

### **3.2 Lame Horse Club, Russia, 2009**

In the early hours of December 5<sup>th</sup>, 2009 a fire broke out in the “Lame Horse Club” in the city of Perm in Russia. On this particular night the 8<sup>th</sup> anniversary of the nightclub was being celebrated. The fire started due to a pyrotechnic display that was lit on stage which ignited the ceiling. A total of 156 people died and 100 were injured [56]. The sources used for this analysis are mainly newspaper articles but also different video footages from the night itself and the news. These videos show the venue both before and during the initial phase of the fire [57].

#### **Description of the Building and the Situation Prior to the Fire**

The nightclub was located in a one storey building and had a surface area of 500 m<sup>2</sup> [58]. The nightclub had two exits, the main entrance and a rear exit. At the main entrance there were two double swing doors placed behind each other. On the evening of the fire only one leaf of each double swing door was open. The rear exit was not signed as an emergency exit while the main entrance was [59]. In [60] windows are mentioned. It is unknown if those could be used for an evacuation or not. The videos show many tables and chairs at the venue [57], [61].

In the video that was shot during the incident it is not possible to hear a fire alarm [57]. The building had no automatic suppression system [62]. Fire extinguishers or a smoke control system are not mentioned in any of the reports or videos. The building’s interior finishing consisted mainly of wood; the ceiling was decorated with twigs [59], [63].

The nightclub had a capacity of 450 people. In total 282 people were invited to the party. The exact number of occupants is unknown [60]. According to [62] there were more than 200 people within the venue. In no article it is reported that the venue was overcrowded. The pyrotechnical devices used for this party were not certified for indoor use, only for outdoor use [62]. The nightclub had already received two fines after failing fire safety inspections one year earlier [60]. People living close to the building accused the fire brigade of corruption and of approving the safety standards of the venue for the past 8 years [62]. The nightclub expected a fire safety inspection in the following week [59].

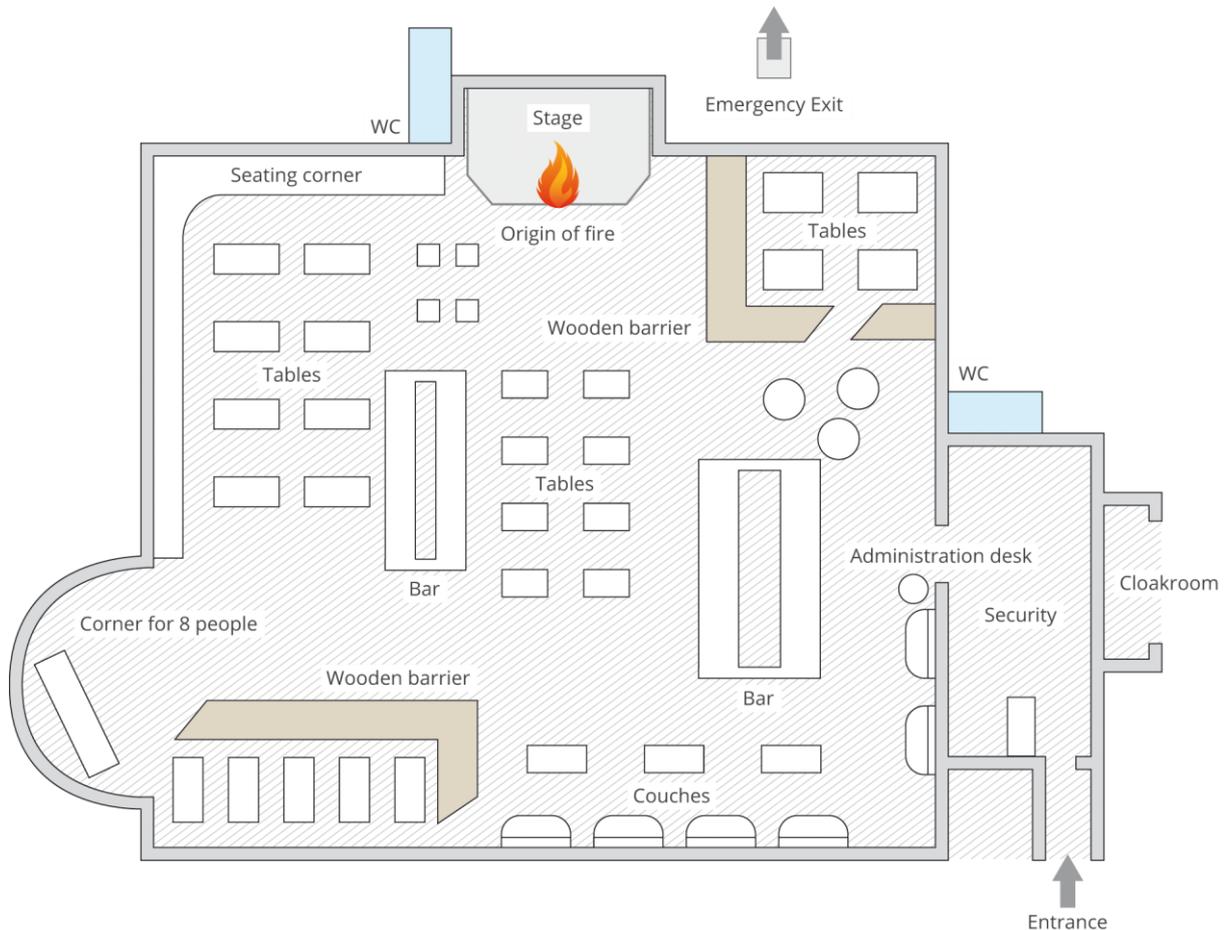


Figure 4: Layout of the Lame Horse Club; The exact location of the rear emergency exit is unknown; The flame indicates the origin of the fire; Figure based on [61]

### Description of the Incident and Human Behaviour

The fire was started by a pyrotechnic display which ignited the wooden brushwork on the ceiling when “[...] a performance artist juggled so called cold-flame pyrotechnical maces” [57], [63]. The pyrotechnic display was not certified for indoor use [62]. Due to the choice of materials the fire and smoke spread quickly throughout the nightclub [59].

When the situation became apparent to the guards they tried to open the second leaves of the double swing doors at the main entrance to improve the egress. Some of the staff members exited through the backdoor. It was not known to ordinary guests. Officials stated that most of the victims died of smoke inhalation [64].



Image 4: Burning ceiling in the Lame Horse Club; Image taken from [57]

### Identified Critical Factors

The nightclub did not fulfil the required safety standards and therefore operated illegally. The pyrotechnic display that was used was certified only for outdoor use. The choice of materials led to an easy ignition and a rapid spread of fire and smoke. There was no evidence of a detection and alarm system, an automatic suppression system, a smoke and heat control system or fire extinguishers. The rear emergency exit was not signed and ordinary occupants did not know about it. The full width of the main entrance was not available as the second leaves of the door were initially sealed.

### 3.3 Santika, Thailand, 2009

During a New Year's Party on the night from December 31<sup>st</sup> to January 1, 2009 a fire occurred in the very popular nightclub "Santika" in Bangkok, Thailand. The fire began due to the use of pyrotechnic igniting combustible material at the stage. The fire killed 66 people and injured 236 [65]. Sources for this incident include an investigation report carried out by the Center of Education and Research on Advanced Fire Safety Science and Technology in East Asia, journal and newspaper articles and video footage.