STONE BUND (LOOSE BOULDERS BUNDING)

Loose Boulders Bunding (LBB) also known as dry stone walls can be constructed across the hill slopes at pre-determined spacing for developing land for cultivation, if stones are readily available in the locality. LBB can be constructed on contour or at minor gradient depending upon the need.

i) Suitability:

a) LBBs are suitable at places where stones are locally available.

b) It helps in retaining soil and subsequent formation of a bench terrace as well as drainage of the excess water.

c) LBBs are widely adopted in the hilly areas of Tamil Nadu and Kerala.

ii) Design

The spacing of VI of contour stonewalls is not rigid and suitable spacing can be adopted as per site conditions/ suitability. The following formulae are used in southern region of India.

VI = S/10 + 2 (for the areas receiving rainfall up to 1500 mm per annum)

VI = S/10 +1.5(for areas receiving rainfall more than 1500mm per annum)

VI = S/8 + 4 (in Udhagamandalam, Tamil Nadu)

Length of Contour stone wall/ Ha. = 100 x S/V.I.
Where, S = Slope, percent, and VI = Vertical interval in mt.
Shallow foundation to a depth of about 30cm is adopted.
The most commonly adopted cross section for the contour stone wall is a trapezoidal section with 60cm top width and 80cm bottom width. The height above the ground level is about 50cm.

Table: Vertical interval in (m) and Length (m) of contour Stone Wall per ha. for different land slopes (per cent) & rainfall zones

% Slope	Rainfall less than 1500mm		Rainfall more than 1500mm		In Nilgiri Hills	
	VI=S/10 +2	Length	VI=S/10+1.5	Length	VI= S/8+4	Length
2	2.2	91	1.7	118	4.250	47
5	2.5	200	2.0	250	4.625	108
8	2.8	286	2.3	348	5.000	160
10	3.0	333	2.5	400	5.250	190

12	3.2	375	2.7	444	5.500	218
15	3.5	429	3.0	500	5.875	255
18	3.8	474	3.3	546	6.250	288
20	4.0	500	3.5	571	6.500	308
22	4.2	524	3.7	595	6.750	326
25	4.5	556	4.0	625	7.125	351
28	4.8	583	4.3	651	7.500	375
30	5.0	600	4.5	667	7.750	387