

Wattle and Daub

"The greatest part of our building in the cities and good towns of England consisteth only of timber, for as yet few of the houses of the communalty (except here and there in the west country towns) are made of stone.... 'these english', quoth he [a Spaniard of Queen Mary's day], 'have their houses made of sticks and dirt, but they fare commonly so well as the king'".

William Harrison, Description of England, 1587

Wattle and daub is the term for the panels of woven wood and mud used to fill between the timbers of many of the Museum's buildings. This combination of materials has been used since at least the Bronze Age; fragmentary remains of daub-like mixtures bearing wattle imprints often survive in the archaeological record having been 'fired' as a building burnt down and waterlogged remains of wattle panels occasionally survive also. Brick nogging might also have been used to fill in between the timbers but this was also sometimes used to replace earlier wattle and daub. Evidence for the previous existence for wattle and daub panels may come from marks left on the main timbers by daub, and from auger holes drilled into the upper timber of the panel and grooves cut into the lower where the uprights for the wattle were fitted in.



Timber framing with wattle and daub panels was the dominant form of building construction in many parts of England and Wales from the mid 12th century. It was common in some areas until the late 18th century and was used into the 19th century for lower status housing, such as farm worker's cottages. If well looked after daub can last for a long time; a sooted panel in Walderton dates from the 16th century. Many existing examples of wattle and daub survived because of the protection afforded by subsequent structural additions, others because of the fashion, from the 17th century, for plastered

interiors. Battens or reeds fixed to the timber posts and studs and plastered over effectively sealed in the daub.

*the sooted panel
in Walderton*

In the entrance to Crawley Hall you can see painted panels (though of plaster, not daub) from Ivy House, Fittleworth that were protected in this manner.

Wattle



Coppiced hazel is considered typical for wattles but willow and ash were used as well as split (riven or cleft) beech, oak or chestnut, indicating that whatever was suitable, locally available and affordable (relative to social status) would probably have been used. The wattles are interwoven with vertical (very occasionally horizontal) staves usually made of oak or elm.

Wattle in Walderton



Cleft oak or chestnut 'laths' were sometimes nailed across the staves, as for North Cray, though, this construction is considered less usual. Lath eventually became common when plaster superseded daub from the 18th century.

*North Cray lath
exposed prior to re-
daubing*

Daub

Ingredients

'The clay wherewith our houses are impanelled is either white, red or blue; and of these the first doth participate very much of the nature of our chalk, the second is called loam, but the third eftsoons changeth colour as soon as it is wrought, notwithstanding that it looks blue when it is thrown out of the pit...', William Harrison. The basic 'recipe' for daub is subsoil, dung (usually cow), chopped straw and water; there are Mediaeval building records mentioning the delivery of cart loads of clay for daubing but the 'ingredients' for most people, depended upon local availability of materials. Aggregates such as gravel, crushed chalk or sand were sometimes added, as was extra clay, especially if the subsoil was particularly lacking in these and reed and grass might be used instead of, or as well as, straw. The subsoil makes up the body of the mix, the aggregates control shrinkage and cracking, the dung and clay act as binders and the chopped vegetation stabilises helps to the matrix. The consistency is important; it has to be soft enough to pack into the wattle, but not too soft as too much water in the mix will result in extra shrinkage and thus worse cracking when drying. Lime might also be included in daubs, it created a much stronger bond but as it was manufactured it was available only to those who could afford it. An English Heritage analysis of daubs at the Museum suggested that salt may have been added to help the wall retain moisture and so control shrinkage and their findings also suggested that the subsoil was sieved. There is also a debate as to whether 'weathered' dung or fresh was used. The analyses also suggested that the dung was weathered but other sources have suggested that fresh dung might have been used as it has been found to be better for plasticity and binding.

Method

Traditionally it is thought that people mixed daub by treading it. Ethnographic evidence from Brittany in France supports this view, until the 1940's, the 'torchis' for clay built houses was mixed by dancing, chanting, barefoot men (torchis is analogous to the cob construction found in the West Country and the word 'torching' appears in Mediaeval documents as another word for daubing). It has also been suggested that penned animals did the treading; a visitor to the museum said he had seen this being done in Ireland in the 1930s

and it has been mooted that the dung in daub could be a result of this rather than a deliberate addition.

Daub would have been applied to both sides of the panel at once or while one side was still wet, ensuring that it would stick together firmly. Internally, it was either recessed slightly, or flush with the timbers; on exterior panels daub is recessed and then curved out at the bottom to shed water. There is evidence that daub was built up in layers to reach the required thickness, though, during the rebuild of Winkhurst Tudor Kitchen in 2002, it was difficult to get new layers or patches of daub to stick. Daub takes 3-4 weeks to dry and must be coated with a breathable finish, or decay will start inside the panels. Lime wash would have been used, applied before the panel was fully dry. The processing and use of lime is dealt with on a separate 'introductions' sheet.

Wattle panels would not always have been daubed; it is usually possible to tell if daub has have been used from marks on the original timbers. First floor partitions were often left undaubed, as were some agricultural buildings; the first floor panels of Walderton were not daubed and the housing for Catherington Treadwheel showed no signs of ever being daubed and so has been left with bare wattle.

A study in Eastern Sussex revealed examples of decorated daub. Due to the small amount of samples found it was not possible to tell how widespread this form of decoration was but it appears that the decoration was more common in Mediaeval times rather than the 16th and 17th century. Patterns of vertical alternating wavy and straight bands, probably made with a five or six pronged fork appear to be the most usual but more complicated patterns existed too, and in some cases it appears that different patterns were used on different walls in the same room. In the museum collection is a sample of daub from Talbot House, Sellinge in Kent that appears to depict an almost life size human figure.

The lack of documentary evidence for, and surviving examples of, vernacular architecture at the lower end of the social scale means that conjectures about ingredients and processes have to be based on visual and scientific analyses, practical experiments and, to a certain (and careful) extent, ethnographic analogies; with wattle and daub, this is especially true.