

Report on the partial collapse of the ceiling
at the Apollo Theatre
on 19th December 2013

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1. Background

- 1.1. The Apollo Theatre at 31 Shaftesbury Avenue, London W1D 7ES is owned by NIMAX Theatres Limited. Prior to the incident it had a capacity of 775 seats which has subsequently been reduced due to the construction of a high level safety platform. NIMAX owns 6 theatres all of which are within Westminster. NIMAX Theatres Ltd has operated the Apollo Theatre since September 2005 and prior to that it was owned by Lord Lloyd-Webbers Really Useful Group.
- 1.2. On the 19th December 2013 the auditorium ceiling of the Apollo theatre partially collapsed during the evening performance injuring 88 people. The following day the investigation into the incident was formally handed over to the Westminster City Council, Environmental Health, Health and Safety team from the Metropolitan Police
- 1.3. To assist the City Council in its investigation it employed two experts Richard Ireland, an historic plaster specialist and structural engineers employed by Alan Baxter and Associates. We have relied on their expert opinion as to why the theatre suspended ceiling collapsed and what events led to it. Both experts produced detailed reports setting out their findings.
- 1.4. In the early stages of the investigation the principal focus was to make the theatre safe and to prevent further structural failure. In order to achieve this we worked closely with Westminster City Council's District Surveyors in the design and construction of a high level safety platform to protect against further collapse, provide access for detailed inspection (and later repair) and to enable the theatre to reopen once the structural elements of our investigation were complete.
- 1.5. During the investigation we gathered information from the London Ambulance service, the Really Useful Theatre Group, The National Theatre, 15 members of the audience on the night who were injured and 7 members of the cast. We also carried out visits to site, spoke at length to inspectors who had independently inspected the suspended ceiling and members of NIMAX management team and staff.
- 1.6. This report explains how and why the incident occurred and the actions taken by Westminster City Council and other stakeholders and also sets out the grounds for our enforcement decision.
- 1.7. Through this report "NIMAX" is used to refer to NIMAX Theatres Limited.

2. The Incident

- 2.1. On 19 December 2013, at about 20:15 hours, about 40 minutes into the performance of 'The Curious Incident of the Dog in the Nighttime' the main auditorium plaster ceiling partially collapsed injuring 88 people 7 of which were seriously injured. The theatre was performing to a capacity audience at the time.

- 2.2. The ceiling dates from the original construction of the theatre in 1901 and the theatre is a Grade II listed building. The central part of the ceiling above the main auditorium comprises of a heavily ornamented oval dome constructed of hessian plaster and lathings which is suspended from steel roof trusses above. Almost one third of its total surface collapsed with debris falling a considerable distance down onto an audience beneath. (REPORT REDACTED)
- 2.3. The Apollo theatre belongs to NIMAX Holdings Limited but is operated by NIMAX Theatres Limited under a full repairing lease. The theatre was sold by Really Useful Theatres Group Holdings Limited to NIMAX in September 2005.
- 2.4. This investigation focused upon the inspection, maintenance and repair of the suspended ceiling from September 2005 up until the date of the incident on 19th December 2013.

3. Legal framework

In the context of this investigation the following legislation is relevant:

3.1. Health and Safety (Enforcing Authority) Regulations 1998

Responsibility for the enforcement of health and safety law in Great Britain is shared between local authorities (LAs) and the Health and Safety Executive (HSE). Schedule 1 of these Regulations sets out a list of those main activities which determine whether LAs should be the enforcing authorities. Theatres are enforced by Local Authorities.

3.2. Health and Safety at Work etc. Act 1974, Section 20.

Each enforcing authority is empowered to appoint suitably qualified persons as inspectors, for the purpose of exercising enforcement powers granted by the Act. Inspectors appointed by local authorities are suitably qualified Environmental Health Officers.

Section 20 of the Act sets out the extensive powers of inspectors. This is a key provision in the Act. The powers set out in this section include the following powers:

- Inspectors have a right of entry to premises (at any reasonable time) without any need to give notice
- to carry out investigations and examinations
- to require any person to answer questions relevant to any examination/investigation and to sign a declaration as to the truth of the answers
- to require the production of and inspect books and documents (e.g. accident book, plant maintenance schedules and risk assessments)
- to require facilities and assistance to be provided

- Seize and make harmless (by destruction if necessary) any article or substance which they have reasonable cause to believe is a cause of imminent danger of serious personal injury

3.3. Health and Safety at Work etc. Act 1974, Section 2.

Section 2 refers to the general duties of employers to their employees:

Section 2 (1) It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.

Section 2 (2) (d) is also relevant as it deals with the maintenance of the workplace.

3.4. Health and Safety at Work etc. Act 1974, Section 3.

Section 3 refers to the general duties of employers to persons other than their employees:

Section 3 (1) It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not thereby exposed to risks to their health or safety.

3.5. The Management of Health and Safety at Work Regulations 1999 Regulation 5.

This refers to the health and safety arrangements of an organisation:

Regulation 5 (1) Every employer shall make and give effect to such arrangements as are appropriate, having regard to the nature of his activities and the size of his undertaking, for the effective planning, organisation, control, monitoring and review of the preventive and protective measures.

- 3.6. The Health and Safety at Work etc. Act 1974 imposes duties on the company, as an employer, to protect their employees whilst they are at work and in addition to conduct the operation of the theatre itself in such a way as to safeguard visiting members of the public. The 1999 Regulations go on to require theatre senior management to set up health and safety management systems to achieve this.
- 3.7. In addition to the above legislation there is also **National Guidance for places of entertainment** produced by the Association of British Theatre Technicians (ABTT), the District Surveyors Association and the Institute of Licensing. These Technical Standards set out the physical standards for buildings and their equipment that are necessary for the safe operation of premises used for entertainment. These recommended standards may be applied by regulators as a guide to best practice under duties imposed by the Health and Safety at Work etc. Act 1974 and as a result of conditions laid down in accordance with the Licensing Act 2003.
- 3.8. There have been three editions of the Technical Standards that are relevant to our investigation dated 2005, 2008/2009 and 2013. It is important to note that they are issued as guidance to the industry and do not hold the same legal status as an Approved Code of Practice (ACOP) or guidance issued by the Health and safety Executive as the national regulator.

- 3.9. There are no significant variations between these editions in respect of the parts which are relevant to the inspection and management of suspended ceilings and this investigation. They all state the following:

Part D1 on Stability

Any material used as a suspended ceiling should be fixed and supported so as to avoid collapse.

Provision should be made to enable the examination of any suspended ceiling from above. This is generally achieved by providing removable panels or tiles.

Part M1 on Certification

Once premises have been licensed for regulated entertainment it is important that they are properly maintained.

A certificate should be obtained from a person competent to inspect and test (as necessary) all suspended ceilings and ornamental plasterwork.

Each certificate should include a written report of visual inspection accompanied by such other tests as may be necessary, in the opinion of the competent person carrying out the inspection, to enable the completion of a certificate that certifies that the installation is in a satisfactory condition.

The certificate should be completed by a competent person such as an appropriately qualified engineer or a member of an accredited body.

The competent person when completing the certificate should indicate the period of validity of the certificate. Certificates should be provided within one month of inspection and be retained on the premises for inspection by any Authorised Inspector.

In 2013 Part M added the following:

Ceiling and plasterwork: Any suspended ceilings and ornamental plasterwork should be regularly inspected both for water and also excessive noise and vibration damage.

- 3.10. The theatre (as with most other theatres in Westminster) has a 'Rules of Management' condition on its Premises Licence that requires certification, where appropriate, to be submitted to the Council. The certificates list includes but is not limited to: emergency lighting, electrical installation, boiler and ceilings.

In relation to ceilings, the specific condition states: *"If required by the Council a certificate shall be submitted at least once every three years (or at shorter intervals if required by the Council) covering ceilings and ornamental plaster work in those parts of the premises to which the public are admitted"*.

Historically, the City Council employed officers with mechanical and electrical expertise to undertake annual surveys of theatres and these officers had the ability to adequately assess the certificates when they were submitted. Since the Licensing Act 2003 came into force, annual surveys have not been required and the City Council reduced its resources and no longer retains the mechanical and electrical expertise that it once had. However, one of the City Council's surveyor's does visit each theatre to assess the public safety implications of each change of production.

As the licence condition regarding ceiling certification required the certificates to be in place but not necessarily submitted to the City Council, in 2005 a decision was taken in light of reduced resources and expertise in this area, to place the onus on the theatre operator to comply with that requirement and for surveyors to only assess compliance if and when there was a specific reason to.

4. Direct Causes

- 4.1. Richard Ireland and, Jason Howell, the structural engineer from Alan Baxter established very early on in the investigation the principal causes of the collapse. In their view this was due to age related degradation of key supporting structures which led to the successive failure of the suspension system. (REPORT REDACTED)
- 4.2. We have carried out detailed research to establish if similar collapses have occurred in the UK with the assistance of the Health and Safety Executive (HSE) Construction and Leisure Division. We identified a small number of incidents of a similar nature, one example being the collapse of the Golders Green Hippodrome (BBC studio). All the incidents we have become aware of had an external factor which led to the collapse. This was either water ingress or human error such as that caused by a contractor when carrying out repair work. There are no cases known to us of the collapse of a similar structure resulting from age related degradation alone within the UK.
- 4.3. In view of the potential risk of similar failures occurring in other theatres (as many similar aged suspended ceilings exist across the UK and particularly in Westminster) we decided to issue Interim guidance to theatre owners and other places of entertainment in January 2014. This guidance was based upon the initial findings of our experts and having regard to the legal framework and guidance that supports current management arrangements for such ceilings. (REPORT REDACTED) The guidance was later added to as more information became available and version 2 was issued in March 2014 (REPORT REDACTED).

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6. Enforcement Decision

When considering what enforcement action is appropriate in these circumstances we need to consider whether or not the actions and or omissions of NIMAX or the independent ceiling inspectors led to the partial collapse of the ceiling. In making this decision we must have regard to the following national guidance, code and local enforcement policy

6.1. The Health and Safety Executive Enforcement Policy Statement

It requires us to take account of the Code for Crown Prosecutors as set down by the Director of Public Prosecutions. It also states that no prosecution may go ahead unless the prosecutor finds there is sufficient evidence to provide a realistic prospect of conviction, and decides that prosecution would be in the public interest.

6.2. Code for Crown Prosecutors

This code, in addition to that set out above, requires us to consider what the defence case may be, and how it is likely to affect the prospects of conviction. A case which does not pass the evidential stage must not proceed, no matter how serious or sensitive it may be.

It is our opinion as the appointed inspector that the facts of this case do not pass the evidential stage of the Code. The principal reasons for this decision are as follows:

- The Technical Standards for Places of Entertainment with respect to the inspection and certification of the suspended ceiling were met by NIMAX

- It has been acknowledged by the Entertainment and Leisure Sector of the Health and Safety Executive that as a result of this investigation the Technical Standards lack sufficient definition to enable a dutyholder to properly and fully manage the structural aspects of a historic suspended ceiling. As a consequence ABTT have been requested to reconsider the Technical Standards that apply to suspended ceilings to take account of the principal findings of our experts.
- The Technical Standards are the benchmark standard by which the management of the suspended ceiling would be judged and the actual risk of failure assessed. In other words, it is the difference between where the dutyholder is in terms of compliance and where they should be. Whilst NIMAX met the principal requirements of the Technical Standards in terms of independent inspection and certification, the Standards were not sufficiently robust and therefore the risk gap was substantial. (See EMM decision below)
- The Technical Standards represent a best practice guide to the entertainment industry. They are not of the standing of an Approved Code of Practice or Guidance issued by the Health and Safety Executive in support of legal requirements.

6.3. The Health and Safety Executive Enforcement Management Model (EMM)

The Health and Safety Executive has produced the EMM to ensure consistency of enforcement decisions between itself and Local Authorities. When the details of this investigation are fed into the model the resulting enforcement decision is that of the service of "an improvement notice". In this case the service of such a notice would be inappropriate due to the lack of definition contained within the Technical Standards.

6.4. Westminster City Council's Enforcement Policy

Premises Management has its own Enforcement Procedure which builds upon that of the Health and Safety Executive and which states that prosecution should be considered when at least one of the points below is relevant:

- 1) a blatant breach of the law such that public or employee health, safety and welfare has been put at risk;
- 2) a failure to correct an identified serious problem after having been given reasonable opportunity to do so by an authorised officer;
- 3) a failure to comply with the requirements of a statutory notice;
- 4) a history of similar offences;
- 5) an unwillingness on the part of the individual or business to prevent a recurrence of the problem

With respect to point 1, we have no evidence that a blatant breach to the law has been committed. Points 2-5 do not apply in this case.

7. Legal advice

Legal advice has been sought throughout the investigation, with regular meetings taking place to review the evidence and agree next steps. Legal advice supports our view that in light of the industry standards in place at the time of the accident, the evidential test for prosecution in relation to the accident is not passed.

8. Positive impact of the investigation

8.1. The investigation into this incident and the attendant press coverage has had a profound effect upon the entertainment sector both at a local and national level. This is evidenced by the feedback we have received from ABTT meetings (attended by theatre companies and stakeholders including plaster ceiling inspectors) and the number of telephone calls for advice received from local authorities across the UK.

8.2. Very early in the investigation it became apparent from our fibrous plaster ceiling expert and our structural engineer that some fundamental rethinking was necessary in the way in which suspended ceilings were being inspected, maintained and managed. In view of the significance of these findings to public safety, we issued interim guidance to theatre owners and operators. This was sent in January and March 2014 to our theatre owners, to the Society of London Theatres, the Local Authority Unit of the Health and Safety Executive and to all Local Authorities. REPORT REDACTED however; the key points are as follows:

- suspended plaster ceilings must, where it is possible, be viewed in detail from above;
- all elements of the constituent parts, including the supporting structures, must be fully documented and understood;
- a management system should be developed which includes an annotated ceiling plan, regular inspection, the keeping of accurate records of observations including photographs;
- periodic inspection by competent persons and consultation with such persons when matters of concern are identified;
- regular inspection of the roof for disrepair and water penetration.

8.3. We lobbied the Local Authority Unit of the Health and Safety Executive with a view to getting them to recognise that ABTT guidance concerning suspended plaster ceilings was weak and lacking in sufficient detail to enable these complex historic structures to be preserved in a safe condition. As a consequence HM Inspector for the Entertainment and Leisure Sector convened a meeting of representatives from ABTT, English Heritage

and Building Research Establishment to form a working group with a view to producing industry led national guidance. We have attended two meetings and commented extensively on the proposed national guidance and draft 5 of this document is currently out to consultation. ABTT hope to publish the final version of this guidance early in the New Year and this is likely to be supported by the simultaneous publication of an Entertainment Information Sheet by the Joint Advisory Committee for Entertainments (JACE). The Health and Safety Executive chair JACE meetings and its attendant membership is drawn mainly from industry trade bodies, trades unions, large event facilities and the major broadcasting organizations. The committee has a number of aims which include:

- identifying health and safety priorities for action, where members may require additional information, guidance or assistance;
- monitoring and reviewing developments within the entertainment industry which may impact on health, safety and welfare at work

- 8.4. Since April 2013 the Westminster City Council's, Health and Safety team have carried out a programme of inspection of all of our theatres in Westminster with a view to assessing their compliance with the interim guidance on suspended ceilings issued by the City Council and also to address other structural matters. We have seen a significant change in the attitude of duty holders with a much more proactive approach being taken by management to deal with structural and engineering issues that might affect both public and employee safety.
- 8.5. The new national guidance will only apply to places of entertainment. However, the Apollo incident has raised concerns about the inspection, repair and maintenance of suspended plaster ceilings in a multitude of other buildings and it is likely that English Heritage will be promoting similar standards across a wide range of buildings of historic interest.

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