



BRIGHT PLAN CIVILS

Project No: D2240
Project Name: Land West of Pagham Rd, Pagham
Sheet No: 1 SYSTEM 6 BASIN - S97
(DEEP SECTION)

BASIN LINER HYDROSTATIC UPLIFT ANALYSIS FOR SOFT CONSTRUCTION (@BED LEVEL)

DEEP AREA (WEST)

Level Data:

Thickness of surfacing layers above Liner:

Ground Level = 5.05 m
Depth to Groundwater = 1.2 m
Invert of Basin = 3.45 m
Level of Liner = 2.7 m

Depth between
groundwater & Liner = 1.15 m

Hydrostatic Uplift = 11.47 kN/m²

Factor of Safety = 1.2

Min' downward force required = 13.76 kN/m²

GW@3.24m AOD
(However
GW@4.46m AOD to east,
average taken of
3.85m AOD for FoS)

Topsoil = 150 mm
Clay = 500 mm
Sand = 100 mm
TOTAL = 750 mm

DMRB, CD 350 (Highway Structures, for Dead loads = 1.32)

Densities:

Top Soil = 15.7 kN/m³
Clay = 22 kN/m³
Sand = 14 kN/m³

Weight of Topsoil = 2.36 kN/m²
Weight of Clay = 11.00 kN/m²
Weight of Sand = 1.40 kN/m²

Downward force of layers over liner = 14.76 kN/m²

Make-up over Liner OK

Anchor Trench:

Dimension =
Pond area = 0 m²
(Base exl sides)

Width	Height	Total Length
0	0	0

Weight of Clay = 0.00 kN

Total min downward force required over pond area = 0 kN

Total downwards force over pond area from layers over liner = 0 kN
Total downward force from anchor trenches = 0.00 kN

Total resisting force = 0.00 kN

Design Sufficient



Project No: D2240
 Project Name: Land West of Pagham Rd, Pagham
 Sheet No: 2 SYSTEM 6 BASIN - S97
 (SWALE SECTION)

BASIN LINER HYDROSTATIC UPLIFT ANALYSIS FOR SOFT CONSTRUCTION (@BED LEVEL)

SHALLOW AREA (EAST)

Level Data:

Thickness of surfacing layers above Liner:

Ground Level = 5.05 m
 Depth to Groundwater = 0.59 m
 Invert of Basin = 4 m
 Level of Liner = 3.25 m

GW@4.46m AOD

Topsoil = 150 mm
 Clay = 500 mm
 Sand = 100 mm
 TOTAL = 750 mm

Depth between
 groundwater & Liner = 1.21 m

Hydrostatic Uplift = 12.06 kN/m²

Factor of Safety = 1.2

Min' downward force required = 14.48 kN/m²

DMRB, CD 350 (Highway Structures, for Dead loads = 1.32)

Densities:

Top Soil = 15.7 kN/m³
 Clay = 22 kN/m³
 Sand = 14 kN/m³

Weight of Topsoil = 2.36 kN/m²
 Weight of Clay = 11.00 kN/m²
 Weight of Sand = 1.40 kN/m²

Downward force of layers over liner = 14.76 kN/m²

Make-up over Liner OK

Anchor Trench:

Dimension =

Pond area = 0 m²

(Base exl sides)

Width Height Total Length
 0 0 0

Weight of Clay = 0.00 kN

Total min downward force required over pond area = 0 kN

Total downwards force over pond area from layers over liner = 0 kN

Total downward force from anchor trenches = 0.00 kN

Total resisting force = 0.00 kN

Design Sufficient