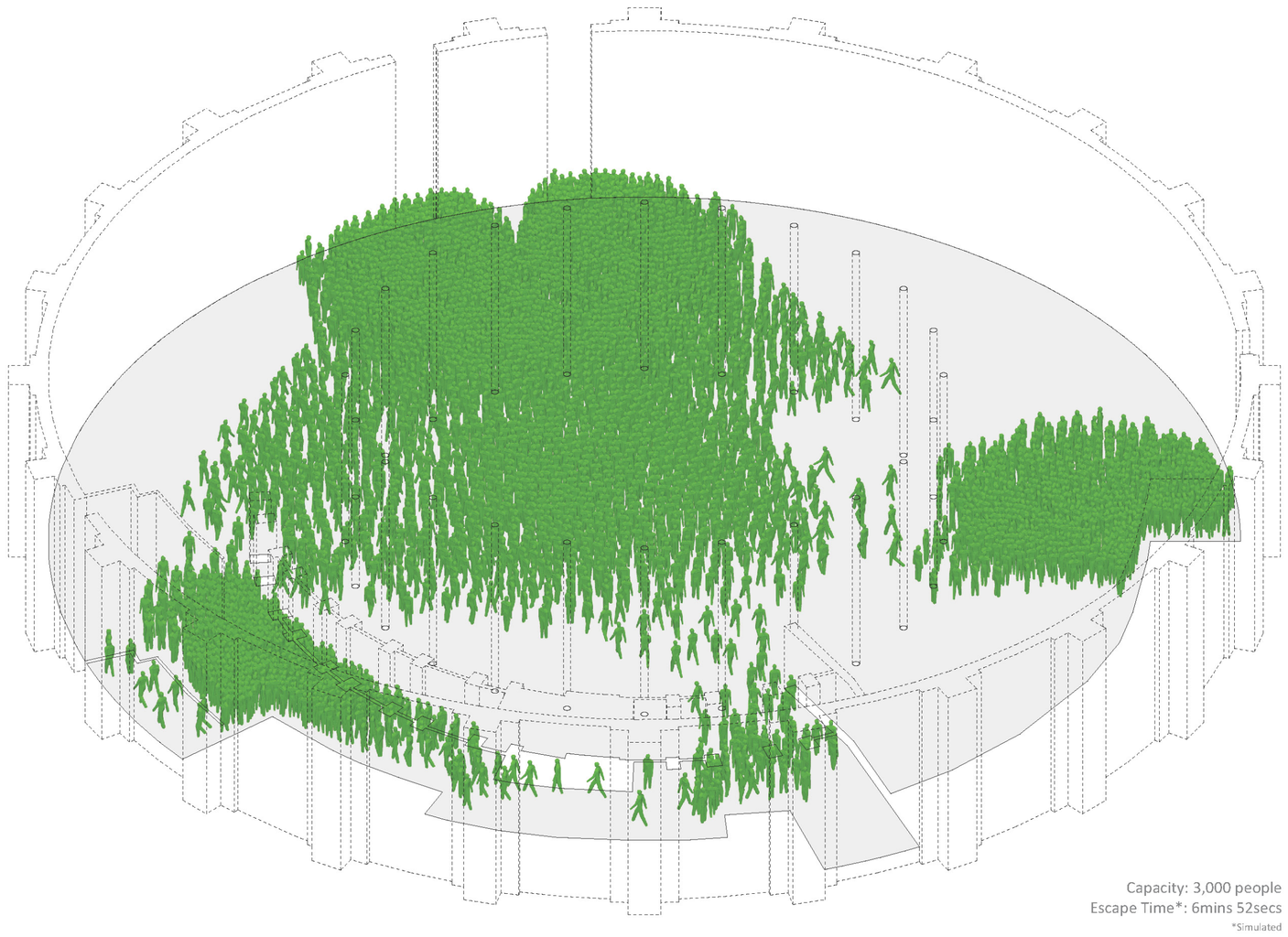
MASS EVACUATION: REGULATORY COMPLIANCE

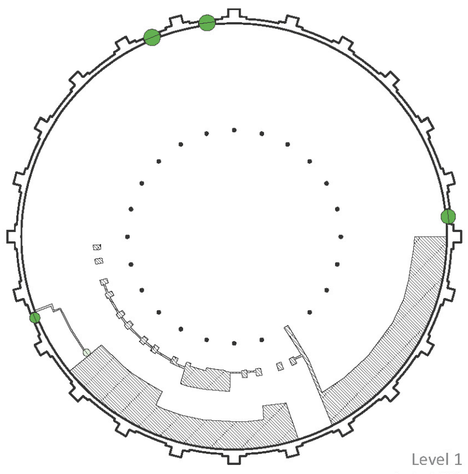
The Roundhouse Theatre, Chalk Farm, London

1968, Concert (Following Conversion from Train Shed in 1964)

Max Ochel + Richard Fleming

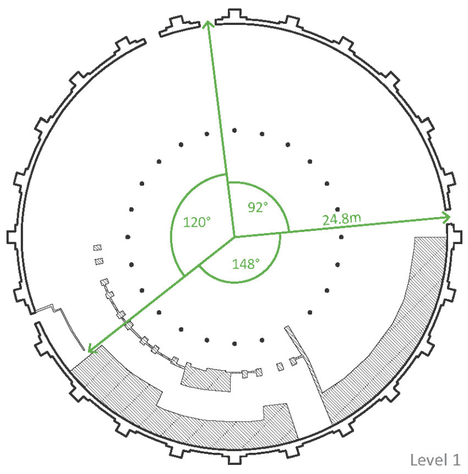


Capacity: 3,000 people
Escape Time*: 6mins 52secs
*Simulated
Scale 1:200



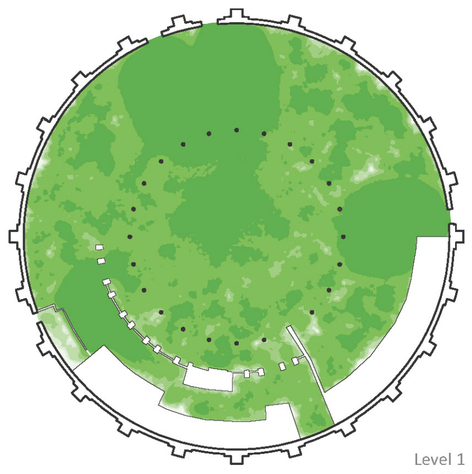
Level 1
Scale 1:500

External Exit
Internal Door
4 Total Number of Exits
6,700mm Total Width of Exits
15,000mm Total Width of Exits Required for 3,000 People



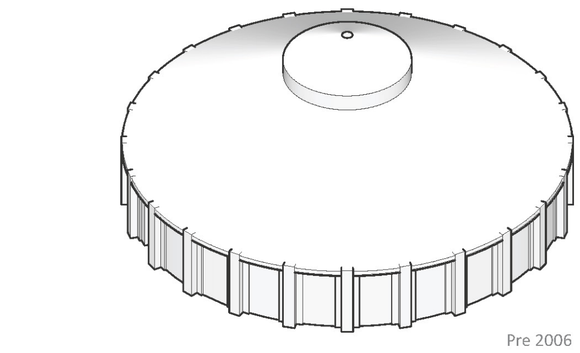
Level 1
Scale 1:500

24.8m Distance to Exit
>45° Angle between Escape Routes

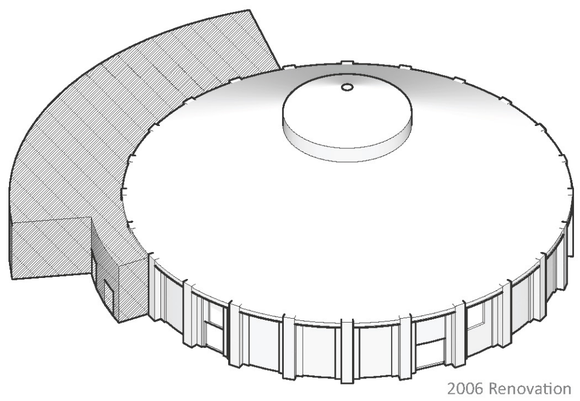


Level 1
Scale 1:500

Highest Experienced Density*
Lowest Experienced Density*
*Simulated



Pre 2006



2006 Renovation

Context

The Roundhouse is a performing arts and concert venue located in a Grade II Listed former railway engine shed in Chalk Farm, London. Originally built in 1846 it was used as an engine shed for just 10 years, spending several decades as a warehouse and a period of time in disuse before being converted into a performing arts venue in 1964. In 1968 The Doors' performed to an audience of over 3,000 people in their only UK appearance. After many notable events during the 1960s and 1970s the building again fell into disuse in the 1980s. In 2006 The Roundhouse under went a £30 million renovation designed by John McAslan + Partners. The practice led a multi-disciplinary team which repaired the existing fabric of the building, modernised the auditorium and extended the building's functional range. It was declared a National Heritage Site in 2010.

Our analysis looks at how the building functions in a mass evacuation scenario at full capacity with reference to Part B of the building regulations. Using crowd simulation software (Oasys MassMotion), the efficiency of the building's egress strategy has been tested both in its current state and before the 2006 renovation. Through comparing its current functionality with its use prior to its renovation the effects of building regulation compliance is illustrated; the time taken to evacuate 3,000 people from the building is reduced from 6 minutes 52 seconds to 2 minutes 48 seconds.

In the design of the renovation much of the existing fabric of the building remained unchanged, satisfying the strict planning policies put in place to protect heritage buildings. This was facilitated through the construction of a new extension that contained much of the additional circulation and infrastructure needed for the main auditorium space to function safely. The project highlights issues of restoring a historic building, simultaneously respecting the existing fabric whilst bringing the building up to current building standards.

Planning Policy

Planning Policy Statement 5
7. The Government's overarching aim is that the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations.

HE3.4 At a local level, plans should consider the qualities and local distinctiveness of the historic environment and how these can contribute to the development of the spatial vision in the local development framework core strategy. Heritage assets can be used to ensure continued sustainability of an area and promote a sense of place.
Plans at a local level are likely to consider investment in and enhancement of historic places, including the public realm, in more detail. They should include consideration of how best to conserve individual, groups or types of heritage assets that are most at risk of loss through neglect, decay or other threats.

HE7.4 Local planning authorities should take into account: the desirability of sustaining and enhancing the significance of heritage assets, and of utilising their positive role in place-shaping; and the positive contribution that conservation of heritage assets and the historic environment generally can make to the establishment and maintenance of sustainable communities and economic vitality by virtue of the factors.

25.4 Historic buildings in conservation areas can be sensitively adapted to meet the needs of climate change and energy saving – preserving their special interest and ensuring their long term survival.

Camden local Development Framework
25.12 The Council has a general presumption in favour of the preservation of listed buildings. Total demolition, substantial demolition and rebuilding behind the façade of a listed building will not normally be considered acceptable.

References:
Communities and Local Government, (2010), *Planning Policy Statement 5: Planning for the Historic Environment*, London: TSO.
Camden Local Development Framework, (2010), *Camden Development Policies*.

Appendix i: The Roundhouse Evacuation Simulation (animation)