:



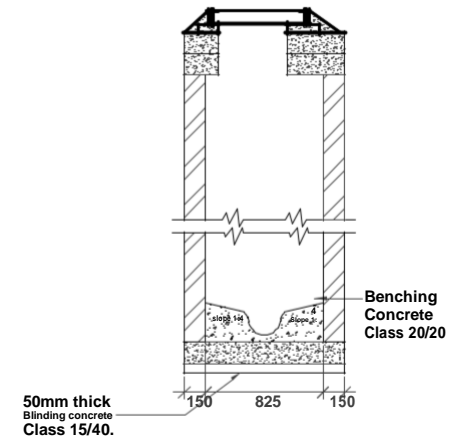
SECTION B-B
SCALE 1:40



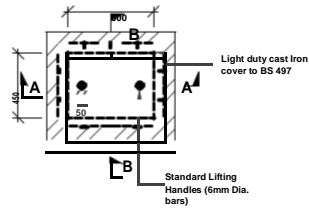
SECTION A-A
SCALE 1:40



SECTION B-B
SCALE 1:40



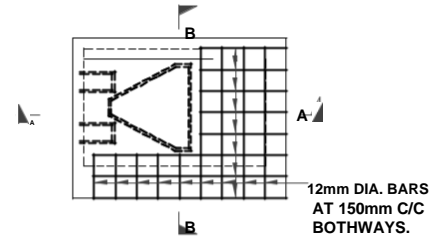
SECTION A-A
SCALE 1:40



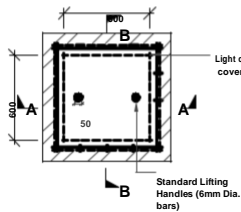
PLAN
600mmx450mm PVC Cover
SCALE 1:40

NOTES:

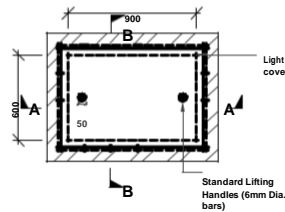
1. INSPECTION CHAMBER SHOULD BE SIZE 600x450mm UP TO DEPTH OF 1000mm
2. FOR CHAMBERS EXCEEDING DEPTH 1000mm SIZE SHOULD BE 850x1200mm
3. WALLS OF INSPECTION CHAMBER TO BE OF MASONRY
4. ALL CONCRETE TO BE CLASS 20/20 IN ACCORDANCE WITH THE SPECIFICATION



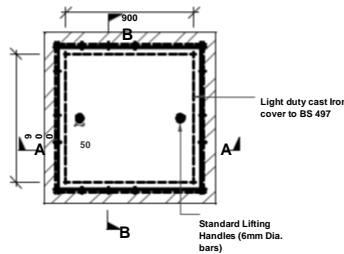
PLAN
SCALE 1:40



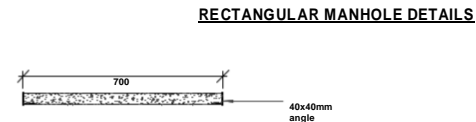
PLAN
600mmx600mm PVC Cover
SCALE 1:40



PLAN
900mmx600mm PVC Cover
SCALE 1:40



PLAN
900mmx900mm PVC Cover
SCALE 1:40



SECTION
700mmx400mm PCC Cover
SCALE 1:40

INSPECTION CHAMBER DETAILS

CHAMBERS AND MANHOLES

Project Title:
Up-scaling Basic Sanitation for Urban Poor (UBSUP)



Designed and drawn by:UBSUP technical team
Checked by: Programme Manager Urban Investments
Approved by:CEO WSTF

Notes:
See Above

Index-No.:	Description:

Date:
Scale: As shown
page: