12 earth construction techniques

A summary of the Terraversa article. It presents twelve techniques grouped into monolithic systems, units and mixed structures. The geometry of this “wheel” inspires the Terraversa logo.

01 · Dug-out

The ground is excavated to create cave-like spaces, depending on the soil and site conditions.

02 · Earth sheltered

Earth covers or surrounds parts of a building. Its use requires structural design, drainage and protection against water.

03 · Fill-in

Earth is contained within a frame or enclosure. The article describes lattice frames and bags as different ways of containing it.

04 · Cut blocks

In certain cohesive soils, pieces are cut directly from the ground, such as the laterite blocks described in the article.

05 · Compressed earth

Includes rammed earth, compacted in layers inside formwork, and compressed earth blocks (CEBs), compacted in a mould using a press.

06 · Direct shaping

Earth in a plastic state is shaped directly to form elements and spaces, without first making separate blocks.

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07 · Stacked earth · cob

Portions of plastic earth are placed and joined to build the wall progressively.

08 · Moulded earth · adobe

A workable earth mixture is placed in moulds or shaped by hand and left to air-dry.

09 · Extruded earth

A machine pushes a plastic earth mixture through an opening to produce a profile, which is then cut into units.

10 · Poured earth

A fluid earth mixture is poured into formwork. The formulation and drying require technical control; crack-free results are not guaranteed.

11 · Daubed earth · wattle and daub

A framework of wood and branches is coated with earth. Related systems are known as quincha in Spanish.

12 · Straw and clay

Straw is mixed with clay-rich earth and placed as infill within a frame. It does not replace the load-bearing structure.

An introductory guide, not a construction manual. Each solution requires professional assessment of the soil, water, structure and project conditions.

Source: “12 Techniques of Earth Construction (English)”, supplied by Terraversa.

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