$E_t = E_m + E_s + E_l$

$E_s + E_l$ — 30 % of earthwork of main contour bund

E_m = cross-sectional area x Total length of main contour bund

$= c/s \text{ area} \times \frac{100S}{VI}$

$E_s + E_l = \left(\frac{100S}{VI} \times \frac{30}{100}\right) \times c/s \text{ area}$

$E_t = c/s \text{ area} \times \left(\frac{100S}{VI} + \frac{30S}{VI}\right)$

$= c/s \text{ area} \times \frac{130S}{VI}$

$E_t = 1.3 \times \frac{100S}{VI} \times c/s \text{ area}$

→ Length of side bunds & lateral bunds - 30 % of length of main bund.

◆ Area lost due to contour bunding -

$A_L\% = \frac{1.3 \times S \times b}{VI}$ $\quad \frac{1.3 \times 2 \times b}{VI}$

where, b - base width of contour bund

❖ Surplusing arrangements in bunds -

→ for safe disposal of excess water/runoff from bunded area

1. Surplus Weir - (Waste Weir)

→ Do not cover the land, so can be located at any desired place in the bund

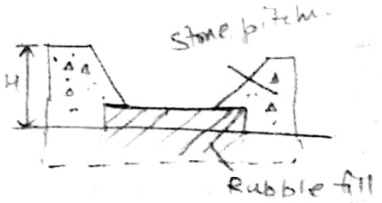
→ demerit - dvt. of flow channels - tend to move water from one field to another

Types -

i) Contour clear overwall weir -

→ type of permanent masonary structure

→ suitable for > 40 ha catchment area



ii) Pipe outlet -

→ consist of u/s & d/s stilling wells connected with a conduit