

EARTH

STRUCTURES

Product is made up of a combination of:

1. Aggregates
2. Sand (not always used)
3. Waterproofing agent (Plasticure)
4. Cement (8 - 10%)
5. Water

1. Stabilised Rammed Earth (SRE) needs to be built on strip footings or slab.
2. Stabilform formwork is set up at wall location. Forms can be straight or curved as facets depending on client requirement. Wall thickness is 300mm or 400mm as standard. This can be customised if required.
3. Dampcourse is used to prevent rising damp under each wall.
4. The selected aggregates, sand (if used), cement, water and waterproofing agent are mixed via skid steer loader and the resulting compound is used to fill the formwork in layers. Each layer is compacted by pneumatic rammer, or in some cases, rammed by hand.
5. The wall is built in 'lifts' to the required height, and propped where required (usually at 4.2m for a 400 - 450mm thick wall).
6. Wall is left to cure overnight.
7. Formwork is stripped away from the wall, resulting in a fully finished product.
8. Walls are capped to prevent moisture transfer where required.
9. Where a structure has a roof, interior walls are required to be sealed. ES Group members will return to site to complete this process once roof has been finished.

The following checks and balances are practised by ES Group members to ensure a consistently excellent product:

1. Interior forms are washed with releasing agent to ensure completed walls are released from the formwork without damage.
2. Correct mix ratio of 1 bucket aggregate/sand: 2 x 20kg bags cement: 250mls water-proofing agent. Water is added until the required consistency is achieved. Note that this may change depending on client requirements.
3. Precise placement of the earth mix into formwork and correct depth of earth mix in each 'ram' (approximately 220mm unrammed, 150mm rammed) to achieve optimal strength, load-bearing capacity and visual appearance.
4. Careful monitoring of ramming time.
5. Visual verification of walls once formwork has been stripped.
6. Detailing of wall is completed including patching/plugging holes left by formwork bolts as required.