

# Vauxhall Gardens Project

The architectural model of the building containing the rotunda was created utilising the expertise of the **Biomechanics & Immersive Technology Laboratory** at the University of Leicester. Biomechanics & Immersive Technology Laboratory is dedicated to fundamental and applied research on human behaviour utilising novel sensing technologies in real-life and immersive environments.

The architectural model of the building containing the rotunda was developed in ArchiCAD, state of the art building information modelling (BIM) software. There is scarcity of reliable historic sources that provide detailed description of the structure of the building enabling its accurate reconstruction. The model was primarily based on the plan drawing dating back to 1764 and the description of the building found in a number of written sources (Coke & Borg, 2011). Additional information was taken from a number of artwork pieces showing the interior, i.e. those by Anonym (Anonym, 1786) and Cole (Cole, 1752).

During the modelling process, some initial assumptions had to be made on the geometry and the proportions of the structure, as many sources were found to provide contradictory information or only offered artistic representation disregarding physical constraints of the structure itself.

The sizes of the main rotunda section and the pillared saloon attached to it had to be reconciled. The contemporary descriptions indicate that those sections were of similar area, as it was said that the pillared saloon doubled the audience capacity of the main rotunda section. However, according to the plan drawing, the main rotunda section had an area of approximately 318m<sup>2</sup>, whereas the pillared saloon was smaller by nearly 130m<sup>2</sup>. Consequently, a decision was made to extend the pillared salon by over 4 metres in order to increase its area while keeping the proportions of the whole building as consistent with the plan drawing as possible.

Another example of those discrepancies would be the positioning of columns supporting the main rotunda's roof next to the stage area. The plan drawing suggests that the columns are distributed along a straight line, which was deemed unrealistic due to the fact their main function is to transfer the weight of the rotunda down to the foundations. To address this issue, the columns were distributed along a circular path mapping the outline of the rotunda thus ensuring structural integrity.

Artwork: **Mr Artur Adam Soczawa-Stronczyk** & Supervision: **Dr Mateusz Bocian**

References: Anonym, 1786. Representation of the Grand Saloon in Vauxhall Gardens [Engraving], Minet Library, London, Lambeth Archives Department; Cole, B., 1752. The Inside of the Elegant Music Room in Vaux-Hall Gardens [Engraving], British Museum, London; Coke, D. E. & Borg, A., 2011. Vauxhall Gardens: A History (Studies in British Art). 2nd ed. London: Yale University Press.

