References to studies of Westminster Hall Roof

   Description of the condition of the roof timbers following Deathwatch beetle damage and a history of the various building programmes which led to its construction in the late 14th century.


   Explanation of the early 20th century repairs to the roof, just completed.

   General overview of the construction of the roof and a comparison with the possible form of the 11th century original.

   The structure, a hammer-beam roof, is analysed from the perspective of the king’s carpenter Hugh Herland. This analysis is based on drawings made in 1913 to facilitate the repair of the roof, and on the author’s archaeological reconstruction of the carpentry based on those drawings.

   Early measured survey drawings of the hall with some historical analysis of the construction of the roof.

   Early measured survey drawings of the hall.

   Drawings and measurements prepared during Baines’ repairs to the hall, so showing the timbers before the steel frames and early repairs.

   Details the construction of the roof following the commission to reconstruct the hall by Richard II in 1393.

    Overview of medieval timber roof types.

    Early measured survey drawings of the hall.


    Compares the hall roof with contemporary structures.

Traces the development of the hammerbeam construction technique.

Comparae the hall roof with a contemporary structure.

Traces the development of the hammerbeam construction technique.

Approaches the roof from the empirical building knowledge of masons and carpenters.

Overview of medieval carpentry.

Overview of medieval carpentry.

Overview of medieval carpentry.

The initial modern study of the framing of the roof and the mathematical interpretation of the timber structure.


Comparison with a lost medieval roof of a similar scale.

Modelling of the roof to understand the structural aspects and timber joints under loading.


Description of the origins of the carpentry and forms of the timbers used to construct the roof including an isometric projection of the component parts and a perspective view of the medieval louvre.


41. E.C. Wade and J. Heyman, “The timber Octagon of Ely Cathedral” Proceedings of the Institution of Civil Engineers, 1, 78 (December 1985), 1421-1436. The most important surviving mid-14th century timber roof which both predates and prefigures the hall roof.


44. British Library [Building Account: Add Ch.27018]


46. Parliamentary Archives [Survey drawings HC/LB/1/114/42]