Paine's published plans give no indication of the use of the ground floor rooms. However, in Doncaster Archives there are volumes of inventories for the Mansion House from 1756 to 1908, which list all the furnishings and fittings and describe the use to which the rooms were put.

In the eighteenth century, one of the ground floor rooms was used as the magistrates court, where the mayor and his three fellow aldermen-magistrates held court every Monday morning. This was probably what is now the front committee room. Other rooms were used as a councillors' room, an aldermen's room and a gentlemen's dining room.

The rear committee room may have been, on account of its size, the room available to the twenty-four 'common council men', rather than the twelve aldermen, as the senior members of the council were called.

In the rear committee room there are, amongst the paintings, two relating to Doncaster's racing history: Royal Lancer, the winner of the 1922 St Leger, painted by Lynwood Palmer, and the finish of the St Leger in 1958, painted by J Appleyard. The wall clock is by Richard Holt of Newark.