



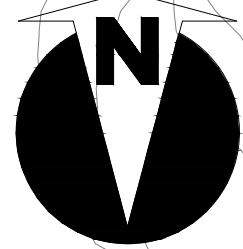
TECHNICAL SPECIFICATIONS

1. Landfill liner systems shall comply with minimum standards for Class B or C facilities, as applicable.
2. Geomembrane liners must have a minimum thickness of 1.5 mm HDPE unless otherwise specified by the engineer.
3. Leachate collector pipes shall be HDPE perforated pipe, minimum 110 mm diameter, laid to required slopes
4. All drainage pipes shall be installed on a 150 mm minimum layer of graded bedding material.
5. All geomembrane welding works shall be performed by certified technicians using approved welding equipment.
6. Compaction of landfill cells shall achieve a minimum density of 93% MOD AASHTO or as specified.
7. Road surfacing shall consist of a minimum 150 mm G5 sub-base with a tarred (bituminous) top layer.
8. Stormwater channels shall be constructed using reinforced concrete with appropriate slopes to prevent standing water.
9. The weighbridge foundation shall be constructed with reinforced concrete in accordance with manufacturer guidelines.
10. Electrical services for the office and weighbridge must comply with IEC/SANS electrical installation standards.

LEGEND

- MH LEACHATE COLLECTION MANHOLE
- S66 SETTING OUT POINT
- U CADASTRAL POINT
- SOLID WALL LEACHATE COLLECTOR PIPE 200mm Ø
- PERFORATED LEACHATE COLLECTOR PIPE 160mm Ø
- ROADWAY CLEARED UNDER CURRENT PHASE, WITH 150mm RIP & RECOMPACT LAYER AND WEARING COURSE

COORDINATE LIST WGS Lo29			
Setting Out Co-ordinates			
POINT CONST.	Y-COORD	X-COORD	ELEVATION
S01	-30,6896	26,6640	1325,5
S02	-30,6912	26,6661	1323,5
S03	-30,6923	26,6650	1324
S04	-30,6909	26,6632	1323
S05	-30,6909	26,6626	1325
S06	-30,6911	26,6646	1323



CONSULTANT:

PURPOSE: CONCEPT DESIGN

Proposed Malitswai Landfill – Layout Plan

PLAN VIEW

DESIGNED/APPROVED: MR. S. MASEKO

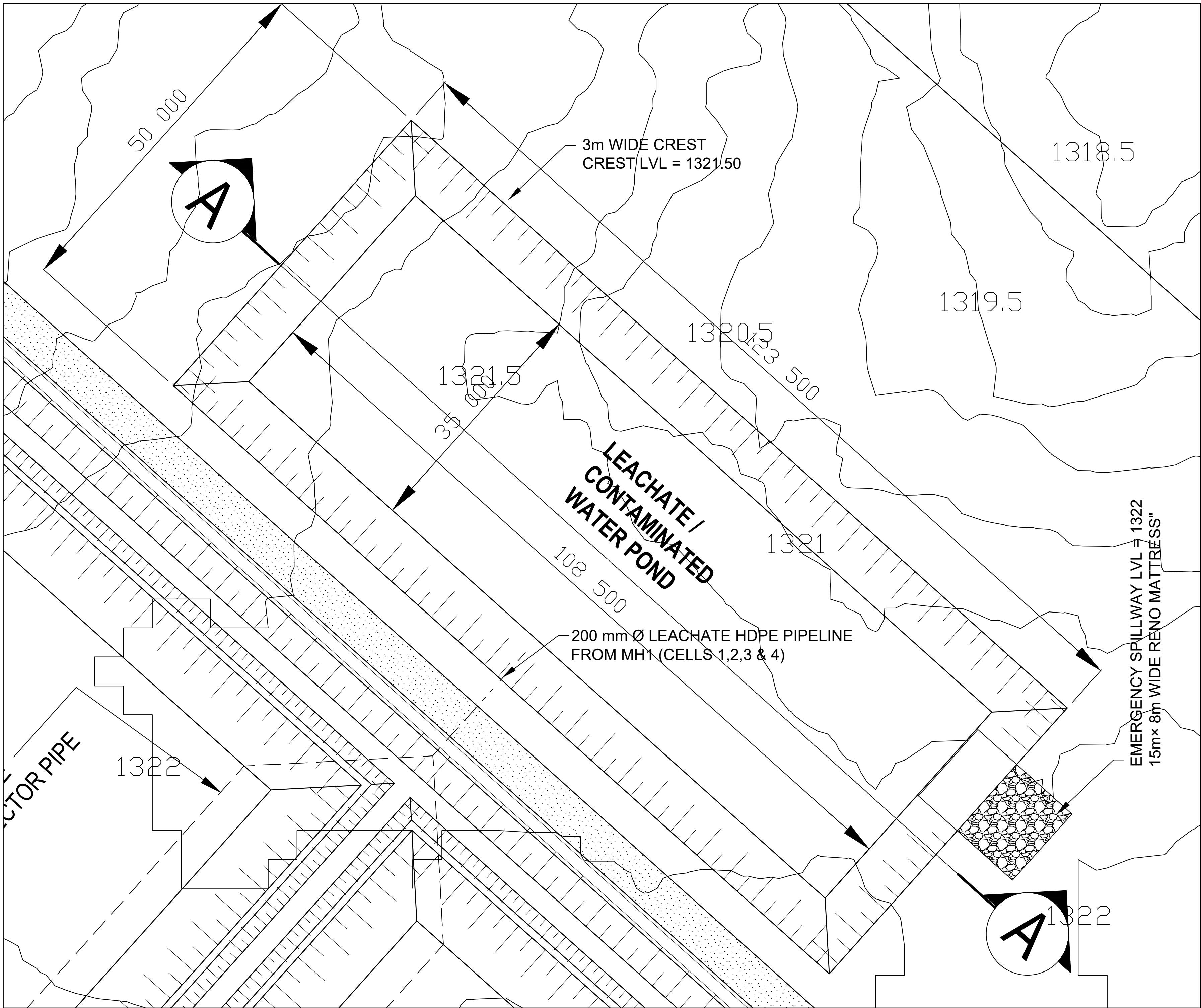
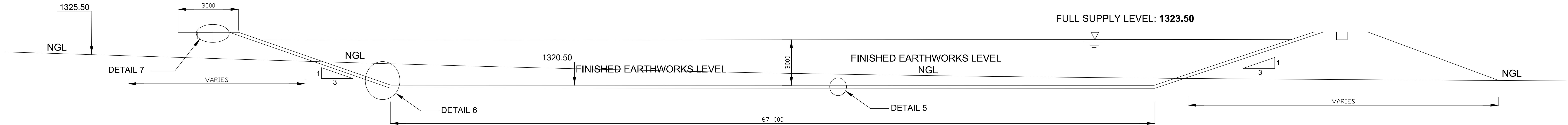
DRAWN: MR. M. MBABO

DATE:

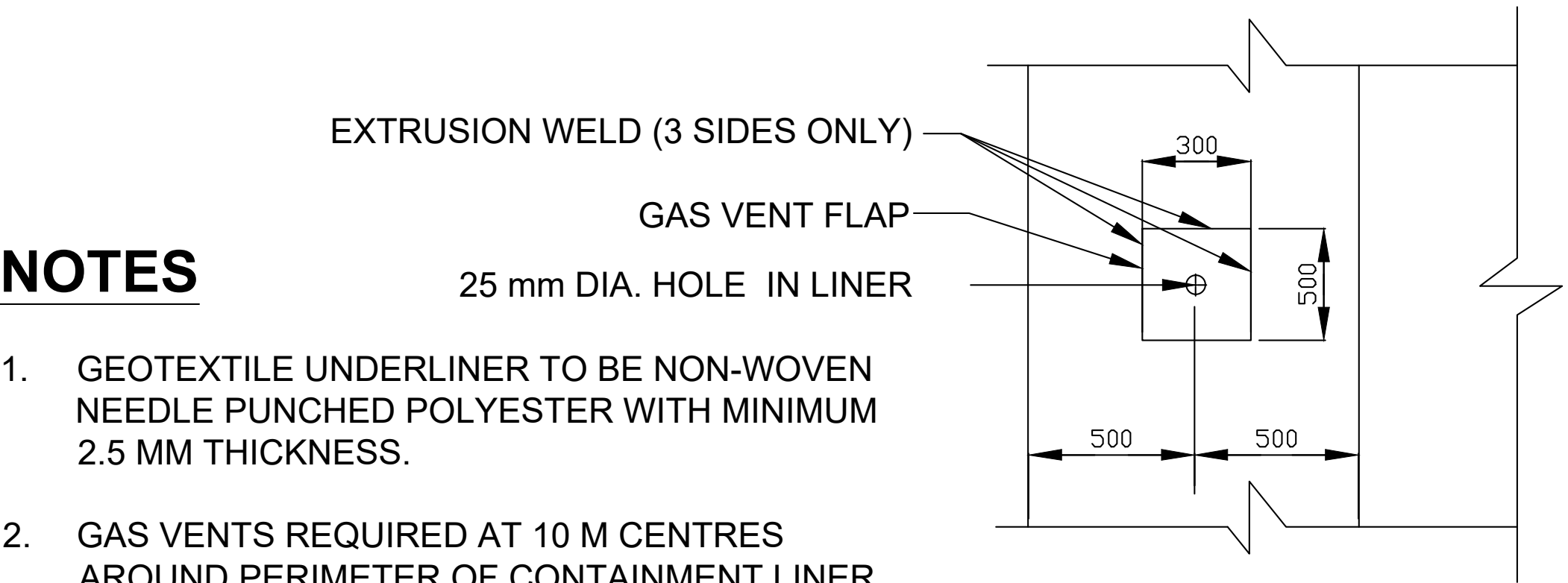
SHEET 1 OF 4

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LEACHATE DAM GENERAL ARRANGEMENT
Scale: 1:100



PLAN
DETAIL 4
ANCHOR TRENCH & GAS VENT DETAIL
Scale: N.T.S

NOTES

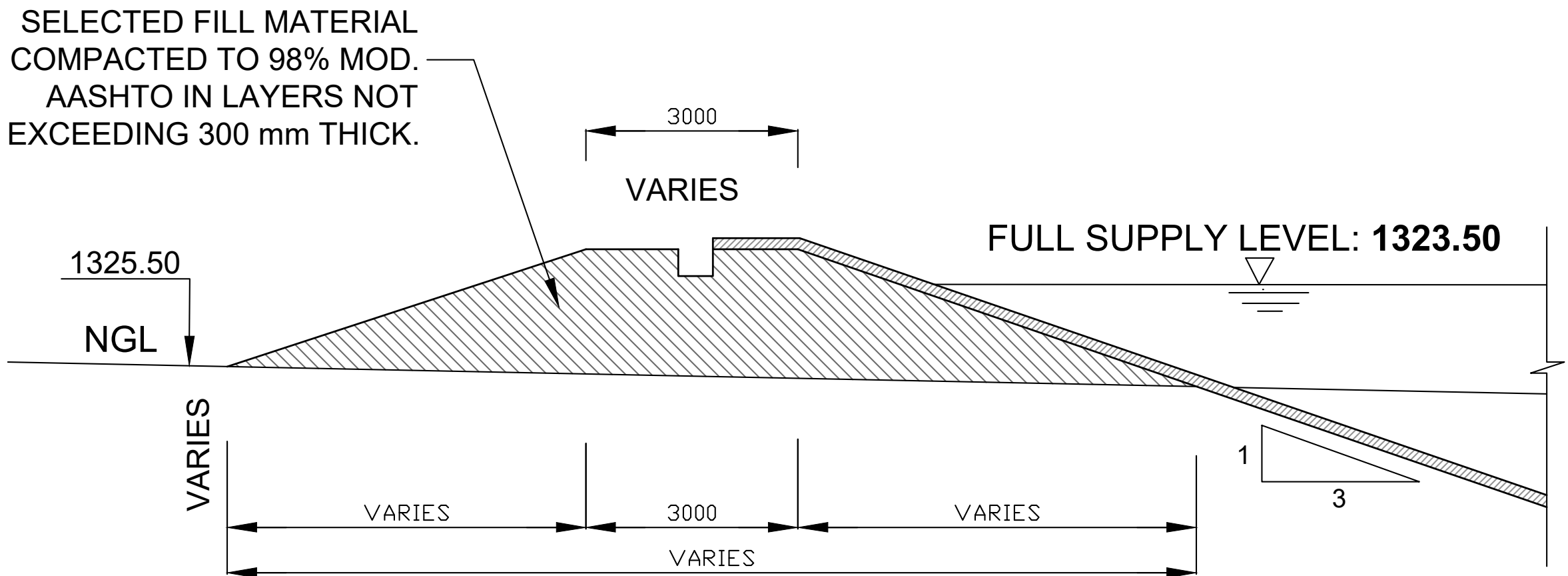
- GEOTEXTILE UNDERLINER TO BE NON-WOVEN NEEDLE PUNCHED POLYESTER WITH MINIMUM 2.5 MM THICKNESS.
- GAS VENTS REQUIRED AT 10 M CENTRES AROUND PERIMETER OF CONTAINMENT LINER FLOOR.
- GAS VENT TO BE LEFT OPEN AND NOT FILLED.

LEGEND

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- S66 SETTING OUT POINT
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SECTION A-A

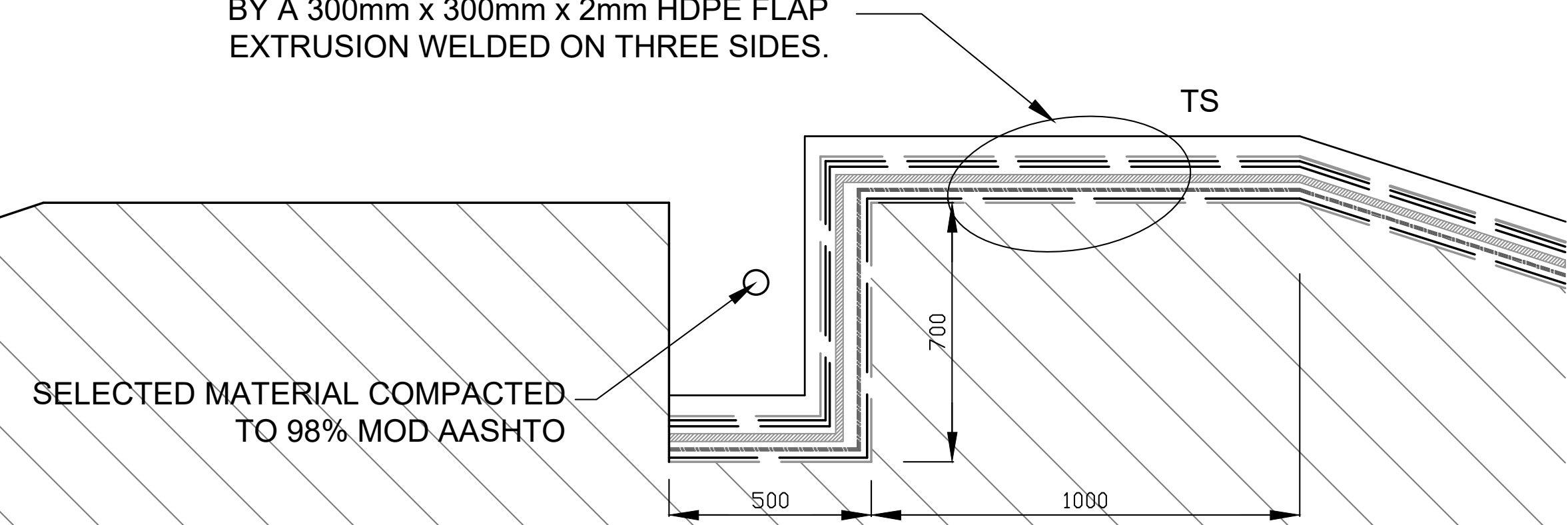
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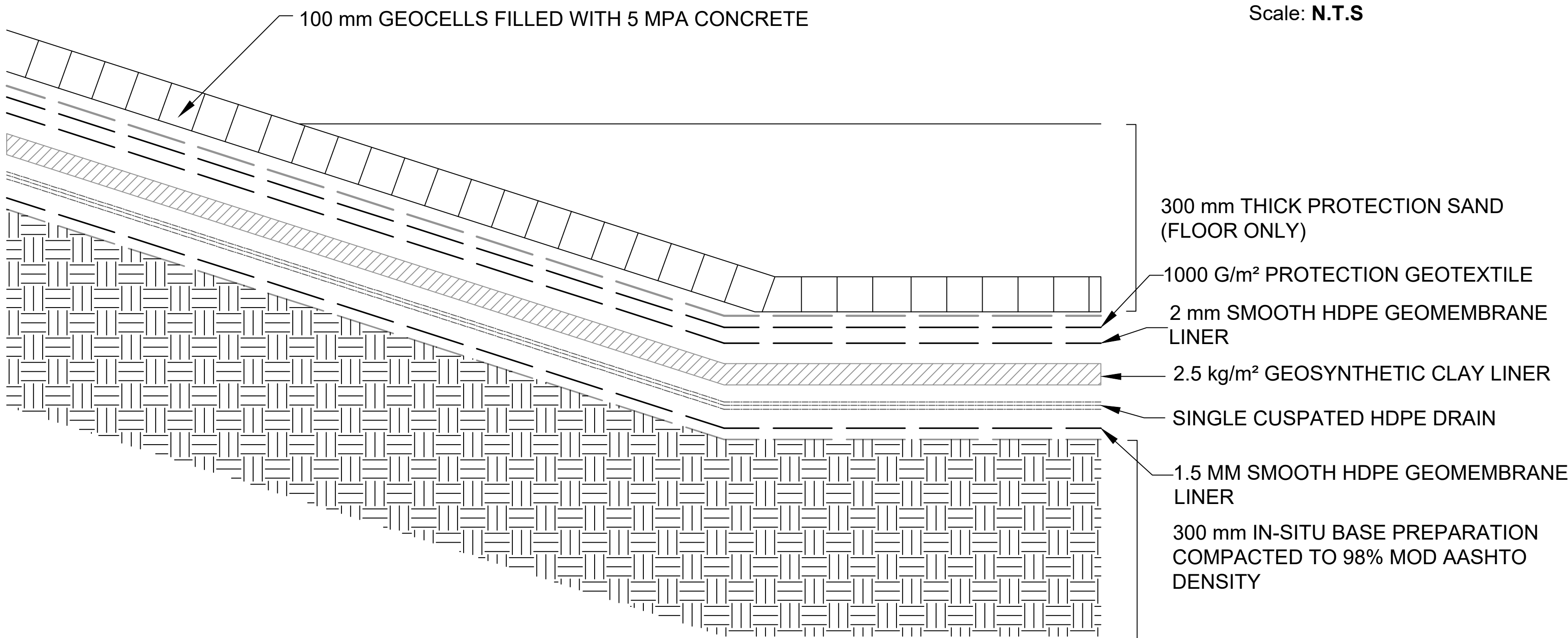
DAM WALL DETAIL

Scale: N.T.S

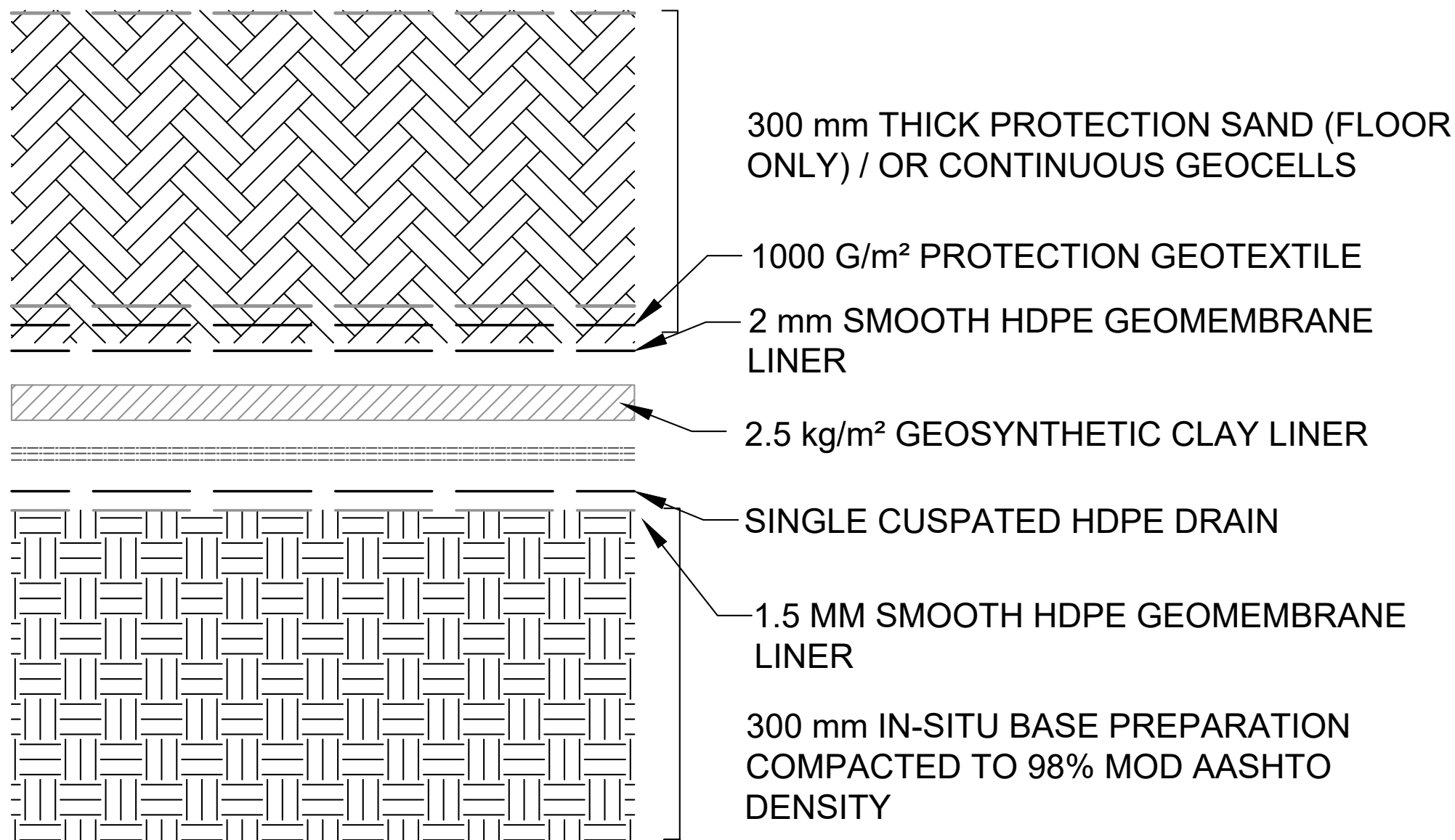
DETAIL 4: GAS VENTS (25mm HOLE COVERED BY A 300mm x 300mm x 2mm HDPE FLAP EXTRUSION WELDED ON THREE SIDES.



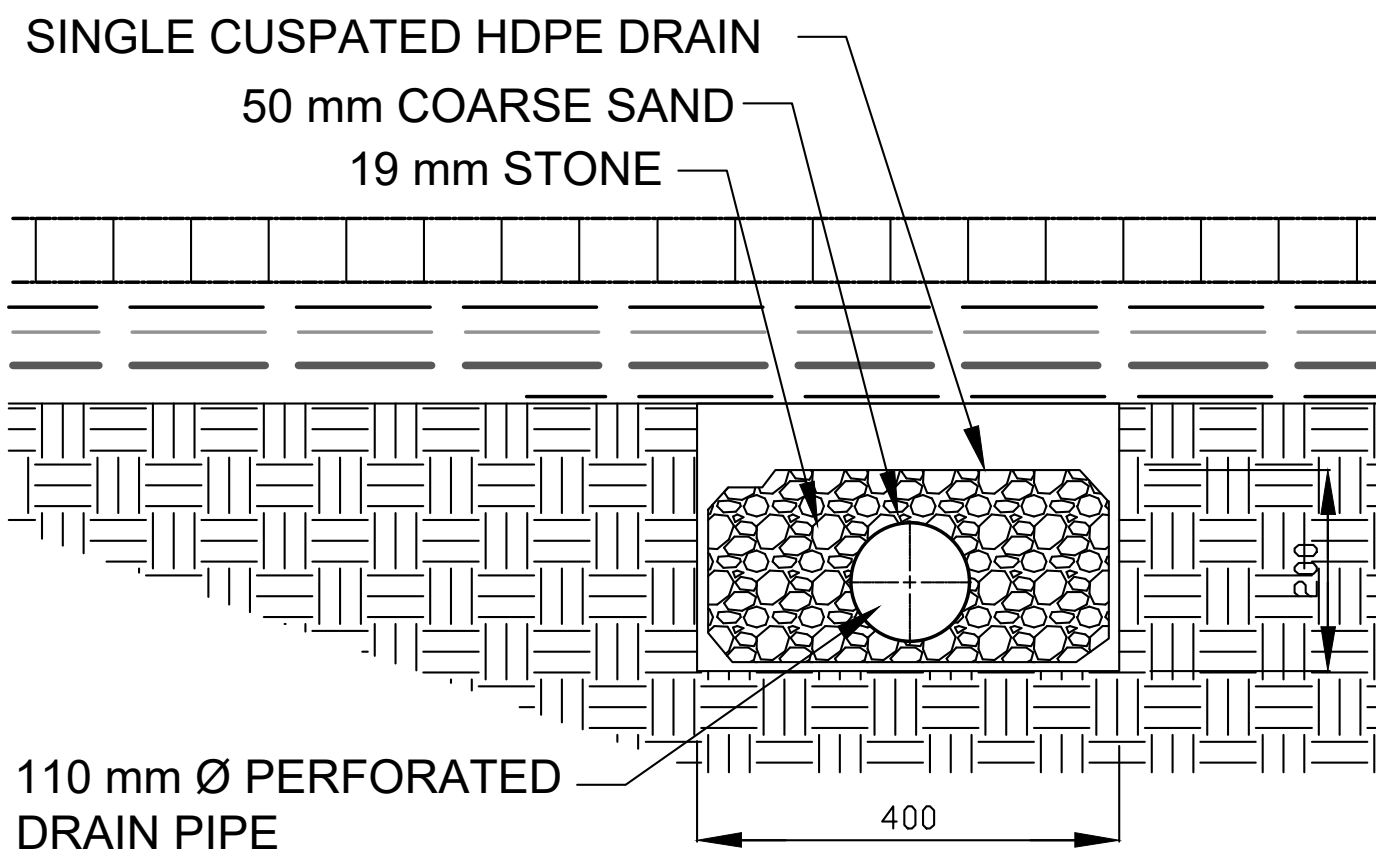
DETAIL 7
ANCHOR TRENCH DETAIL
Scale: 1:25



DETAIL 6
GENERAL LEACHATE DAM
CONTAINMENT BARRIER SYSTEM
Scale: N.T.S



DETAIL 5
GENERAL LEACHATE DAM
CONTAINMENT BARRIER SYSTEM
Scale: N.T.S

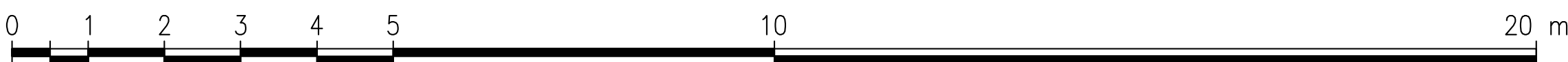


DETAIL 8
SUB-SOIL COLLECTOR TRENCH
Scale: N.T.S

GENERAL ARRANGEMENT NOTES

- AREA TO BE LINED MUST BE FREE OF PROTRUSIONS, STONES, ROOTS, AND VEGETATION.
- BASE SLOPE TO BE AT A SLOPE OF 1:200.
- EMBANKMENT SLOPES TO BE 1:3.
- ALL COMPACTION ON BASE AND SLOPE TO ACHIEVE 98% MOD AASHTO DENSITY.
- ANCHOR TRENCH TO BE FILLED WITH SELECTED AND APPROVED MATERIAL WOVEN IN PLACE WITH LAYERWORKS AND SLOPE.
- ALL GEOMEMBRANE PREPARATION AND INSTALLATION TO COMPLY WITH MANUFACTURER'S GUIDELINES.
- ONTRACTOR TO IDENTIFY OVERHEAD POWERLINE ROUTE (HIGH VOLTAGE) AND GAS LINES BEFORE STARTING, PLANT AND EQUIPMENT.
- SPILLWAY DETAILS ON DRAWING 672-2020-09.

SCALE 1:100



CONSULTANT:

IMBAWULA
CIVIL PROJECTS

PURPOSE: CONCEPT DESIGN

Proposed Malitswai Landfill – Layout Plan
LEACHATE DAM LAYOUT AND DETAILS

DESIGNED/APPROVED: MR. S. MASEKO

DRAWN: MR. M. MBABO

DATE:

SHEET

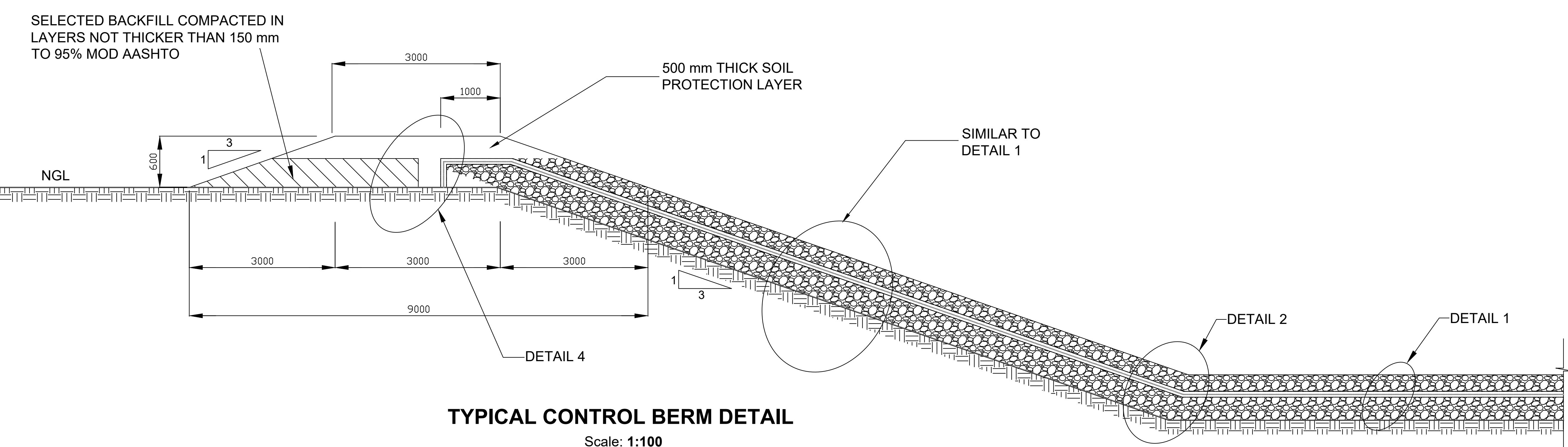
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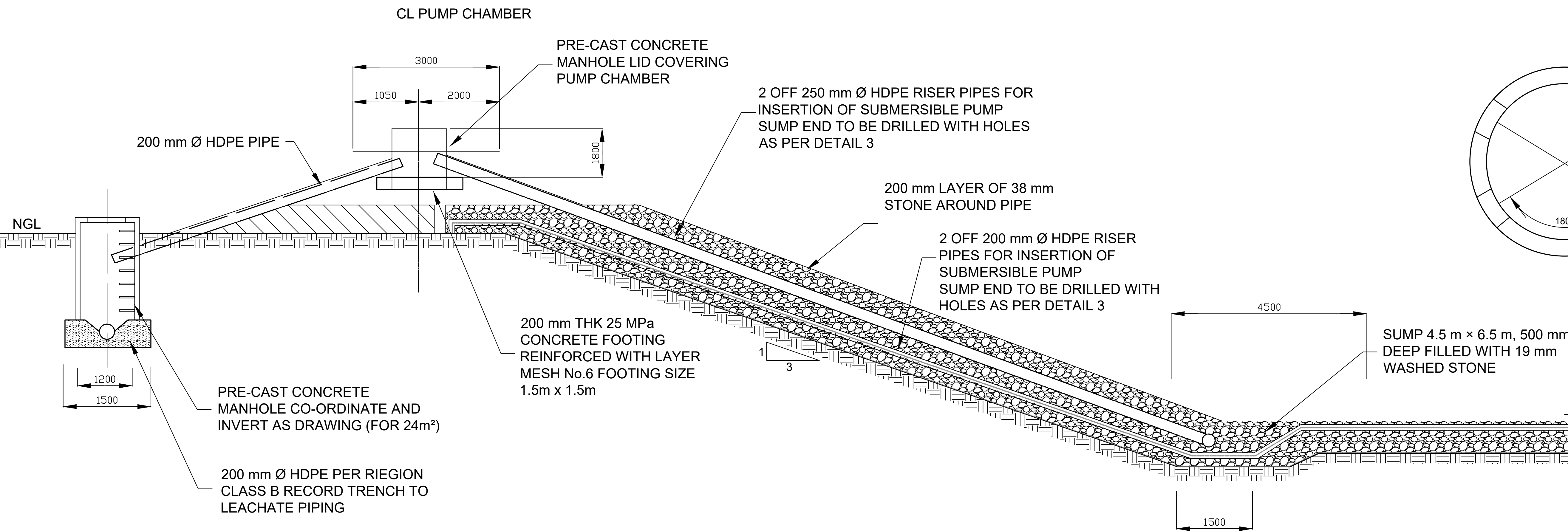
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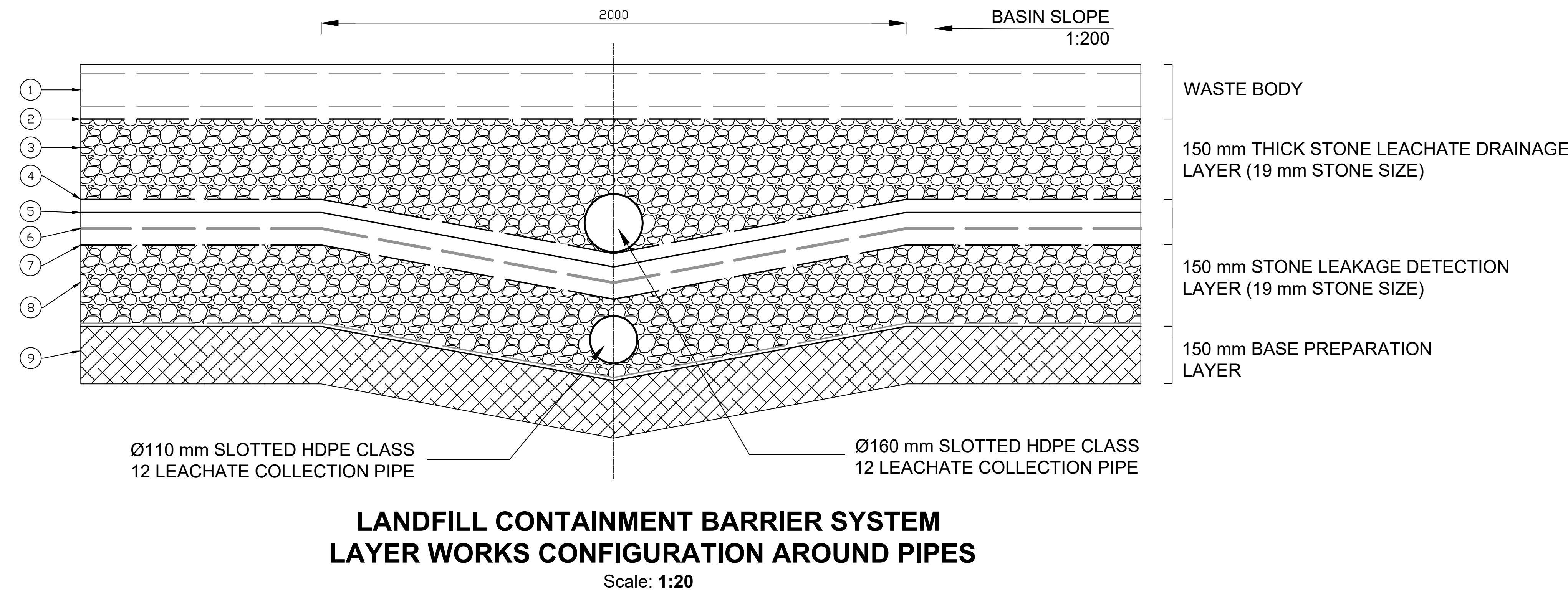
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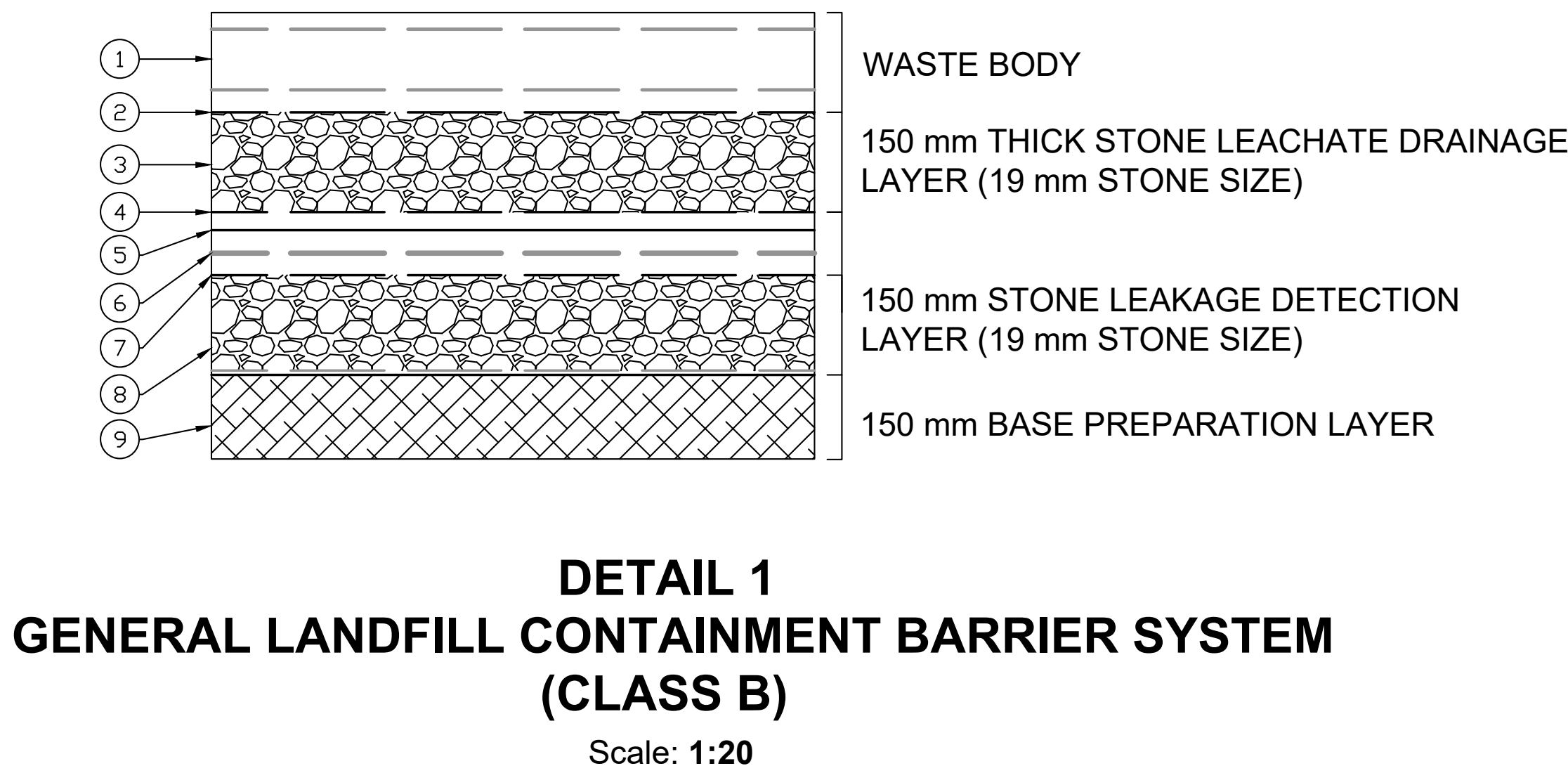
TYPICAL CONTROL BERM DETAIL
Scale: 1:100



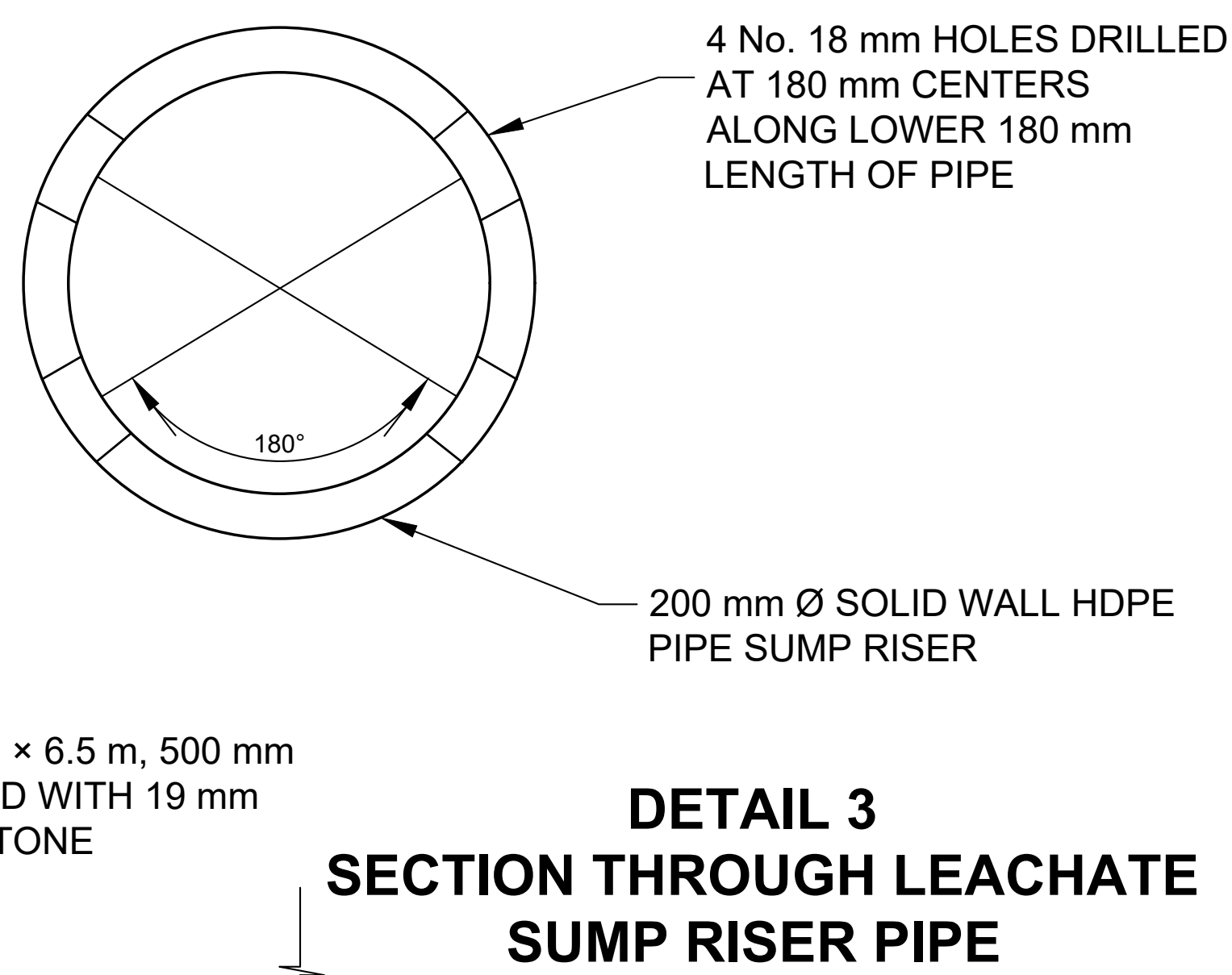
TYPICAL SECTION THROUGH SUMP AND LEACHATE MANHOLE
Scale: 1:100



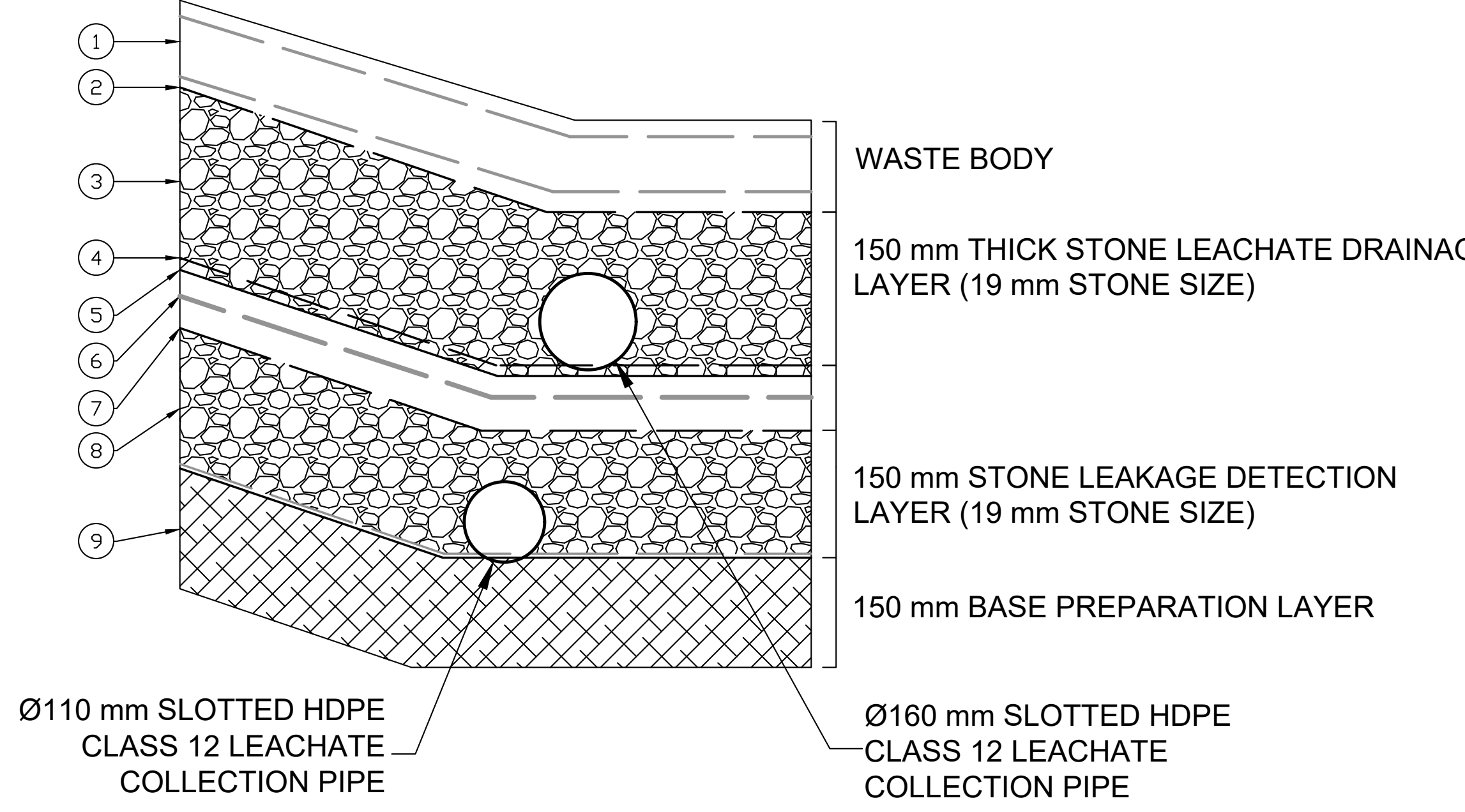
**LANDFILL CONTAINMENT BARRIER SYSTEM
LAYER WORKS CONFIGURATION AROUND PIPES**
Scale: 1:20



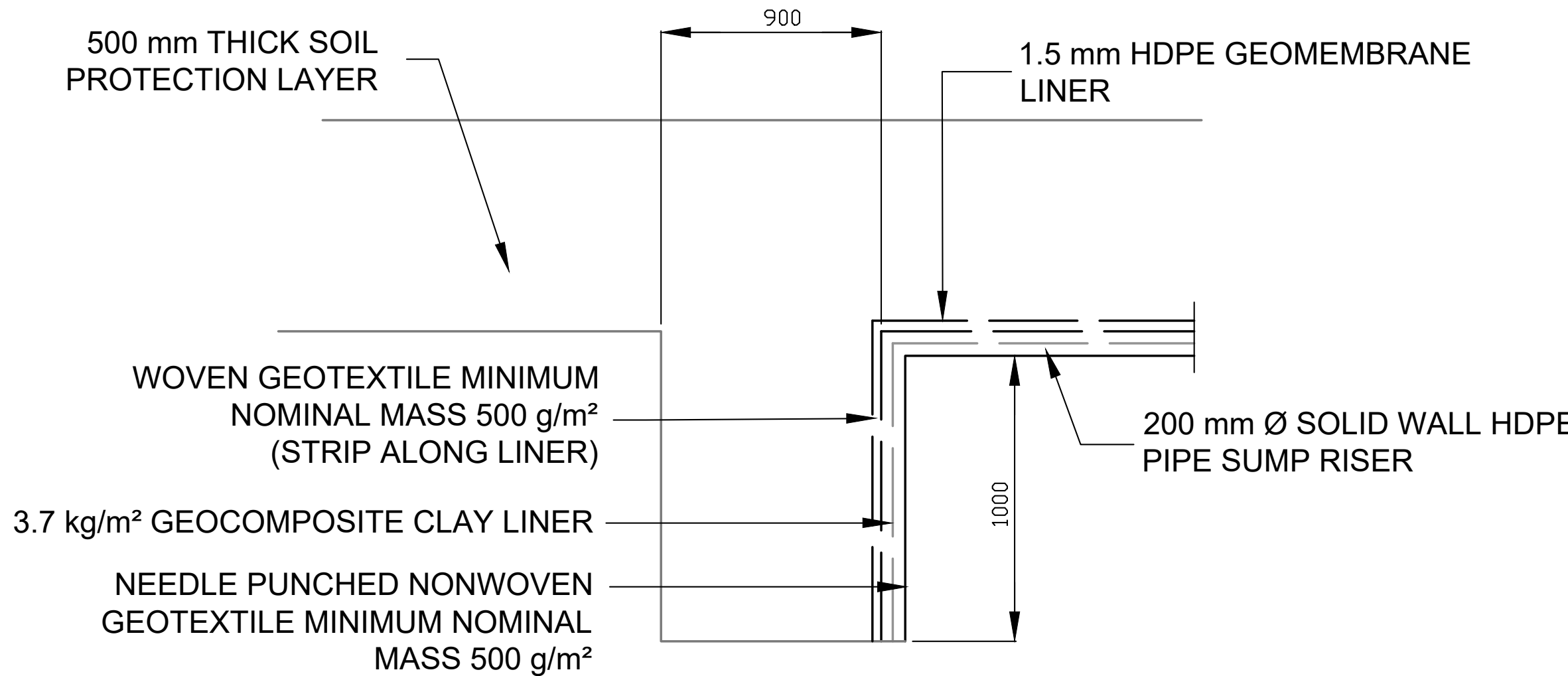
**DETAIL 1
GENERAL LANDFILL CONTAINMENT BARRIER SYSTEM
(CLASS B)**
Scale: 1:20



**DETAIL 3
SECTION THROUGH LEACHATE
SUMP RISER PIPE**



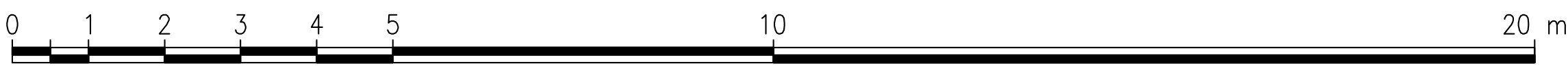
**DETAIL 2
LANDFILL CONTAINMENT BARRIER SYSTEM
SLOPING & HORIZONTAL LINER INTERFACE**
Scale: 1:20



**DETAIL 4
ANCHOR TRENCH DETAIL**

LABELING LEGEND	
LABEL	DESCRIPTION
①	WASTE BODY
②	WOVEN GEOTEXTILE MINIMUM NOMINAL MASS 210 g/m² (WITH PUNCTURE CBR TO LINER SIDE FACING WASTE)
③	150 mm THICK STONE LEACHATE DRAINAGE LAYER (19 mm STONE SIZE)
④	NEEDLE PUNCHED NONWOVEN GEOTEXTILE MINIMUM NOMINAL MASS 500 g/m²
⑤	1.5 mm HDPE GEOMEMBRANE LINER
⑥	3.7 kg/m² GEOCOMPOSITE CLAY LINER
⑦	NEEDLE PUNCHED NONWOVEN GEOTEXTILE MINIMUM NOMINAL MASS 500 g/m²
⑧	150 mm STONE LEAKAGE DETECTION LAYER (19 mm STONE SIZE)
⑨	BASE PREPARATION LAYER

SCALE 1:100



CONSULTANT:		PURPOSE: CONCEPT DESIGN	
		Proposed Malitswai Landfill – Layout Plan	
		LANDFILL CELLS TYPICAL LINER DETAILS (CLASS B BARRIER)	
		DESIGNED/APPROVED: MR. S. MASEKO	
DRAWN: MR. M. MBABO		SHEET 1 OF 4	REV. 00
DATE:		MA2026/08	

