PART 1 — EARTHBAG TAMPING GUIDE

Each earthbag course must be tamped to at least 90% of its loose-fill height before the next course is laid. Use a flat-plate tamper weighing minimum 4 kg.

✔	Item	Notes
☐	Bag type confirmed: woven polypropylene (UV-stabilised), 18 kg capacity minimum	
☐	Soil fill: moistened to 'just moist' — forms ball, breaks cleanly when dropped	
☐	Bag filled to 90% only — no overfilling; sealed end tucked under	
☐	Each bag tamped until height reduces by ≥ 15% (loose to compacted)	
☐	Course is level and plumb before barbed wire is laid	
☐	Two strands of 4-point barbed wire between every course	
☐	Wire extends ≥ 150 mm beyond bag edge to overlap with next course	
☐	Courses staggered (running bond) — joints never align vertically	
☐	Buttresses / piers added every 3 m for walls > 2 m height	
☐	All bags plastered within 3 months of completion to prevent UV degradation	

TAMP QUALITY TEST	Target	Recorded
Course height after tamp (mm)	≤ 180 mm	
Width after tamp (mm)	≥ 380 mm (std bag)	
Level error per course (mm)	≤ 10 mm	
Plumb error per 1 m height	≤ 15 mm	

PART 2 — BARBED WIRE SHEAR CALCULATOR

Barbed wire between courses acts as the tensile / shear reinforcement. Calculate the number of wire rolls needed.

PARAMETER	FORMULA	YOUR VALUE
Total wall perimeter (m)	Measure on plan	
Wall height (m)	Design height	
Number of courses	Height ÷ 0.18 m per course	
Wire length per course (m)	Perimeter + 10% waste	
Total wire length (m)	Wire/course × no. of courses × 2 strands	
Roll length (m) — standard	90 m / roll (confirm with supplier)	
Rolls required	Total length ÷ 90	
Add 15% wastage; final rolls to buy		

★ *Never substitute smooth wire for barbed wire. The barbs are structural — they interlock under shear loading.*