

History of Earth Architecture in Europe

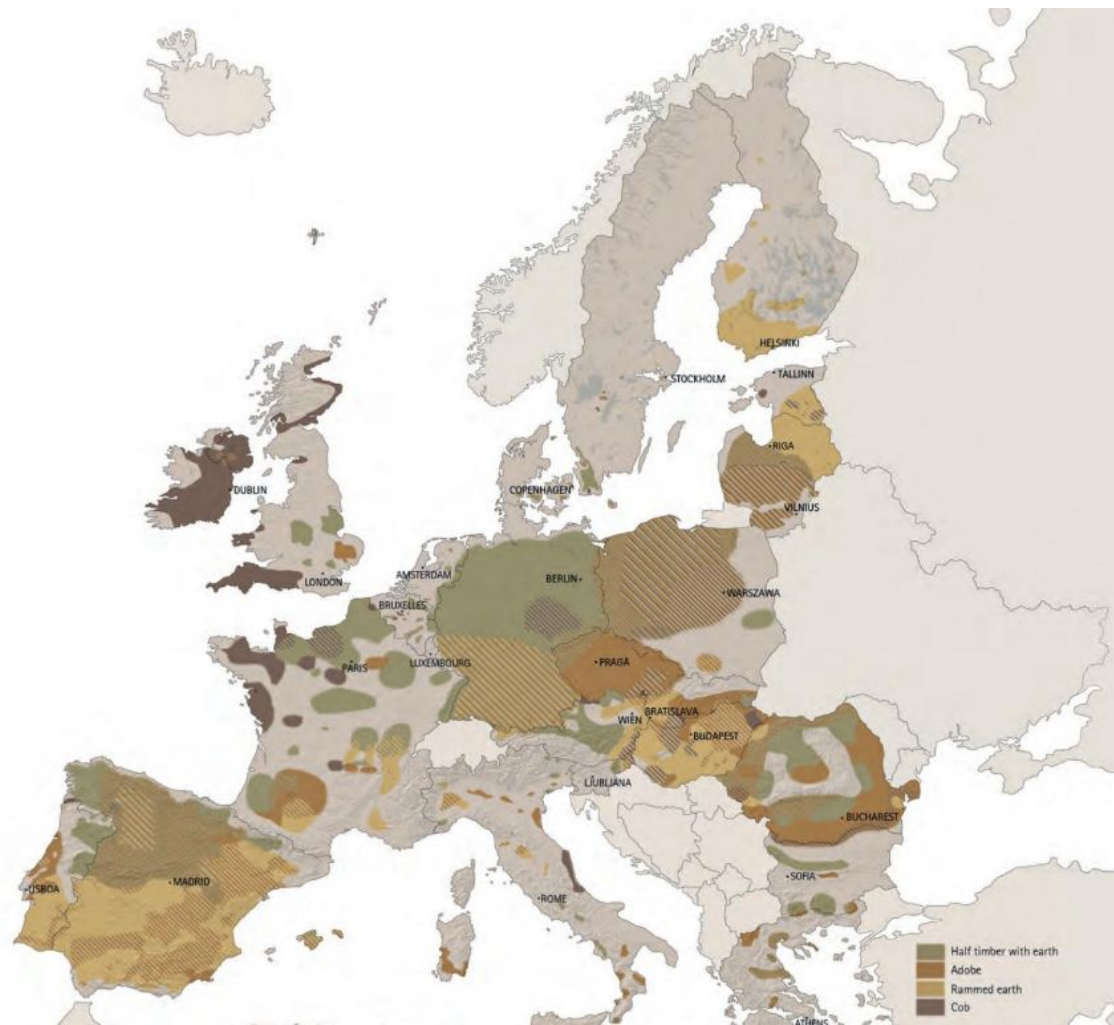
ARK-E0001 Special Project of Architecture, Earth Architecture, 07.09.2020-19.10.2020

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A regional approach

Northern Europe
Eastern Europe
Central Europe
Southern Europe



Map of earth heritage in the European Union

Northern Europe

Finland, Sweden, Denmark, Estonia, Ireland, UK



Open air museum, Denmark



Barn with wooden and earthen walls, Finland



Mud cabin in Ireland

Eastern Europe

Czech Republic, Slovakia, Austria, Romania, Hungary

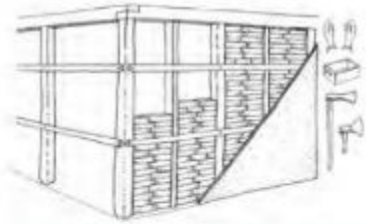




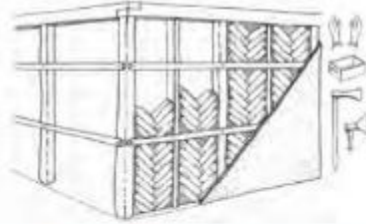
Half-timber structure of wall, Czech Republic



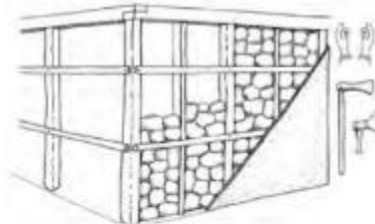
Log wall with clay, Austria



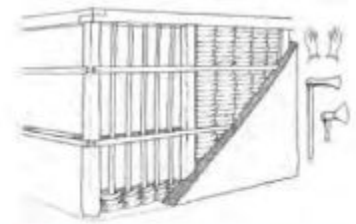
2.1. Half-timber with horizontal adobe in fill



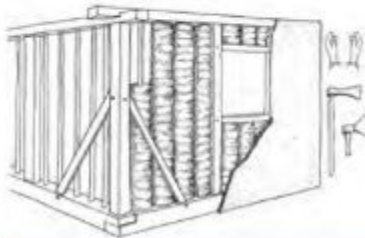
2.2. Half-timber with herringbone adobe in fill



2.3. Half-timber with cob in fill



2.4. Half-timber with donut-like in fill



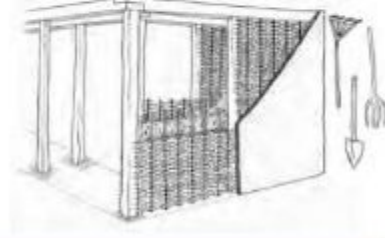
2.5. Half-timber with angle braces and donut-like in fill



2.6. Half-timber with earth in fill between two lath screens



2.7. Half-timber with adobe in fill and tile protection

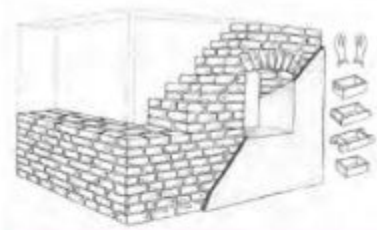


2.8. Half-timber with earth in fill between two wicker screens

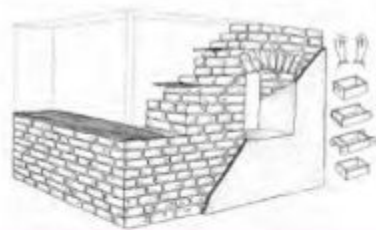
Half timber wall techniques



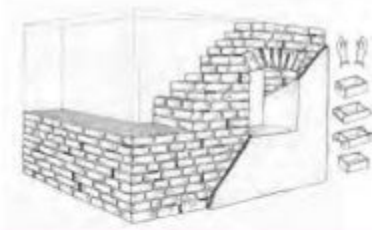
Example of adobe technique



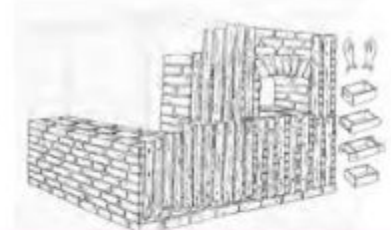
1.1. Adobe masonry wall



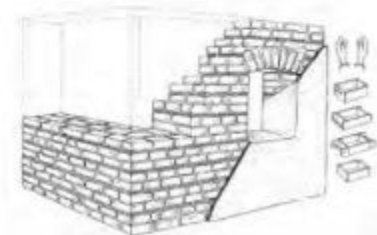
1.2. Adobe masonry with wattle or reed bedding layers



1.3. Adobe masonry with brick reinforcement



1.4. Adobe masonry with timber boards protection



1.5. Adobe masonry with stone slabs reinforcement

Central Europe

Germany, Poland, Netherlands, Belgium, Luxembourg,



Limburg, Germany



Belgium



Dwelling, mixed use of materials, Netherlands

Southern Europe

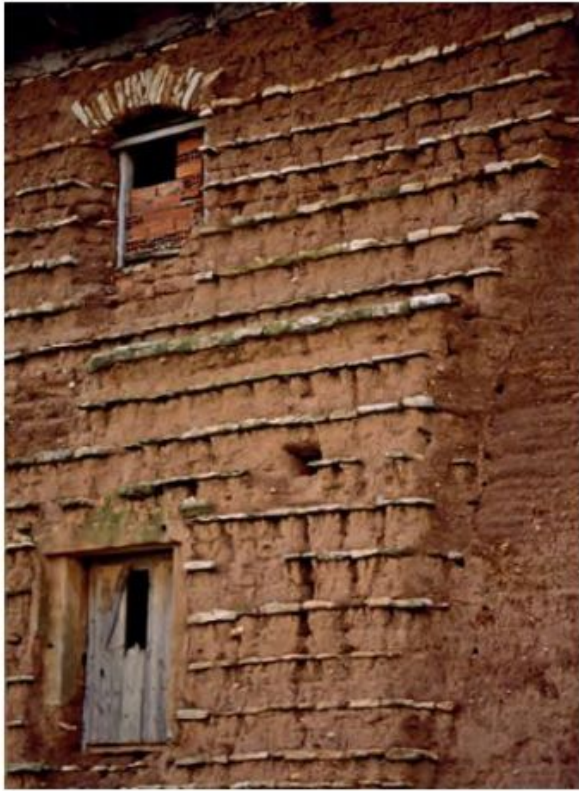
Spain, Portugal, Italy, Greece, France



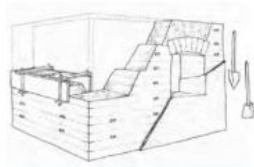
Earthen chimney, Spain



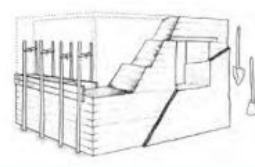
Wattle and daub house, France
Rammed earth house, Portugal



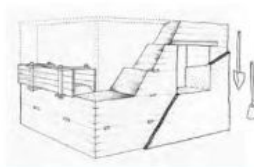
Stone and adobe, rammed earth built between stone masonry pillars, rammed earth reinforced with gypsum. All houses in Spain.



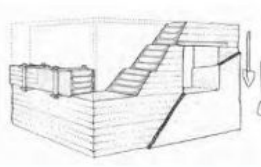
4.1. Rammed earth built with single or double board formwork



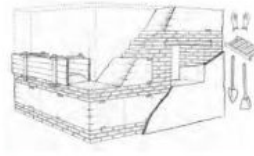
4.2. Rammed earth with single or double boards formwork fixed by vertical posts



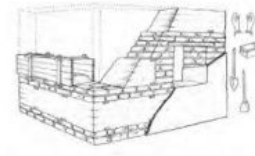
4.3. Rammed earth built between forms



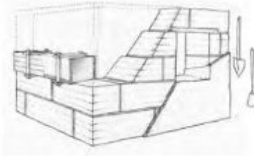
4.4. Rammed earth reinforced with layers of lime mortar



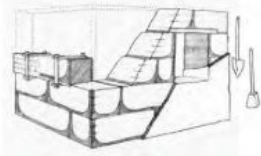
4.5. Rammed earth reinforced with layers of brick masonry bonded with lime mortar



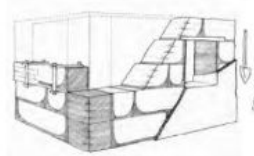
4.6. Rammed earth reinforced with layers of adobe masonry bonded with lime mortar



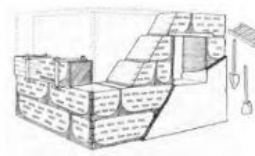
4.7. Rammed earth reinforced with gypsum mortar



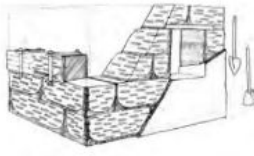
4.8. Rammed earth reinforced with gypsum mortar, forming waves



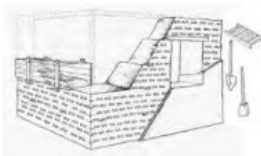
4.9. Rammed earth reinforced with gypsum mortar and gypsum pillars



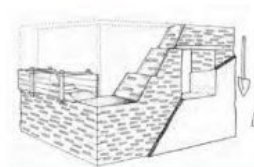
4.10. Rammed earth reinforced with gypsum mortar waves and bricks on outer surface



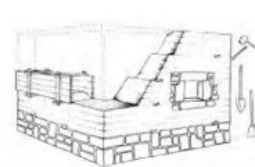
4.11. Rammed earth reinforced with gypsum mortar waves and stones on outer surface



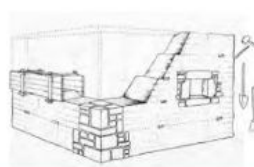
4.12. Rammed earth reinforced with bricks on outer surface



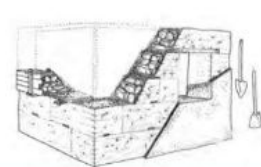
4.13. Rammed earth reinforced with stones on outer surface



4.14. Rammed earth with an ashlar masonry basement



4.15. Rammed earth with masonry pillars



4.16. Rammed earth with stone and lime mortar in fill

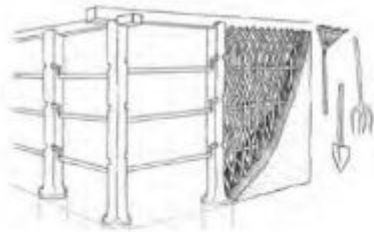
Rammed earth techniques



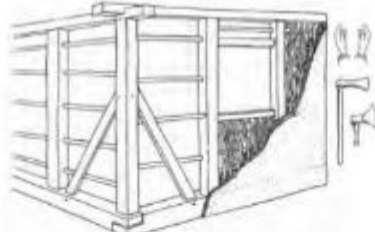
Adobe houses, Greece



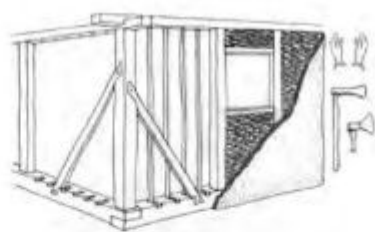
Wattle and daub house, France



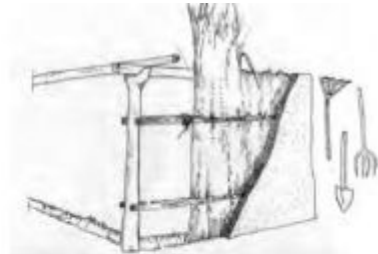
5.1. Post-and-beam structure with wattle-and-daub in fill



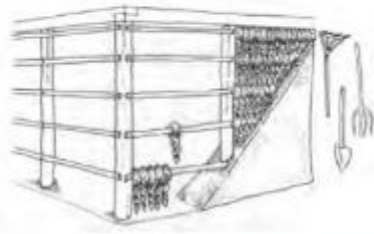
5.2. Post-and-beam with angle braces and wattle-and-daub in fill I



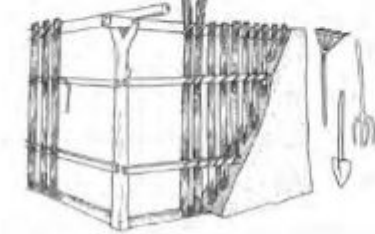
5.3. Post-and-beam with angle braces and wattle-and-daub in fill II



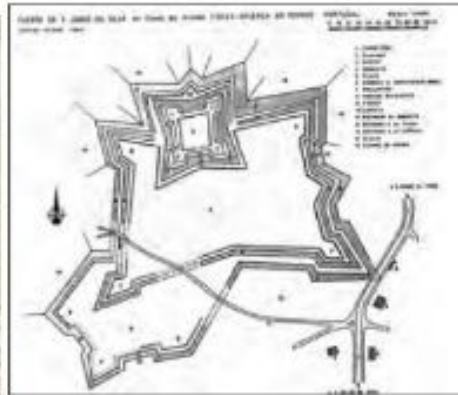
5.4. Daubed straw screens between posts



5.5. Daubed straw knotted plait between posts



5.6. Daubed straw tresses between posts



Earthen Fortress of Santiago, Spain
Earthen Fortress of S. Jorge da Silva, Portugal



House in stone, wood and earth

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