

## APPENDIX 2 – PROPOSED ACTION PLAN

| Identified Gaps   | Recommendation  | Management Response/Mitigation  | Action  |
|---|---|---|---|
|   | <b>Cromwell Tower</b>   |   |   |
|   | <b>Interim Measures</b>   |   |   |
| Page 2  | Prepare a Personal Emergency Evacuation Plan (PEEP), so that the evacuation arrangement in the event of a fire is clear to each PRM occupant.               | We have introduced a new procedure for assessing vulnerable residents who, may need help evacuating in an emergency or, who may benefit from further help and advice on fire safety issues in their homes.      | Continue to work with the 67 households who have informed us that they (or a member of their household) may be vulnerable.  |
|   | Remove all storage and rubbish within riser spaces that opens into stair.   | This relates to the FRA finding from January 2018, which was addressed immediately at the time. The issue arose because of a leaseholder carrying out internal refurbishment works.                             | New process introduced in 2018 for Home Improvements requires landlord's post inspection and approval that prevents this happening again.   |
|   | Consider providing a fire detector within the electrical riser above L37, so that the BE receives early warning of a potential fire in the electrical riser | Following discussions with Building Control, we feel that this is unnecessary. The load within the electrical riser is negligible. Due to the chimney effect, smoke from any floor may end up setting this off. | No further action proposed at this stage.   |
|   | <b>Recommended Actions (Table 1)</b>  |   |   |
| No internal hallway in the flats.<br><br>Extended travel distances (for single direction of escape).<br><br>Duplex and triplex layout with open internal stair. | Provide early warning to occupants within the flats by installing a minimum Grade D1 Category LD1 within the flats.   | This is considered a leaseholder responsibility and, our Home Improvements booklet recommends to leaseholders the installation of a fire alarm system during refurbishment work.                                | Further promotion of the installation of fire detection systems through the Estate Wide Bulletin and other publications.<br><br>For our tenanted homes on the Estate, this work is planned for completion by March 2023 (dependent upon residents granting access). |

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|  | Review the internal layout of the duplex and triplex in terms of alternative egress and internal hallway against the current guidance.  | We have referred this back to ARUP as, it is our view that this forms part of its original commission.   | ARUP to review and report back.<br><b>Not part of ARUP commission. To be commissioned by the Corporation.</b>  |
| Sprinkler protection.                                      | The installation of a sprinkler system is strongly recommended to address inherent risks to the life safety of occupants.   | The Executive Director of Community & Children’s Services has previously recommended that sprinklers are fitted in the three Barbican high-rise tower blocks.  | Members of the BRC to further consider and decide on the recommendation to install sprinklers in the three Barbican high-rise tower blocks.<br><b>Alternative use of water mist system being considered by officers.</b> |
| L1 – L6 Wing A flats provided with single means of escape. | For Wing A flats from L1 to L6: Retain the existing arrangement of escaping via a neighbour’s flat from Wing A provided, that there are regular inspections in place to check that the means of escape route via the adjacent flat (Wing B) is available. | This is the most practical and achievable option of the three presented. The BEO sends out advice to leaseholders about these escape routes. Regular inspection is difficult due to access arrangements.   | BEO staff to work with residents to develop practical arrangements for inspection and maintaining escape routes.   |
| Evacuation of PRM’s/smoke control.                         | Preparation of Personal Emergency Evacuation Plans (PEEP) for PRM’s.  | We have introduced a new procedure for assessing vulnerable residents who, may need help evacuating in an emergency or, who may benefit from further help and advice on fire safety issues in their homes. | Continue to work with the 67 households (estate wide) who have informed us that they (or a member of their household) may be vulnerable.   |
|  | Replacing existing manually operated ventilation to automatic ventilation system in the lift lobbies.   | Early research suggests that this will be a huge and intrusive task. The existing arrangements do function and the benefits do not seem to justify the task.   | Further work to complete an options appraisal and, assess the benefits/risks against the scope, nature, and cost of the recommendation.<br><b>Arup to undertake specific M&amp;E survey.</b>                             |
|  | Provision of Emergency Voice Communication (EVC) system to all the lift lobbies.  | We are looking to incorporate this into the proposed Lift Refurbishment Works.   | Review as part of the proposed Lift Refurbishment Works.   |
| Exit signage.  | A survey is recommended to inspect and replace existing fire signage to comply with current standards.  | Fire signage replacement project is in place but, has been suspended to enable Listed Building Consent to be achieved.   | Complete the current fire signage replacement project.   |
| Emergency lighting.  | A survey is recommended to inspect and replace existing emergency lighting to comply with current standards.  | Existing emergency lighting is inspected and tested regularly and remains functional. A survey is being carried out to identify the works required to bring the installation up to current standards.      | Complete the survey and implement subsequent project to bring the installation up to current standards.  |

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| Compartmentation   | A sitewide survey is recommended to inspect breach in compartmentation and to undertake works to maintain the compartmentation in accordance with BS9991.   | The BEO has completed this survey for the three Barbican towers.  | Discussions with qualified Fire Engineer regarding findings from survey, proposed reinstatement works and process for inspection.<br><b>Compartmentation works being procured.</b>  |
| Connection between small lobby, ventilation shaft and electrical riser.                      | Provide fire separation between the small lobby and the ventilation shaft (removing all the vents) and remove the fire door between the small lobby and the lift lobby on L37 and above, or<br>Provide a fire and smoke damper at each vent to maintain fire separation and to only vent the floor of fire incident. Also provide a wall to separate the smoke shaft and the electrical riser from L38 and above. | There are concerns that these recommendations are simply not achievable due to the constraints on the building including its construction and its listed status.  | Further work is required to analyse the recommendations in more detail. Officers are working with Arup, colleagues in Building Control, Planning, and the CS Fire Safety Team to progress this matter.<br><b>Arup to undertake specific M&amp;E survey.</b> |
| Fire doors at flat entrances, lift lobbies, firefighting stairs and refuse storage/post box. | It is recommended to replace all fire doors to the stair, small lobby, flat entrances, and the refuse storage/post box.   | This is part of the £20m Replacement Door Programme across the Barbican Estate.   | Included in the Replacement Door Programme across the Barbican Estate.  |
|  | Doors to all the risers to be inspected and repaired/replaced to maintain fire separation from the stair or lift lobbies.   | The existing PDA doors are concrete, and the EDA doors are asbestos and are deemed to be compliant.   | No further action required at this stage.   |
|  | Keep records of inspecting and testing of fire doors in future, at not less than three-monthly intervals to ensure that all fire doors are in working order.  | Relevant staff have had training in the inspection of fire doors and, this is no incorporated into the Estate inspection process.   | Incorporated into the Estate inspection process.  |
| Kitchen extract shunt duct system.   | Replace the existing extract hoods with recirculation type hoods and, implement one of the following:<br>(a) smoke and fire damper at the shunt duct riser activated by the fire alarm/detectors within the flats.<br>(b) maintain the shunt duct arrangement and increase the reliability of the main extract fan. This will require an additional duty standby fan.   | There are concerns that these recommendations are simply not achievable due to the constraints on the building including its construction and its listed status.<br><br>The current Leaseholder Home Improvements Pack contains up-to-date recommendations for installing fire dampers. | Further work is required to analyse the recommendations in more detail. Officers are working with Arup, colleagues in Building Control, Planning, and the CS Fire Safety Team to progress this matter.<br><b>Arup to undertake specific M&amp;E survey.</b> |

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|   | (c) to block off the shunt ducts and provide a fan on the external wall to draw out air from the flat into the balconies. | The existing fans are inspected and maintained at six-monthly intervals.   |   |
|   | <b>Andrewes House</b>   |  |   |
|   | <b>Recommended Actions (Table 1)</b>  |  |   |
| Narrow escape routes along the balconies.<br><br>Extended travel distances in flats with single direction of egress and flats without hallway.<br><br>Lack of protected lobby between each flat and the escape stair. | Provide early warning to occupants within the flats by installing a minimum Grade D1 Category LD2 within the flats.       | This is considered a leaseholder responsibility and, our Home Improvements booklet recommends to leaseholders the installation of a fire alarm system during refurbishment work. | Further promotion of the installation of fire detection systems through the Estate Wide Bulletin and other publications.<br><br>For our tenanted homes on the Estate, this work is planned for completion by March 2023 (dependent on residents granting access). |
|   | Provide smoke ventilation to all the common stairs with appropriate means of activation (e.g. smoke detectors).           | There are concerns that these recommendations are simply not achievable due to the constraints on the building including its construction and its listed status.                 | Further work is required to analyse the recommendations in more detail. Officers are working with Arup, colleagues in Building Control, Planning, and the CS Fire Safety Team to progress this matter.<br><b>Arup to undertake specific M&amp;E survey.</b>       |
|   | Clear briefing to all occupants of Andrewes House on the available escape routes.   | The Resident Handbook includes relevant information on fire safety and, further regular reminders are included in the Barbican weekly email bulletin.                            | Covered by current processes and procedures.  |
| Evacuation of PRM's.  | Provision of Emergency Voice Communication (EVC) system to all the lift lobbies.  | Need to check on feasibility of this recommendation. If feasible, we will obtain estimate of costs from approved contractor.   |   |
|   | BE to put in place a management plan and evacuation strategy for the evacuation of occupants including Personal           | We have introduced a new procedure for assessing vulnerable residents who, may need help evacuating in an emergency or,  | Continue to work with the 67 households (estate wide), who have informed us that  |

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|                                      | Emergency Evacuation Plans (PEEP) for PRM's.   | who may benefit from further help and advice on fire safety issues in their homes.   | they (or a member of their household) may be vulnerable.  |
|                                      | Clear briefing to PRM's on the evacuation procedures and the use of the EVC system to call for assistance.                 | Included in the procedure above.   | Will be included in the above if and when EVC system is installed).                                     |
| Exit signage.                        | A survey is recommended to inspect and replace existing fire signage to comply with current standards.                     | Fire signage replacement project is in place but, has been suspended to enable Listed Building Consent to be achieved.   | Complete the current fire signage replacement project.  |
| Emergency lighting.                  | A survey is recommended to inspect and replace existing emergency lighting to comply with current standards.               | Existing emergency lighting is inspected and tested regularly and remains functional. A survey is being carried out to identify the works required to bring the installation up to current standards.  | Complete the survey and implement subsequent project to bring the installation up to current standards. |
| Storage areas in LO3 car park level. | Provide minimum LD2 automatic fire detection and alarm system in accordance with BS5839-1.                                 | Further discussion with Arup in light of restrictions on use included in the stores licence outlined below.  |   |
|                                      | Provide adequate signage and emergency lighting within the area.   | Included in existing fire signage and emergency lighting projects.   | Included in existing fire signage and emergency lighting projects.                                      |
|                                      | Provide 120 minutes fire resisting construction, including FD60S doors to separate storage areas from firefighting stairs. | Stores licence includes the following provisions:<br>(a) no petrol, paint or other explosive or inflammatory oils or illegal substances shall be kept or taken into the store.<br>(b) the store shall be used as a personal domestic store only and the Licensee shall not do or suffer to be done in the store or on the premises of which the store forms part anything which in the opinion of the City may be a nuisance to them or any occupier of the premises of which the store forms part or other Licensees of stores.<br>(c) the Licensee shall not use the Store or permit or suffer it to be used for the purpose of any trade or business. | Review the store licence and inspect the use of the stores.   |
|                                      | Provide 60 minutes fire resisting construction, including FD30S doors to   | As above.  | As above.   |

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|   | separate storage areas from the common stairs.   |   |   |
| Fire doors at flat entrances, refuse storage/post box and service risers within stairs.                                   | It is recommended to replace all the fire doors to all the escape stair and firefighting shaft enclosures and service risers within the stairs, to maintain the fire and smoke integrity of the stair.   | This is part of the £20m Replacement Door Programme across the Barbican Estate.   | Included in the Replacement Door Programme across the Barbican Estate.  |
|   | Keep records of inspection and testing of fire doors in the future, at not less than three-monthly intervals to ensure that all fire doors are in working order.   | Relevant staff have had training in the inspection of fire doors and, this is now incorporated into the Estate inspection process (refer to replacement door programme)   | Incorporated into the Estate inspection process.  |
| Kitchen extract shunt duct system.  | Replace the existing extract hoods with recirculation type hoods and, implement one of the following:<br>(a) smoke and fire damper at the shunt duct riser activated by the fire alarm/detectors within the flats.<br>(b) maintain the shunt duct arrangement and increase the reliability of the main extract fan. This will require an additional duty standby fan.<br>(c) to block off the shunt ducts and provide a fan on the external wall to draw out air from the flat into the balconies. | There are concerns that these recommendations are simply not achievable due to the constraints on the building including its construction and its listed status.<br><br>The current Leaseholder Home Improvements Pack contains up-to-date recommendations for installing fire dampers.<br><br>The existing fans are inspected and maintained at six-monthly intervals. | Further work is required to analyse the recommendations in more detail. Officers are working with Arup, colleagues in Building Control, Planning, and the CS Fire Safety Team to progress this matter.<br><b>Arup to undertake specific M&amp;E survey.</b> |
| Firefighting stairs (SC38 and SC44) at Level 04.  | Services in firefighting stairs SC38 and SC44 at L04 that are not part of the firefighting stairs or facilities should be enclosed in a fire rated box or be re-routed.  | Works order raised.   |   |
| Firefighting access distance, width of access routes, fireman's lift, lobby smoke ventilation and extended hose coverage. | Discuss with the London Fire Brigade (LFB), and record, firefighting procedures that are specific to Andrewes House in this document.  | The LFB is familiar with the layout of the various blocks on the Barbican Estate and, in the past, we have had regular inspections and 'drills' across the Estate.  | Further meetings to be held with the LFB to discuss the peculiarities of the Barbican Estate.   |

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|        | Carry out inspections of the three fireman’s lifts (including lift control system) at monthly intervals to report the results of every inspection to the local fire and rescue service.  | The LFB has advised that they do not want this information. We currently carry out annual inspections as recommended by our lift consultant.  | Requested written confirmation from the LFB.  |
|        | Update the Fire Notice Box (FNB) to include information about the design and materials of the external walls, extended hose coverage, and any relevant information following the consultation.   | Information on wall construction included in FNB and, ARCGIS also updated.  | Completed.  |
| Others | Establish the compliance of the back-up power supply provisions against the relevant standards.  | Service contract in place for the inspection and maintenance of the emergency lighting. The lifts are not ‘firefighting’ lifts and, there is no secondary ‘back-up’ supply.   | Completed.  |
|        | Consult with Insurers regarding any additional requirements for property protection.   | Insurance colleagues consulted and confirmation received that our Insurer does not require the installation of sprinklers in our residential buildings.   | Completed.  |
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|        | <b>Mountjoy House</b>  |   |   |
|        |  |   |   |
|        | <b>Interim Measures</b>  |   |   |
|        |  |   |   |
| Page 2 | BE to prepare Personal Emergency Evacuation Plan (PEEP) for residents with restricted mobility or in a wheelchair as, they are not able to evacuate via the balconies or, down the stairs, so that the evacuation arrangement in the event of a fire is clear to each of them. | We have introduced a new procedure for assessing vulnerable residents who, may need help evacuating in an emergency or, who may benefit from further help and advice on fire safety issues in their homes.                                    | Continue to work with the 67 households (estate wide), who have informed us that they (or a member of their household) may be vulnerable. |
|        | BE to ensure balconies are kept clear of any stored goods to provide safe egress route for occupants.  | Window cleaning is done across the Estate every six weeks. Window cleaners are instructed to immediately report any obstructions to the balconies to the BE. The House Officer team carries out a full inspection of the nine miles of estate | Process in place.   |

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|  |  | balconies every year. Items are labelled and removed within a prescribed period. The Residents Handbook sets out the respective responsibilities of landlord and leaseholder in terms of fire safety. Regular reminders included in our weekly email bulletin to residents. |  |
|  | BE to keep all the windows in the SC26 protected lobby shut on every floor to reduce the risk of smoke entering the lobby and spread to other floors.                | Staff are aware of this and, check the windows as part of the Estate inspection process.  | Process in place.  |
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|  | <b>Recommended Actions (Table 1)</b>   |   |  |
|  |  |   |  |
| Extended travel distance (for single direction of travel). | Provide early warning to occupants within the flats by installing a minimum Grade D1 Category LD2 within the flats.  | This is considered a leaseholder responsibility and, our Home Improvements booklet recommends to leaseholders the installation of a fire alarm system during refurbishment work.  | Further promotion of the installation of fire detection systems through the Estate Wide Bulletin and other publications.<br><br>For our tenanted homes on the Estate, this work is planned for completion by March 2023. |
|  | Provide detection and alarm system in common areas of the building.  |   |  |
|  | Provide fire action notices throughout the common areas of the building for residents to be aware of the evacuation procedure.                                       | Fire signage replacement project is in place but, has been suspended to enable Listed Building Consent to be achieved.  | Complete the current fire signage replacement project.   |
| Evacuation of PRM's.                                       | Preparation of Personal Emergency Evacuation Plan (PEEP) for PRM's.  | We have introduced a new procedure for assessing vulnerable residents who, may need help evacuating in an emergency or, who may benefit from further help and advice on fire safety issues in their homes.  | Continue to work with the 67 households who have informed us that they (or a member of their household) may be vulnerable.   |
|  | As part of the PEEP, it may be necessary to provide refuge area and Emergency Voice Communication System to SC24 and SC26 (firefighting stairs with firemen's lift). | At the time of the survey, it was confirmed that the lift in SC24 (Thomas More House) can be used.<br><br>Arup to review in light of mitigation recently submitted.   |  |

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| Sprinkler protection.   | The installation of a sprinkler system is recommended to address risks to the life safety of occupants.   | It is felt that this recommendation should be reviewed once a detailed compartmentation survey of the block is completed.  | Review upon completion of compartmentation survey.  |
| Exit signage.   | A survey is recommended to inspect and replace existing fire signage to comply with current standards.  | Fire signage replacement project is in place but, has been suspended to enable Listed Building Consent to be achieved.   | Complete the current fire signage replacement project.  |
| Emergency lighting.   | A survey is recommended to inspect and replace existing emergency lighting to comply with current standards.  | Existing emergency lighting is inspected and tested regularly and remains functional. A survey is being carried out to identify the works required to bring the installation up to current standards.  | Complete the survey and implement subsequent project to bring the installation up to current standards.   |
| Compartmentation – corner flats with risers in the kitchen running through the building height. | A sitewide survey is recommended to inspect breach in compartmentation and to undertake works to maintain the compartmentation in accordance with BS9991.   | Specific representative compartmentation surveys are underway on the Estate. Mountjoy House will completed by the end of December this year.   | Compartmentation survey to be carried out by March 2023.<br><b>Find and Fix pilot.</b>  |
| Fire doors at flat entrances, lift lobbies, firefighting stairs and refuse storage/post box.    | It is recommended to replace all fire doors to the stair, small lobby, flat entrances, and the refuse storage/post box.   | This is part of the £20m Replacement Door Programme across the Barbican Estate.  | Included in the Replacement Door Programme across the Barbican Estate.  |
|   | Doors to all the risers to be inspected and repaired/replaced to maintain fire separation from the stair or lift lobbies.   | This is part of the £20m Replacement Door Programme across the Barbican Estate.  | Included in the Replacement Door Programme across the Barbican Estate.  |
|   | Keep records of inspecting and testing of fire doors in future, at not less than three-monthly intervals.   | Relevant staff trained in the inspection of fire doors and, this is no incorporated into the Estate inspection process.  | Incorporated into the Estate inspection process.  |
| Kitchen extract shunt duct system.  | Replace the existing extract hoods with recirculation type hoods and, implement one of the following:<br>(a) smoke and fire damper at the shunt duct riser activated by the fire alarm/detectors within the flats.<br>(b) maintain the shunt duct arrangement and increase the reliability of the main extract fan. This will require an additional duty standby fan. | There are concerns that these recommendations are simply not achievable due to the constraints on the building including its construction and its listed status.<br><br>In respect of option (c), this is not relevant or appropriate to Mountjoy House as, the external wall in this case is all glass. | Further work is required to analyse the recommendations in more detail. Officers are working with Arup, colleagues in Building Control, Planning, and the CS Fire Safety Team to progress this matter.<br><b>Arup to undertake specific M&amp;E survey.</b> |

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|  | <p>(c) to block off the shunt ducts and provide a fan on the external wall to draw out air from the flat into the balconies.</p> | <p>The current Leaseholder Home Improvements Pack contains up-to-date recommendations for installing fire dampers.</p> <p>The existing fans are inspected and maintained at six-monthly intervals.</p> |  |
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