Committees:	Dates:
Community and Children's Services Housing Management and Almshouses Sub Committee	11 May 2018 5 June 2018
Subject: Fire Safety Review – HRA Properties	**Public**
Report of: Andrew Carter Director of Community & Children's Services	**For Decision (by Community and Children's Services)**
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Summary

The purpose of this report is to inform Members of the work that has been done on potential improvement works to enhance the safety of the City of London Corporation's (CoLC's) social housing portfolio, and its residents in the event of fire. The report also seeks the views of, and guidance from Members on the strategic direction the CoLC should take in its approach to fire safety.

Recommendations

The Committee is asked to:

1. Note, consider and discuss the work that has been done on potential improvement works to enhance the safety of the CoLC's social housing portfolio and its residents in the event of fire.

2. Note the completion of the 2018 fire risk assessments for the CoLC's social housing portfolio and agree and approve the outline 'action plan' for dealing with the improvements required.

3. Provide advice and guidance to officers on the strategic direction the CoLC should take in its approach to fire safety.

4. Agree the retro-fitting of Automatic Water Fire Suppression Systems (Sprinklers) for Great Arthur House and on the recommendation of the Director of Community and Children's Services consider the retro-fitting of sprinklers to the four remaining social housing high rise tower blocks.

Main Report

Background

1. An initial paper was presented to this Committee, the Housing Management and Almshouses Sub-Committee and the Audit and Risk Management Committee in July 2017. This initial paper outlined actions we had taken in the immediate aftermath of the Grenfell Tower fire and set out our plans for further action. Further update reports were brought back to this Committee in September and November 2017 and in January 2018.

2. The initial paper presented to this Committee in July 2017, and all subsequent update reports, informed Members of the CoLC's position, and the progress made, with matters such as:

    - fire risk assessments,
    - communication with residents,
    - estate management,
    - fire safety maintenance and improvement works,
    - inspections by the London Fire Brigade (LFB),
    - potential future improvement works.

3. Questions were raised about the use of sprinkler systems and the installation of fire alarms in high-rise blocks of flats. The CoLC's high-rise flats do not currently have such systems. As part of the review of current processes and procedures relating to fire safety in its homes, research has been done into these, and other areas of improvements. The results are outlined in this report.

Considerations

4. This report has been prepared following a review of the CoLC's processes and procedures relating to fire safety in its homes to ensure that they remain robust and fit for purpose and its residents remain safe.

5. The report has been prepared and produced in conjunction with the CoLC's Fire Safety Adviser and with input and guidance from other colleagues across various departments.

Automatic Water Fire Suppression Systems (Sprinklers)

6. Regulations in England mean that only buildings constructed since 2007 and which are taller than 30 metres, are required to have sprinklers fitted. This requirement was not applied retroactively. Less than 1% of social housing tower blocks are fitted with sprinklers and none of the CoLC's five social housing tower blocks are fitted with sprinklers.

7. It is generally well documented and accepted that a sprinkler system is one of the most effective tools available to prevent the spread of fire in high-rise blocks of

flats. The installation of sprinklers in high-rise blocks of flats has significant benefits including:

- enhancing the safety of occupants and firefighters in the event of fire in the property;
- reducing the costs of a fire on local authorities and other property owners affected;
- reducing the financial consequences and other burdens associated with fires;
- reducing the demands on fire and rescue, police and ambulance/health services responding to events and the aftermath of major fires in high-rise accommodation;
- helping address shortcomings in other fire protection measures such as compartmentation.

8. There are however real issues and concerns with the retro-fitting of sprinkler systems, which is why they have not been installed in any great numbers. These issues include:

- the process is intrusive for residents and may require them to leave their home due to the nature of the works,
- the retro fitting of sprinklers into existing buildings is very difficult to achieve in terms of structural problems, water storage, etc,
- retro fitting sprinkler systems is very difficult to achieve in historic buildings or buildings with planning restrictions.
- the cost of retro fitting sprinkler systems is considered to be extremely expensive

9. As part of the review of its processes and procedures, and to give Members a realistic appraisal of the potential retro-fitting of sprinkler systems, the CoLC commissioned an independent feasibility study into the fitting of sprinkler systems into its eight tower blocks (five social housing blocks and three on the Barbican Estate). The study was carried out by Butler & Young Associates, a specialist independent firm of mechanical and electrical consulting engineers. The firm's findings are attached as Appendix 1 to this report.

10. For the purpose of this report, the focus is on the five tower blocks that form part of the Housing Revenue Account (HRA) namely:

- Great Arthur House, Golden Lane;
- Petticoat Tower, Middlesex Street;
- West Point, Avondale Estate;
- Central Point, Avondale Estate;
- East Point, Avondale Estate.

11. The feasibility study concludes that from a practical point of view, the retro-fitting of a sprinkler system can be achieved without undue complications and without the need to decant residents. The one potential exception to this is the need to comply

with planning restrictions. At this stage, this potential complication has not been explored in detail.

12. The feasibility study also gives indications of the total cost for both tenant and leaseholder flats, which do not include fees, VAT and on-going maintenance costs. These are summarised in the table below:

Block	**Units**	**Cost**
Great Arthur House	120	£676,880
Petticoat Tower	92	£537,768
West Point	74	£431,096
Central Point	74	£431,096
East Point	74	£431,096
Total:	**434**	**£2,507,936**

13. It is worth noting that the cost of installing sprinklers has already increased as a result of the response to demand from the sector. There is already a concern that even with the current demand for sprinklers, there will soon be a skills shortage in this area. This, and the increase in costs, will likely become even more significant if the anticipated changes to the current regulatory system and to the Building Regulations include the retro-fitting of sprinklers.

14. As outlined previously, there is no legal obligation on the CoLC to consider the retro-fitting of sprinklers in its tower blocks. With the exception of Great Arthur House, the recently completed fire risk assessments do not support the installation of sprinklers in the CoLC's tower blocks either as a suitable fire precaution or, as part of a fire evacuation strategy.

15. The CoLC's Fire Safety Adviser has provided his views and advice on the issue of installing sprinklers and his views are attached as Appendix 2 to this report.

16. Having considered the technical advice, the Director of Community and Children's Services would like members to consider the longer-term fire safety and robust risk management of our social housing, high rise towers.

Fire Doors

17. As Members will be aware from previous reports on fire safety presented to this Committee, the vast majority of front entrance doors to individual flats in our residential blocks of flats are as originally installed. As such, it is expected that these doors will provide a notional 15 to 20 minutes fire resistance. While this does not comply with the current Building Regulations for new-build properties, this in itself does not mean that the doors must be changed. However, if a fire risk assessment carried out under the provisions of the Regulatory Reform (Fire Safety) Order 2005, determines that the doors require upgrading to maintain the required level of compartmentation, then the doors must be replaced.

18. As part of the work we have been doing in relation to fire safety, we identified a small number of front entrance doors from our residential blocks of flats that were already undergoing improvement works, to be sent away for destructive fire resistance testing. There are very few testing facilities in the country that offer this service and those that do, including the Building Research Establishment (BRE), have had serious capacity issues.

19. The position with the testing of the front entrance doors, at the time this report was written, is outlined below:

Address	Date tested	Outcome
8 McMorran House	3 February 2018	Failed 15mins 30secs
23 Lambfold House	3 February 2018	Failed 16mins 30secs
5 Eric Wilkins House	3 February 2018	Failed 16mins 30secs

20. The destructive testing carried out on the doors to date, indicates an average fire resistance of 16 minutes. Although this is in line with what was predicted for doors in their original state, it gives serious cause for concern when set against the recommendations from many of the 2018 FRA's. An example of the fire testing report undertaken is attached as Appendix 3 to this report.

21. It should also be pointed out that, in terms of component life cycles, the expected life-span of a timber main entrance door is between 20 and 30 years. The vast majority of front entrance doors to individual flats in our residential blocks are as originally installed and so have reached the end of their useful life and are due to be replaced.

22. At this early stage, it is estimated that a replacement door programme for all the CoLC's HRA residential blocks of flats will cost in the region of £4million.

Fire Alarms

23. As has been reported on several occasions previously, the LFB continues to advise against the installation of fire alarms in communal areas. However, as part of the work we have been doing on fire safety, we have considered the potential installation of fire alarms in the common parts of our tower blocks and other blocks of flats set against the specific legislation and the guidance available at the time.

24. Early warning of a fire is an essential part of ensuring that residents can evacuate safely from their flats. The success of smoke alarms in reducing the number of casualties from fires in dwellings is well documented. The provision of appropriate smoke (and sometimes heat) alarms is now considered a basic component of fire safety in flats. Through a programme of electrical testing across all of its social housing estates, the CoLC is installing hard-wired carbon monoxide, smoke and heat detectors in all its tenanted flats.

25. Although purpose-built blocks of flats are not normally provided with communal fire detection and alarm systems, there are exceptions. The most common example is

a sheltered housing scheme. However, this is a 'special case' and even then, a 'stay-put' policy is normal.

26. In general needs' blocks designed to support a 'stay-put' policy (as is the case with all our blocks), it is accepted that a fire alarm system is unnecessary and undesirable. Such a system will inevitably lead to a proliferation of false alarms, imposing a burden on fire and rescue services and, ultimately, lead to residents ignoring warnings of what could be genuine fires. In addition, the ability to effectively manage a fire alarm system is rarely possible in a block of flats, unless it is staffed at all times.

27. The very clear advice is that fire alarms should only be fitted in existing blocks of flats where there is clear justification, and only as a last resort for example, when it is impossible to upgrade other measures to enable a 'stay-put' policy.

28. Notwithstanding the above, for the purpose of completeness in terms of our tower blocks, we have received information on the cost of installing fire alarms in the communal areas as summarised below:

Block	**Units**	**Cost**
Great Arthur House	N/A	Already installed
Petticoat Tower	92	£158,800
West Point	74	£119,950
Central Point	74	£119,950
East Point	74	£119,950
Total:	**314**	**£518,650**

29. It should also be noted, that if a sprinkler system is fitted in the tower blocks, there is even less reason or need for a fire alarm system to be installed.

Fire Risk Assessments (FRAs)

30. As Members will be aware, Frankham Risk Management Services Limited was commissioned to carry out new FRAs for each of our residential blocks. These new FRAs are very detailed and cover not only those areas previously inspected, but also any further areas of concern raised since the Grenfell Tower fire.

31. Previous FRAs carried out on the CoLC's residential blocks have been a Type 1 as required by legislation. The new FRAs are Type 3, which go beyond the requirements of the Regulatory Reform (Fire Safety) Order 2005. Type 3 FRA's cover everything required for a Type 1 FRA but also provide for an assessment of the arrangements for means of escape and fire detection (smoke alarms, heat detectors, etc.) within a sample of the flats (typically around 10%). A Type 3 FRA is non-destructive but the fire resistance of doors to rooms and compartmentation within the flat is considered.

32. Frankhams has now completed the new FRAs for our social housing estates and the final reports have been received and agreed. Attached at Appendix 4 to this report is the recently agreed 'Specific Hazard Identification and Action Plan Template for Fire Risk Assessments', which lists the recommendations from all the FRA's on our residential blocks. This is an overview of all the recommendations on all our blocks of flats and, for this purpose, individual blocks are not specified.

33. Officers are now working on developing detailed action plans for each of the residential blocks to ensure that the works required are completed in a timely manner in line with the FRA's recommendations. It should be noted however, that the final action plans for each block will, possibly to a significant extent, be affected by decisions taken by this Committee as a result of this report. It is intended, subject to the approval of this Committee, that the FRA's and resulting action plans should be available for publishing by the first week in June.

Leaseholder Recharges for Fire Safety Improvement Works

34. The issue of recharging leaseholders for fire safety improvement works is a key consideration for the CoLC. We have approximately 800 long leaseholders in our residential blocks of flats (HRA). Whether or not they can be recharged for potential improvement works such as the installation of sprinklers, replacement of fire doors and so on will have a significant bearing on the affordability of such measures and the financial burden for the CoLC and the leaseholders themselves.

35. Given the importance of this matter, Counsel's opinion has been sought on the ability of the CoLC to recharge leaseholders for fire safety works. A report will be presented to this Committee in due course.

Great Arthur House

36. As Members will be aware, due to the extensive refurbishment work being carried out at Great Arthur House, it had previously been decided not to carry out an FRA during 2016, when the CoLC's other residential blocks were done. However, even though the refurbishment work is still far from complete, it was felt prudent to undertake an FRA on Great Arthur House as a priority.

37. Notification was received from Frankhams that there were potentially serious compartmentation issues with the main entrance doors and side panels that required immediate attention / further investigation. Further investigation revealed that, although not as serious as first thought, there are issues with compartmentation at Great Arthur House that meant the 'stay put policy' in the event of fire could not be sustained.

38. Following discussions with representatives of the LFB, an action plan was developed and implemented to ensure the safety of residents in Great Arthur House. The action plan provided for:

    - the installation of a communal fire alarm system as a temporary measure until a permanent hard-wired fire alarm system can be installed

- the delivery, and installation where required, of individual smoke detectors to all flats in Great Arthur House
- the introduction of a 'Waking Watch', a team of four security staff patrolling the building at all times, whose role is to alert residents in the event of a fire and to assist in any evacuation process
- the introduction of an evacuation process for residents in the event of a fire.

39. A hard-wired fire alarm system was subsequently procured, installed and, on completion, the system was commissioned. There are a number of residents who have refused us access to install the detection units within their flats and appropriate action is being taken to gain access. We have recently received confirmation from the LFB that, until access has been achieved to all flats and the detection units installed, the Waking Watch must remain in place.

40. Due to the unique nature of the building and its issues, Great Arthur House is being dealt with as a 'special project' in terms of the fire safety works. As well as the further detailed investigation work that is presently being carried out on the compartmentation issues, a Gateway process is underway to facilitate the removal and replacement of two front entrance 'screens' and doors to individual flats. These will be replaced to replicate the ones removed and the units taken out will be used for destructive testing to assess their level of fire resistance, one in its original condition and the second in an upgraded condition. This will allow us to determine the extent of work required to upgrade the compartmentation of the front entrance doors and screens to the rest of the flats in the block. Members will be kept informed of progress with this project through the Fire Safety Update Reports presented to this Committee.

Collaborative Working

41. Several opportunities have arisen for representatives of the London Councils to get together to discuss the various approaches they are taking to ensure processes and procedures relating to fire safety in their homes remain robust and fit for purpose.

42. One such opportunity is the London Housing Directors' Fire Safety Sub-Group, which the CoLC is a member of. Through its membership, the CoLC has, for example, had the opportunity to contribute to a response to the interim report on the Grenfell Tower tragedy issued by Dame Judith Hackitt. We have also been able to discuss with other London Council's topics such as ACM cladding (the type installed at Grenfell Tower), fire safety improvement measures such as fire doors and sprinklers and leaseholder recharges.

43. In general terms, most of the other London Council's face the same issues as the CoLC and are embarking on similar courses of action. Many of the other London Council's do have problems with ACM cladding on their residential blocks and are at various stages of removing and replacing it.

44. For comparison purposes, the work other London Councils are doing in relation to fire safety improvements includes:

- Hammersmith and Fulham - installing sprinklers in all its high-rise blocks with no charge to leaseholders,
- Wandsworth - installing sprinklers in 99 high-rise blocks with the intention of recharging leaseholders,
- Croydon - fitting sprinklers in 25 high-rise blocks,
- Westminster - fitting sprinklers in high-rise blocks,
- Waltham Forest - fitting sprinklers in high-rise blocks,
- Enfield - fitting sprinklers in high-rise blocks,
- Harringay – not fitting sprinklers,
- Lewisham – not fitting sprinklers.

Financial Implications

45. As outlined earlier in this report under the heading "Leaseholder Recharges for Fire Safety Improvement Works", the issue of recharging leaseholders for fire safety improvement works is a key consideration for the CoLC. With approximately 800 long leaseholders in its residential blocks of flats (HRA), whether they can be recharged for potential improvement works such as the installation of sprinklers, replacement of fire doors and so on will have a significant bearing on the affordability of such measures and the financial burden for the CoLC.

46. Setting aside the issue of leaseholder recharges, fire safety improvement works are currently not provided for within the HRA Capital Works Programme. As such, any decision to carry out these previously 'unplanned' works will put additional pressure on the HRA and there may need to be a review of priorities particularly in relation to our new housing delivery programme. In simple terms, for every £1million we spend on 'unplanned' works such as fire safety improvement works, we lose the ability to fund four new homes from the HRA towards our housing delivery programme.

47. Clearly, once final decisions have been made on what additional fire safety improvement works are to be carried out and the results of the general stock condition survey are known, the detailed profile of planned HRA expenditure and funding will need to be fully refreshed and a revised financial strategy developed and approved by Members.

Legislation

48. All the CoLC's residential blocks of flats complied fully with the requirements of the Building Regulations at the time of their construction. Given that the Building Regulations are not retrospective, they remain compliant.

49. Issues do arise however, as in the case of Great Arthur House as a result of a FRA carried out under the provisions of the Regulatory Reform (Fire Safety) Order 2005, deficiencies were highlighted in the structure of the building undermining the required level of compartmentation in relation to fire safety. In such cases, these deficiencies must be addressed and remedied, and it is no defence to argue that the building complied with the Building Regulations at the time it was built.

50. In the aftermath of the Grenfell Tower tragedy, further concerns were again raised with the adequacy of the building regulations with particular regard to fire safety. In response, Dame Judith Hackitt was asked by the Secretary of State for the Department for Communities and Local Government (DCLG) and the Home Secretary to conduct an Independent Review of Building Regulations and Fire Safety with a particular focus on their application to high-rise residential buildings.

51. Although her final report is not due until the Spring this year, in December last year, Dame Judith produced an Interim Report and presented to parliament. In the foreword to her report, she states that:

    "As the review has progressed, it has become clear that the whole system of regulation, covering what is written down and the way in which it is enacted in practice, is not fit for purpose, leaving room for those who want to take shortcuts to do so".

52. It does appear that there will be significant changes to the current regulatory system and to the Building Regulations regarding fire safety and in particular to high-rise residential buildings. Some of these changes are likely to be retrospective. The retro-fitting of sprinklers, for example, which has been debated for many years, particularly more so since the Lakanal House fire on 3 July 2009, is believed to be one such area of improvement.

53. With this in mind, Members may take the view that the CoLC, like several others are doing, should wait until the final report is published before deciding on its future strategic approach to fire safety.

Conclusions

54. Members will be aware from the several Fire Safety Update Reports presented to this, and other Committees that the CoLC has responded very positively and efficiently to the demands placed on it by the Grenfell Tower tragedy. We have done considerable work in the following areas:

    - fire risk assessments,
    - communication with residents,
    - estate management,
    - fire safety maintenance and improvement work,
    - inspections by the London Fire Brigade,
    - potential future improvement works.

55. This report informs Members of the work done on potential improvement works to enhance the safety of the CoLC's social housing portfolio and its residents in the event of fire. The report also seeks Members views and guidance on the strategic direction the CoLC should take in its approach to fire safety with particular regards to our genuine high-rise residential blocks in relation to:

    - retro-fitting sprinklers,
    - installation of fire alarms,
    - upgrading front entrance doors.

56. It has previously been agreed that the entrance doors and frames to our social housing properties will be upgraded to give up to 60 minutes fire resistance at an estimated cost of £4million. This makes sense not only from a fire safety perspective but also from a planned maintenance perspective as the doors have long since reached the end of their useful life.

57. As outlined previously, the retro-fitting of sprinklers in CoLC tower blocks is not currently required by law and, except for Great Arthur House, is not supported by the recently completed FRA's. In the case of Great Arthur House, the issues relating to compartmentation identified by the FRA's are complex and potentially challenging to resolve. As such, the installation of a sprinkler system in Great Arthur House has considerable merits in providing an additional level of protection for residents given the compartmentation issues identified.

58. The decision to retro-fit sprinklers in our other tower blocks is not as clear cut in that it is not supported by legislation or the recommendations of the Fire Risk Assessments. The current technical advice does not necessitate retro-fitting sprinklers in these blocks. However, there are reasons why Members may want to positively consider retro-fitting sprinklers across all our social housing high rise towers, such as: the obvious benefits that sprinklers provide (as outlined within this report), the potential cost implications if retro-fitting does become a legal requirement and the avoidance of a divergence within the City's high-rise flats. Therefore, the Director of Community and Children's Services is recommending that Members positively consider the retro-fitting of Automatic Water Fire Suppression Systems (Sprinklers) across all our social housing high rise tower blocks.

Appendices

Appendix 1: Feasibility study into the retro-fitting of sprinklers in our high-rise residential blocks.
Appendix 2: CoLC's Fire Safety Adviser's Report
Appendix 3: Example report on fire testing to doors.
Appendix 4: Specific Hazard Identification and Action Plan Template for Fire Risk Assessments

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