U1: DRY TOILET
U2: URINE DIVERTING DRY TOILET (UDDT)
U4: POUR FLUSH TOILET

slab

water seal
U5: CISTERN FLUSH TOILET
U6: URINE DIVERTING FLUSH TOILET (UDFT)
S1: URINE STORAGE TANK/CONTAINER
S2: SINGLE PIT

support ring

20-40cm

>3m
S3: SINGLE VENTILATED IMPROVED PIT (VIP)
S4: DOUBLE VENTILATED IMPROVED PIT (VIP)
S5: FOSSA ALTERNA
S6: TWIN PITS FOR POUR FLUSH
S7: DEHYDRATION VAULTS

view A

section

- Urine diversion
- Urine tank
- Fly screen
- Φ > 11 cm vent pipe
S8: COMPOSTING CHAMBER
S10: ANAEROBIC BAFFLED REACTOR (ABR)
S11: ANAEROBIC FILTER

- inlet
- tee
- liquid level
- scum
- baffle
- settlement zone
- filter
- outlet
- filter support
- sludge
- access covers
S12: ANAEROBIC BIOGAS REACTOR
C1: JERRYCAN / TANK
C2: HUMAN-POWERED EMPTYING AND TRANSPORT
C3: MOTORIZED EMPTYING AND TRANSPORT
C4: SIMPLIFIED SEWERS
C5: SOLIDS-FREE SEWER
C6: CONVENTIONAL GRAVITY SEWER
C7: TRANSFER STATION (UNDERGROUND HOLDING TANK)

C8: SEWER DISCHARGE STATION
C7: TRANSFER STATION

C8: SEWER DISCHARGE STATION (SDS)
T1: ANAEROBIC BAFFLED REACTOR (ABR)
T2: ANAEROBIC FILTER

- inlet
- tee
- liquid level
- scum
- settlement zone
- baffle
- filter
- outlet
- access covers
- sludge
- filter support
T3: WASTE STABILIZATION PONDS (WSP)

1 anaerobic

2 facultative

3 aerobic maturation

1 anaerobic

2 facultative

3 aerobic maturation

inlet

outlet

sludge

inlet

outlet

sludge

inlet

outlet

sludge

oxygen supply through surface contact

oxygen supply through surface contact

oxygen supply through surface contact

0.5m - 1.5m

2m - 5m

1m - 2.5m
T4: AERATED POND

Sludge

oxygen supply through aerators

inlet

outlet

2m - 6m
T5: FREE-WATER SURFACE CONSTRUCTED WETLAND

- Aquatic plants (macrophytes)
- Rhizome network
- Sludge
- Water surface
- Inlet
- Outlet
T6: HORIZONTAL SUBSURFACE FLOW CONSTRUCTED WETLAND

- inlet pipe and gravel for wastewater distribution
- hydrological gradient
- aquatic plants (macrophytes)
- effluent outlet (height variable)
- wet well and cover
- slope 1%
- rhizome network
- small gravel
- watertight membrane or clay
- inlet
- outlet
T7: VERTICAL FLOW CONSTRUCTED WETLAND

- Inlet
- Air pipe
- Gravel
- Slope 1%
- Drainage pipe
- Outlet
- Aquatic plants (macrophytes)

80 cm
T8: TRICKLING FILTER
T9: UPFLOW ANAEROBIC SLUDGE BLANKET REACTOR (UASB)
T10: ACTIVATED SLUDGE

- Inlet
- Compressed air
- Clarifier
- Outlet
- Recirculation
- Extracted sludge
- Sludge
T11: SEDIMENTATION / THICKENING PONDS
T13: PLANTED DRYING BEDS

- Screening chamber
- Aquatic plants (macrophytes)
- Ventilation pipe
- Wall
- Outlet
- Drainage pipe
- Sludge
- Sand
- Drainage layer
- Mesh
- Gravel
- Concrete blocks or course gravel
T15: ANAEROBIC BIOGAS REACTOR
D1: FILL AND COVER / ARBORLOO
D2: URINE APPLICATION
D3: APPLICATION OF DEHYDRATED FAECES
D4: APPLICATION OF COMPOST/ECO-HUMUS
D5: IRRIGATION

treated wastewater
D6: SOAK PIT
D7: LEACH FIELD

settling tanks

settled effluent
D8: AQUACULTURE PONDS

- Inlet
- Sludge
- Outlet
D9: FLOATING PLANT (MACROPHYTE) POND
D10: WATER DISPOSAL / GROUNDWATER (GW) RECHARGE
D11: LAND APPLICATION OF SLUDGE
D12: SURFACE DISPOSAL