



NOTTINGHAMSHIRE
Fire & Rescue Service
Creating Safer Communities

Nottinghamshire and City of Nottingham
Fire and Rescue Authority
Community Safety Committee

FIRE INVESTIGATION FOR THE UNIVERSITY OF NOTTINGHAM JUBILEE CAMPUS

Report of the Chief Fire Officer

Date: 09 January 2015

Purpose of Report:

To provide the Community Safety Committee with an overview of the fire investigation that occurred following the fire at the University of Nottingham Jubilee Campus on 12 September 2014.

CONTACT OFFICER

Name : Wayne Bowcock
Deputy Chief Fire Officer

Tel : 0115 967 0880

Email : wayne.bowcock@notts-fire.gov.uk

**Media Enquiries
Contact :** Bridget Aherne
(0115) 967 0880 bridget.aherne@notts-fire.gov.uk

1. BACKGROUND

- 1.1 On the 12 September 2014 Nottinghamshire Fire and Rescue Service (NFRS) attended a large fire at the GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry, located on the University of Nottingham's Jubilee campus on Triumph Road. The building involved was under construction and at the time of the fire was nearing 70% completion phase.
- 1.2 In dealing with this incident over 60 fire-fighters, 12 appliances and a number of specialist units attended with operational activity continuing for three days – finally concluding on Sunday 14 September.
- 1.3 The premise was a timber framed building with the predominant construction material being wood throughout. This construction method of gluing laminated timber together is known as 'Glulam' and research has demonstrated that when completed and fully constructed can satisfy the necessary requirements for both building and fire safety regulations that would be equally expected of a traditional build.
- 1.4 However, it has also been identified that whilst buildings of this nature do meet these requirements and offer increased design features, they are vulnerable from fire during the construction phase. As such recent examples of fires in timber framed buildings nationally have resulted in total loss incidents.
- 1.5 This was also found to be true of the fire that occurred in the GlaxoSmithKline building. It was completely destroyed by fire with little or no option to undertake any meaningful salvage from the remains.
- 1.6 As a result of these types of incidents a "Site Safe Notification" process is in place – which the construction company Morgan Sindall acting on behalf of the University appear to have complied with.
- 1.7 On Monday 15 September the Service, in conjunction with the following key agencies commenced a full fire investigation into the cause of the fire:
 - Nottinghamshire Police;
 - Regional Hydrocarbon Dog Handler;
 - Health & Safety Executive (HSE) for Construction Sites.
- 1.8 Additional support and consultation was provided by:
 - University of Nottingham;
 - Morgan & Sindall Construction;
 - Burgoyne's Forensic Investigators;
 - British Research Establishment;
 - Chief Fire Officers Association Lead for Timber Frames.

2. REPORT

- 2.1 The investigation was conducted using a co-ordinated multi-agency approach with the terms of reference being established to seek to determine the following. For each area the appropriate authority took the lead as indicated:
- Has a crime been committed – Police;
 - Cause of the fire – Fire Service; ;
 - Origin of where the fire had started – Fire Service;
 - Had all relevant legislation and guidance been followed – HSE; ;
- 2.2 The primary aim was to determine if a criminal act had been committed and therefore caused the fire. This was of paramount importance as the outcome of this line of enquiry would greatly influence how the investigation would be managed and the subsequent resources required to support this. Additionally it would affect the level of disruption to the local area and businesses through scene preservation, the type and quality of evidence to be collected and ultimately who assumed the lead on behalf of those involved in the combined approach for the whole of the investigation.
- 2.3 It was determined relatively early into the investigation, by the Police, that a criminal act could be discounted. The use of accelerants was also discounted by use of the hydro carbon dog.
- 2.4 At this point whilst the fire was simultaneously being investigated, the overall direction focused on whether there was any negligence on behalf of the building contractors and their sub-contractors during the construction process. This was to identify whether there was an act of omission or defect by the contractors as a collective in relation to:
- Health and Safety Legislation;
 - Fire Safety – as covered by the Construction Design & Management (CDM) Regs;
 - UK Timber Framed Association (UKTFA);
 - Sitesafe notification process.
- 2.5 The enforcing authority for health and safety regulations during construction including fire safety is the Health and Safety Executive (HSE).
- 2.6 Of note is that the Regulatory Reform Fire Safety Order 2005 only applies to occupied buildings or buildings under construction where any part of the building is occupied. For buildings under construction and not occupied the HSE are the enforcing authority for the CDM Regs which covers fire safety.
- 2.7 The Sitesafe notification process is an online process whereby fire and rescue services are notified of construction projects in their area that incorporate timber framed construction techniques. Morgan Sindall had complied fully with the Sitesafe notification process for the Triumph Rd construction project.

- 2.8 Early assumptions could be made relatively quickly into the process due to the fact that the building was still under construction. At the time of the fire it was found that the building did not have a mains gas or mains electrical supply. As such ignition related to the mains supplies from the utilities could be discounted.
- 2.9 What is of note is that there was a temporary power supply to the building for primary lighting, emergency lighting and for transformers to power electrical tools and charge mobile working platforms. Whilst all of these items were portable appliance tested at this stage they could not be discounted as a possible source of ignition.
- 2.10 As a result of the evidence gathering process and the discounting of possible ignition sources, electrical as a cause became the most probable cause. Although a fault with the mains utility supply had previously been discounted, it was established that there was a temporary electrical supply into not only the site, but also into the building under construction itself.
- 2.11 With the support of Morgan Sindall the investigation secured plans not only of the route that the temporary cable installation took, but also the nature and type of electric construction equipment that was in each area of the building. By surveying the scene post fire, the remains of these items were identified, marked and photographed in situ.
- 2.12 Over the days that followed and through the cross checking of the evidence and data available, it was finally determined that the most probable cause for the fire was electrical and the origin or location of the fire was on the first floor underneath the base of horn 1.
- 2.13 At this stage of the construction, without fire doors or in some areas glazing, there were open voids between floors. Whilst services were being installed and commissioned this caused the building to be self-ventilating and once the fire had taken hold it then passed through the building rapidly and with some ferocity.
- 2.14 The final phase of the investigation is to debrief the operational crews with a view to consolidating and refining future practice. This is a standard procedure undertaken by the Service, and due to the resources committed in dealing with this incident there is the potential to interrogate and capture a rich vein of feedback.
- 2.15 Additionally there will be a multi-agency meeting to look at the industry standards that were adopted and applied to this build. The brief will be to determine how effective these were despite the loss and what areas if any can be improved or bolstered for the future.
- 2.16 The investigation is also active in supporting the process to clear the site by offering guidance on what, if any, contamination is present in the fire debris and the land.

2.17 Investigators are also working with the HSE to provide information to assist them in advising the University and the local community to reassure them that any future rebuild is safe and within industry standards.

2.18 There exists a strong desire to replace the loss and once again realise the aspiration to be at the forefront of laboratory research in association with the University of Nottingham.

3. FINANCIAL IMPLICATIONS

There are no additional financial implications other than those incurred by conducting the fire investigation. This was undertaken by staff currently employed by the Service in the execution of its statutory duties.

4. HUMAN RESOURCES AND LEARNING AND DEVELOPMENT IMPLICATIONS

There are no human resources or learning and development implications arising from this report.

5. EQUALITIES IMPLICATIONS

An equality impact assessment has not been undertaken because this report is to provide an update to the Committee on a significant incident.

6. CRIME AND DISORDER IMPLICATIONS

By undertaking the joint investigation some of the information and intelligence obtained can be used to ensure future projects are safeguarded against any criminal acts.

7. LEGAL IMPLICATIONS

7.1 If the Service had not undertaken a fire investigation it would not have satisfied its statutory duties under the Fire & Rescue Services Act resulting in potential legal implications.

7.2 Had the Service not participated fully with a joint investigation it could have faced legal implications by providing conflicting information and therefore undermining fellow enforcing authorities. This could have affected any potential legal actions taken.

8. RISK MANAGEMENT IMPLICATIONS

There are no risk management implications arising from this report.

9. RECOMMENDATIONS

That Members note the contents of this report.

10. BACKGROUND PAPERS FOR INSPECTION (OTHER THAN PUBLISHED DOCUMENTS)

None.

John Buckley
CHIEF FIRE OFFICER