

CASE HISTORY

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REINFORCED SOIL WALL FOR A PRIVATE BUNGALOW IN AAMBY- VALLEY LONAVALA, MAHARASHTRA

LONAVALA, MAHARASHTRA, INDIA



Earth Retention

Client:	Products used & Quantity supplied:
R K GUPTA	TECHGRID GEOGRID MODULAR BLOCK
Main contractor:	
BEST GEOSYNTHETICS PVT LTD.	
Manufacturer & Supplier:	Year of construction:
TECHFAB (INDIA) INDUSTRIES LTD.	

Project description & Challenges:

Aamby valley is a meticulously planned city with world-class infrastructure and facilities, offering everything one needs for premium living. The client bungalow was situated on steep slope of around 70 to 80 degree of height around 16m as seen from Fig 6. The problem client was facing was the same as most of the owners in Aamby Valley do. Scouring was acute at some places which lead to collapse of the soil wedges, further leading to slope stability failure. Rains in Aamby valley are also very heavy. The type of soil there is of lateritic and basaltic origin, it acts like a hard rock in summer and flows with rain during rains. During monsoon the situation would worsen up again. A long-term solution was what the client was requiring.



Fig 1 : During Construction

Solution:

Due to the steep slope and the uncertain behavior of the soil, our client wanted to construct reinforced soil wall, which would not only reinforce and stabilize the slope but also provide the client with a permanent hard and a stable fascia. Here blocks were used as fascia panel and for reinforcement TechGrid TGU was used. The range of TechGrid TGU used varied as per the design requirement. TechGrid was used as it is highly durable and resistant to acids & alkalis, which are present in soil.

The height to be protected also was very high and a single whole stretch wall was not a safe solution, a berm of 6m was provided after a height of 6m. After which the remaining height of 10m height was constructed. The client did not face space restriction, which became a boon for us.

The main attraction as noted from Fig 3 is the stairs which were constructed on the wall, wherein the TechGrid was not disturbed and was laid as per design criteria.



Fig 2 : Stairs over reinforcement



Fig 3 : During Construction



Fig 4 : After Construction of stairs



Fig 5 : After Construction - View from far



Fig 6 : Structure after Construction

Conclusion :

Client was very much contented with the - On time completion and the perfection of the structure. This project has come out very well and has also withstood rains. Nevertheless the structure is functioning as per the expectations.

For further details kindly contact :

TechFab India Industries Ltd.
46/47, Maker Chambers VI, Nariman Point, Mumbai – 400021
Tel: + 91– 22 - 2287 6224 / 6225
E: info@techfabindia.com
W: www.techfabindia.com