

<b>Committee(s):</b> Barbican Residential Committee	<b>Dated:</b> 30/09/2022
<b>Subject:</b> Arup Fire Strategy Report – Barbican Estate	<b>Public</b>
<b>Which outcomes in the City Corporation’s Corporate Plan does this proposal aim to impact directly?</b>	<b>1, 2, 12</b>
<b>Does this proposal require extra revenue and/or capital spending?</b>	<b>N</b>
<b>If so, how much?</b>	<b>N/A</b>
<b>What is the source of Funding?</b>	<b>N/A</b>
<b>Has this Funding Source been agreed with the Chamberlain’s Department?</b>	<b>N/A</b>
<b>Report of:</b> Andrew Carter, Chief Officer/Executive Director Community and Children’s Services	<b>For Decision</b>
<b>Report author:</b> Paul Murtagh Assistant Director Barbican & Property Services	

### **Summary**

The purpose of this report is to update Members on the outcome of the Arup Fire Strategy Report and, the subsequent proposed Action Plan 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 Strategy Reports produced by Arup in respect of Cromwell Tower, Andrewes House, and Mountjoy House on the Barbican Estate.
3. Consider and discuss the Proposed Action Plan, noting the progress that has already been made against some of the recommendations contained in the Arup Fire Strategy Reports.
4. Subject to available funding, to agree the proposal to procure the services of a suitably qualified Fire Engineer to carry out a wider review of the whole of the Estate based on the key findings and principles set out in the three Arup Fire Strategy Reports.

## **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 Barbican 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;
  - Levels of compartmentation;
  - 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 strategy report 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 strategy report has been significantly delayed by COVID-19 and associated resource issues. At its last meeting on 17 June 2022, the BRC received an update report on progress.
5. Arup has now completed its surveys at Cromwell Tower, Andrewes House and Mountjoy House and, has submitted its final reports for the three blocks. The Arup Fire Strategy Reports for Cromwell Tower, Andrewes House and Mountjoy House are included at Appendix 'A', Appendix 'B' and Appendix 'C' to this report.
6. Due to the additional costs incurred in producing the three Fire Strategy Reports and, the delays in producing the reports, it has been decided that the representative sample should be restricted to the three blocks that are now completed.

### **Considerations**

7. As set out in the 'Executive Summary' at the beginning of each of the three reports, as part of its review of Cromwell Tower, Andrewes House and Mountjoy 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, Andrewes House and Mountjoy 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 compared 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, Andrewes House and Mountjoy 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 set out and addressed in turn as part of the Proposed Action Plan attached at Appendix 'D' to this report.
  10. As Members will see from the Proposed Action Plan, several of the recommendations made by Arup for remedial actions to address the identified 'gaps' in the 'as-built' fire safety precautions are already included in current workstreams including:
    - identifying persons with restricted mobility across the Barbican Estate.
    - 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 fire doors to service 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.
    - further specific targeted compartmentation surveys.
    - regular estate inspections to ensure fire safety measures are maintained to the required standard.
  11. Members attention is drawn to the 'Fire Safety Update' report that is also included in the agenda for this meeting, that updates Members on the progress that has been made in relation to fire safety matters across the Barbican Estate since January this year. This report contains more detail on the various workstreams that will go some way to addressing the identified 'gaps' in the 'as-built' fire safety precautions identified in the Arup Fire Strategy Reports.
  12. 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".

13. Further work is still required to analyse some of the recommendations in detail and develop workable solutions. Officers continue to work with colleagues in Building Control, Planning, and the CS Fire Safety Team to progress this matter and, further update reports will be brought back to this Committee at regular intervals.

#### Installation of Sprinklers in the Barbican Tower Blocks

14. As reported at the last meeting of this Committee on 17 June 2022, 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 as the 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.
15. At its meeting on 17 June 2022, Members of this Committee noted the strong recommendation from the Executive Director of Community & Children's Services, that sprinklers are fitted in the three Barbican high-rise tower blocks, based on the assumption that Lauderdale Tower and Shakespeare Tower are similarly constructed and, the same deficiencies are present.
16. An initial outline feasibility study has been undertaken by officers and, has concluded that the retrofitting of sprinklers in the three Barbican high-rise tower blocks can be achieved at an estimated cost of between £3,000,000 and £4,000,000 (for all three towers).

#### Resident Consultation

17. Unfortunately, this report could not be completed in time for inclusion in the Agenda for the Barbican Residents Consultation Committee (RCC) meeting on 20 September 2022. However, the report was subsequently circulated to the members of the RCC on 22 September.
18. It is clear and fully accepted, that there needs to be meaningful consultation and engagement with residents of the Barbican Estate on the outcome of the Arup Fire Strategy work particularly, with regard to recommendations and proposals that will impact on their homes and, the block in which they live. It should be noted however, that at this stage, Members of this Committee are not being asked to make decisions on matters that will have a direct impact on residents.
19. It is hoped and expected that the RCC will provide feedback to officers on the Arup Fire Strategy Reports for the three blocks and, the Proposed Action Plan. It is intended that officers will work closely with the RCC to collectively agree a consultation strategy for taking this matter forward. This will be submitted to the respective meetings of the RCC and the BRC for consideration and approval.

## **Summary**

20. Arup has now completed its commission to provide Fire Strategy Reports at Cromwell Tower, Andrewes House and Mountjoy House. However, it should be noted that these reports are 'live' working documents. As we continue to carry out further investigative works such as, for example, site specific compartmentation surveys, we will provide such information to Arup to enable the relevant Fire Strategy Report to be reviewed, revised, and updated.
21. Now that we have Arup's representative sample Fire Strategy Reports for the three blocks, consideration must be given to how we use the information contained in the reports to establish the position of the remaining 18 blocks on the Barbican Estate. The key findings and principles set out in Arup's Fire Strategy Reports will likely be consistent across all blocks on the Estate and, that being the case, it may be prudent and more cost effective, to procure the services of a suitably qualified Fire Engineer to carry out a wider review of the whole of the Estate.

## **Appendices**

Appendix 'A' – Fire Safety Strategy Report Cromwell Tower  
Appendix 'B' – Fire Safety Strategy Report Andrewes House  
Appendix 'C' – Fire Safety Strategy Report Mountjoy House  
Appendix 'D' – Proposed Action Plan

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