

Committee(s): Barbican Residential Committee	Dated: 17/06/2022
Subject: Update Report – Arup Fire Safety Strategy Reports	Public
Which outcomes in the City Corporation’s Corporate Plan does this proposal aim to impact directly?	1, 2, 12
Does this proposal require extra revenue and/or capital spending?	N
If so, how much?	N/A
What is the source of Funding?	N/A
Has this Funding Source been agreed with the Chamberlain’s Department?	N/A
Report of: Andrew Carter, Chief Officer/Executive Director Community and Children’s Services	For Decision
Report author: Paul Murtagh Assistant Director Barbican & Property Services	

Summary

The purpose of this report is to update Members on the progress made by Arup in carrying out a detailed fire safety strategy audit on a representative sample of residential blocks on the Barbican Estate.

Recommendations

Members are asked to:

1. Note the contents of this report.
2. Consider and discuss the Fire Safety Strategy Reports produced by Arup in respect of Cromwell Tower and Andrewes House on the Barbican Estate.
3. Reconsider the decision of this Committee at its meeting in June 2018, not to pursue the proposal for the retro-fitting of automatic water fire suppression systems (sprinklers) in the three Barbican high-rise tower blocks.

Main Report

Background

1. Due to the unique nature of the Barbican Estate, some Members have previously suggested that a more detailed specialist fire safety survey be undertaken on a representative sample of flat blocks on the Estate. The purpose of this specialist survey would be to review and assess specific fire safety precautions such as:
 - Communal fire doors;

- Smoke control measures;
 - Fire alarm and fire detection measures;
 - Escape routes;
 - Ventilation provisions.
2. This specialist survey would also satisfy some of the recommendations of the FRA's that were carried out by Frankham Risk Management Services Limited in January/February 2018 and, will help fill in some of the 'gaps' in our understanding of how the residential buildings will perform in the event of a fire.
 3. In November 2020, following the approval of the Barbican Residential Committee (BRC), Arup, a specialist firm of engineering consultants, was appointed to carry out a detailed fire safety strategy audit on a representative sample of four residential blocks on the Barbican Estate.
 4. Members will be aware from previous reports, that Arup's progress with the fire safety strategy audit has been significantly delayed by COVID-19 and associated resource issues.
 5. Arup has now completed its surveys at Cromwell Tower, Andrewes House and Mountjoy House and, has submitted its final reports for Cromwell Tower and Andrewes House. The report for Mountjoy House has yet to be finalised and, officers are working with Arup's to provide additional information and mitigation to enable the final report to be issued.
 6. The Arup Fire Safety Strategy reports for Cromwell Tower and Andrewes House are included at Appendix 'A' and Appendix 'B' to this report.

Considerations

7. As set out in the 'Executive Summary' at the beginning of each of the two finalised reports, as part of its review of Cromwell Tower and Andrewes House, Arup has:
 - compared the existing fire safety precautions of each building with the requirements in Building Regulations 2010 (as amended) by benchmarking against the current standards including BS 9991 and BS 9999.
 - considered the recommended improvements to existing residential buildings in Phase 1 of the Grenfell Tower Enquiry Report by Sir Martin Moore-Bick.
8. It is inevitable that buildings that are more than 50 years old (even though they were fully compliant when they were built) will simply not meet the requirements of modern-day standards and regulations, as is the case with Cromwell Tower and Andrewes House and, undoubtedly, with all other blocks on the Barbican Estate. What is important however, is that where there are gaps in the existing fire safety precautions against the current standards, fire safety improvements are carried out to remediate the risk on an 'as nearly as practicable basis'.
9. As can be seen from the Cromwell Tower and Andrewes House reports, Arup has identified several 'gaps' in the existing, 'as-built' fire safety precautions and, has set out its recommendations for remedial actions to address those gaps. These are considered separately for both Cromwell Tower and Andrewes House below.

Cromwell Tower

10. In Table 1 of its Fire Safety Strategy Report for Cromwell Tower, Arup sets out the gaps it has identified in the existing fire safety precautions and, its recommendations for dealing with them. Some of the recommendations however, are already included in current workstreams including:

- identifying persons with restricted mobility in Cromwell Tower.
- upgrading/replacing existing fire safety signage.
- survey of existing emergency lighting and necessary remedial works to ensure compliance with current regulations and British Standards.
- replacement of flat entrance doors and riser cupboards with new fire doors that comply with current regulations and British Standards.
- regular inspection and testing of fire doors to ensure that they remain in good working order.

11. Some of the recommendations proposed by Arup may simply not be achievable due to the constraints on the building including its construction, its listed status, and the feasibility of the recommendations. Arup has acknowledged this in its report when it says:

“The recommendations may take some time to be fully implemented. Constraints on site may affect the feasibility of some of the solutions and further option development may occur”.

12. Further work is required to analyse the recommendations in detail and, to establish a practical Action Plan to address the deficiencies identified. Officers are working with Arup, colleagues in Building Control, Planning and the CS Fire Safety Team to progress this matter and, a further report will be brought back to this Committee at its next meeting.

13. In acknowledging that some of the recommendations in its report may not be feasible and others, will take time to implement, Arup has set out the following interim temporary measures that will address the risks whilst, permanent solutions are developed and implemented:

- preparation of PEEPs for persons with restricted mobility.
- removal of all storage and rubbish within riser spaces that open onto the stairs.
- consider providing a fire detector within the electrical riser above Level 37.

14. We are currently nearing the completion of an exercise to identify persons with restricted mobility living on the Barbican Estate to enable us to discuss with them what they should do in the event of an emergency. Information on those properties that are identified with occupants needing additional support, will be included in the Premises Information Box (PIB). The PIB contains information for the use of the Fire Brigade such as floor plans to the building, as well as those homes with an identified need for assistance in an emergency evacuation.

15. The matter of storage and rubbish within the riser spaces was first raised four years ago when the 2018 Fire Risk Assessment was carried out. Immediate action was taken to remove all storage and rubbish from the risers and, the riser spaces are subsequently monitored and inspected annually to ensure that they remain clear. In addition, the new Home Improvements process implemented across the Barbican Estate, provides that the City Corporation will post-inspect all works before issuing final approval and, the riser spaces are inspected as part of this process.
16. Possibly, the most significant recommendation in the Arup Fire Safety Strategy Report for Cromwell Tower, is the installation of a sprinkler system. For a high-rise, single stair building that adopts a stay-put policy, effective compartmentation is essential. Arup has concluded that condition of the compartmentation is unknown and, with the extended travel distances within the flats and, the potential number of persons with restricted mobility living in the block, the installation of a sprinkler system is strongly recommended. The installation of a sprinkler system will not only enhance life safety but will also significantly improve the overall fire safety of the building.

Andrewes House

17. In Table 1 of its Fire Safety Strategy Report for Andrewes House, Arup sets out the gaps it has identified in the existing fire safety precautions and, its recommendations for dealing with them. Some of the recommendations are already included in current workstreams including:
- identifying persons with restricted mobility in Andrewes House.
 - upgrading/replacing existing fire safety signage.
 - survey of existing emergency lighting and necessary remedial works to ensure compliance with current regulations and British Standards.
 - replacement of flat entrance doors and riser cupboards with new fire doors that comply with current regulations and British Standards.
 - regular inspection and testing of fire doors to ensure that they remain in good working order.
18. As with Cromwell Tower, some of the recommendations proposed by Arup may simply not be achievable due to the constraints on the building including its construction, its listed status, and the feasibility of the recommendations. Further work is required to analyse the recommendations in detail and, to establish a practical Action Plan to address the deficiencies identified. Officers are working with Arup, colleagues in Building Control, Planning and the CS Fire Safety Team to progress this matter and, a further report will be brought back to this Committee in due course.

Summary

19. Although Arup has completed its surveys at Cromwell Tower and Andrewes House and submitted its final reports, there is still work to be done to analyse the recommendations in detail and, to establish a practical Action Plan to address the deficiencies identified. It is expected that a further report will be brought back to the next meeting of this Committee.

20. As a result of the concerns raised by Arup in respect of Cromwell Tower relating to the potential risks to life safety arising from a high-rise single-stair building that adopts a stay-put policy, with unknown levels of compartmentation and, with the extended travel distances within the flats, Members are asked to reconsider the previous decision of this Committee not to pursue the proposal for the retro-fitting of automatic water fire suppression systems (sprinklers) in the three Barbican high-rise tower blocks. This assumes that Lauderdale Tower and Shakespeare Tower are similarly constructed and, the same deficiencies are present.
21. The outcome of the Fire Safety Strategy Report at Mountjoy House will be reported to the next meeting of this Committee once, officers have completed its work with Arup to provide additional information and mitigation to enable the report to be finalised.

Appendices

Appendix 'A' – Fire Safety Strategy Report Cromwell Tower
Appendix 'B' – Fire Safety Strategy Report Andrewes House

Paul Murtagh
Assistant Director, Barbican & Property Services
T: 020 7332 3015 E: paul.murtagh@cityoflondon.gov.uk