

An experimentation on the adobe manufacturing standardisation between past and future

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The town of Macerata (Central Italy), is characterised by a particular old settlement, known as Villa or Borgo Ficana; it was built in 19th century with earth technologies (cob and adobe). The most of its buildings are little private houses (two storeys cells of 5x5 m, with an outside stair). In the 2004 Borgo Ficana was recognised as an unique regional architectural, historical and cultural heritage, so the Macerata Municipality started all the necessary procedures to restore it (cfr. arch. Anna Paola Conti abstract). One of the problems concerned the complete re-building of one of the old houses, because it appeared in a complete state of decay. It was decided to use the *adobe* technology.

The decision led to try understanding if and how to re-introduce it in according to the contemporary economic, manufacturing and building codes context (Macerata is a seismic zone, too).

First of all it was necessary to find a local bricks-kiln inclined to produce all the adobes required; then they had to be characterised to guarantee both the physical and mechanical behaviours (especially in the case of a Public project as Borgo Ficana was). The problem was the actual lack of a national specific code to which refer to, so it was defined an especially protocol to test the adobe, which were produced by the Smorlesi factory, near Macerata.

The protocol provided some tests to carry out inside the factory first and subsequently to verify in an official testing laboratory. The whole procedure concurred to give the required assurances in order the adobe performances. Now the new house is finished and it represents the first Italian example of a new adobe building in seismic zone, realised in the context of a Public Project. We aim that this experience could be an important step in the direction of earthen architecture re-discovery.

Key words: cob, adobe, standardization, restoring

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